# ANALYSIS OF ENGLISH FORMATIVE ASSESSMENT FOR 11TH-GRADE STUDENTS OF SMA N 1 BOBOTSARI PURBALINGGA BASED ON THE COGNITIVE DIMENSION OF REVISED BLOOM'S TAXONOMY

**AN UNDERGRADUATE THESIS**

**Submitted to Faculty of Tarbiya and Teacher Training of**
**State Islamic University Prof. KH. Saifudin Zuhri Purwokerto**
**as a Partial Fulfillment of Requirements for *Sarjana Pendidikan* (S.Pd.) Degree**

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Declare that the thesis I wrote with the title, **"Analysis of English Formative Assessment for 11th Grade Students of SMA N 1 Bobotsari Purbalingga based on the Cognitive Dimension of Revised Bloom's Taxonomy"** is truly my own work and is not a plagiarism of someone else's thesis. I am fully aware that I have quoted some statements and ideas from several resources. All the materials from other sources and references from work done by other people or institutions have been properly cited.

If later on my statement is not true, then I am willing to accept the applicable academic sanctions (revocation of graduation predicate and bachelor's degree).

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**APPROVAL SHEET**

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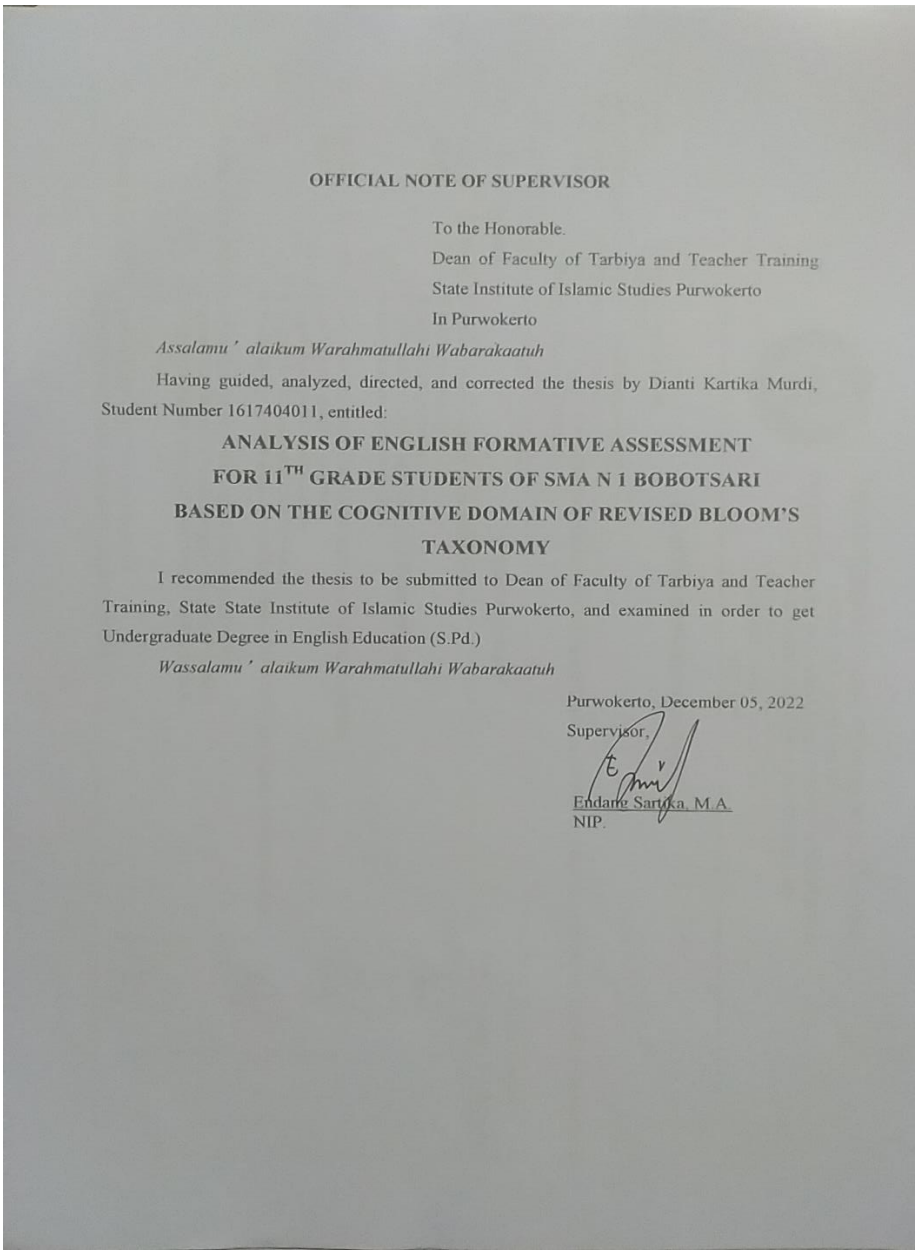

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*Assalamu ' alaikum Warahmatullahi Wabarakaatuh*

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*Wassalamu ' alaikum Warahmatullahi Wabarakaatuh*

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**MOTTO**

"For indeed, with hardship [will be] ease"

"Indeed, with hardship [will be] ease"

"So when you have finished [your duties], then stand up [for worship]"

"And to your Lord direct [your] longing"

(QS Al-Inshirah: 5-8)

"Finish what you have started!"

"You only have one pen of life; make a beautiful doodle!"

(Dianti Kartika Murdi)

UIN PROF. KH. SAIFUDDIN ZUHRI

**DEDICATION**

I dedicate this thesis to:

Myself

## PREFACE

There is no word except Alhamdulillah that comes after finishing this thesis, all praises to Allah, the God of the universe who has given strength and guidance so that the thesis entitled Analysis of English Formative Assessment for 11th Grade Students of SMA N 1 Bobotsari based on the Cognitive Dimension of Revised Bloom's Taxonomy can be completed. Sholawat may always be devoted to Prophet Muhammad SAW who always became a role model for all humans in the world.

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Purwokerto, December 6, 2022

The Researcher

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**Abstract:** One of the assessments a teacher uses to know the progress of a student's learning is called formative assessment. Teachers can use the cognitive dimension of revised Bloom's Taxonomy to conduct the level of questions in the test as a part of the assessment. This research aimed to know the mostly applied cognitive dimension and the proportion between LOTS (Lower Order Thinking Skill) and HOTS (Higher Order Thinking Skill) in the formative test items based on the Revised Bloom Taxonomy. The source of data is the English daily test in the first semester of eleventh grade prepared by an EFL teacher. This research applied the descriptive qualitative method. To collect the data, this research used documentation. The result after reviewing daily test items was founded that from 58 total questions used by the 11th-grade English teacher at SMA N 1 Bobotsari Purbalingga, there were 42 or 72% questions in the LOTS category, which was divided into three levels, namely remembering (C1); 15 questions (24,14%), understanding (C2); 19 questions (32,76%) and applying (C3); 9 questions (15,51%). While in HOTS category reached 16 questions or 28%, it only has one level, namely analyzing (C4). Based on the analysis of the researcher, the test was dominated by LOTS in understanding level (C2), which the teachers mainly apply for assessing students' competencies based on the cognitive dimension of the Revised Bloom Taxonomy. Therefore, the percentage of questions that support mastery of critical competencies—30% for C1 and C2, 40% for C3 and C4, and 30% for C5 and C6—was not reached.

**Keywords**: formative assessment, cognitive dimension, Revised Bloom's Taxonomy.

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# CHAPTER I
# INTRODUCTION

## A. Background of The Study

Learning outcomes are always produced in the learning process so that students are evaluated by their teachers. S.K Mangal, et al. (2019) stated assessment helps much in making proper judgments about the learning outcomes of the students resulting through one or other processes of teaching-learning. According to Brown (2003), assessment is an ongoing process with a wider scope. Through assessment the teacher can measure the extent to which students understanding and competence of the material that has been studied. Teachers can also use the results of the assessment for analysis of which material should be reinterpreted and which instruments should be repaired. In brief, assessment is useful for stimulating student learning in the teaching process in case assessment aims to provide feedback from teachers to students so that the teaching and learning process will be successful.

Although there are various classifications of assessment, two main types are discussed in the context of education: formative and summative assessment. Brown (2003) believes that formative assessment is used to assess the process by which students develop abilities and skills, with the purpose of helping them continue this growth process. Formative assessments are conducted while students are still learning and are used to monitor learning progress (Carr, 2011). Formative assessment should aim to diagnose the problem in teaching and learning and provide constructive feedback to students and teachers. This feedback is expected to help teachers design alternative, beneficial lessons to meet the individual needs of students. It will also help the student correct his or her mistakes. In Indonesia, formative assessments are identical to daily tests, and teachers rarely use other forms of assessment, such as interviews, observation or self-evaluation (Mahendra et al., 2020).

On the other hand, summative assessments are used to measure learning outcomes at a certain time. Brown (2003) explains that summative assessment aims to measure or summarize what students understand and usually occurs at the end of a course or program. They are usually taken at the end of a semester or year to determine whether and to what extent students have mastered the concepts taught in the course.

In this 21st century era, teachers are strongly required to provide creative and innovative teaching and learning processes in order to face increasingly complex global challenges, including in doing assessments or arranging a good test to measure students' proficiency. Tests are a subset of assessment; they are certainly not the only form of assessment that teachers can conduct, and they can be useful tools, but they are just one of many techniques that teachers can ultimately use to assess students (Brown, 2003). In addition, testing is a technique or method that consists of some questions, statements or tasks that are presented to students to measure their performance or behavior (Arifin, 2012). Based on the opinions of the experts above, it can be concluded that the test is part of the assessment and is important for teachers in preparing a good test because the test is a tool to test students' abilities.

In Indonesia, the teacher needs to arrange appropriate questions or test items to measure student competencies based on the regulations of the Government and the current curriculum called *Kurikulum 2013*. Additionally, according to Aliningsih and Sofwan (2015, as cited in Kusumawanti, W. D., & Bharati, 2018), the assessment procedure based on the 2013 Curriculum is considered to be an authentic assessment that involves a comprehensive review of a variety of competences. Dewi (2022) argued that the test items that teachers make must refer to the curriculum used in the institutions, especially after what has been regulated in the *Kurikulum 2013* that students have to master higher-order thinking skills (HOTS) both in the teaching and learning process as well as in the test items that teachers have prepared.

The quality of education can be identified by looking at the skills of students. If the cognitive ability of students is low, it also reflects the low quality of education. Therefore, it is important for teachers to design tests with higher question levels (HOTS) to activate their cognitive abilities. To design a test with higher question levels, a teacher can use the levels of the revision of Bloom's taxonomy proposed by Anderson & Krathwohl (2001) taxonomy which divides it into six levels; remembering, understanding, applying, analyzing, evaluating, and creating. All of these levels should be given especially to high school students because their cognitive abilities are already at that level. According to the cognitive levels proposed by Piaget in Brown (2007, as cited in Fitri et al., 2019), high school students belong to the segment of adolescence that should reach the highest level of cognitive development. It corresponds to the ability of high school students to achieve the highest level of the taxonomy, namely a creating level. It can therefore be assumed that teachers should provide reading tests at all question levels, from the remembering level to creating level. In addition, Sudjana (2010, as cited in Sidauruk & Gultom, 2021), claims that a good test should have a 3:4:3 ratio for simple, middle, and challenging questions. The simple levels are in the level of Remember and Understand, the medium levels are in the level of Application and Analysis, and the challenging levels are in the level of Evaluate and Create. Therefore, the percentage of questions for each level of the revised Bloom's taxonomy is as follows: 30% for levels C1 and C2, 40% for levels C3 and C4, and 30% for levels C5 and C. However, based on the review of some previous research about analysis of cognitive level in question items, LOTS was the dominant level that used in the question items.

According to the preliminary research that has done by doing a direct interview with an English teacher on June 7th, 2022, the researcher found out that SMA N 1 Bobotsari is one of the senior high schools in Purbalingga regency, which has a good accreditation. Then, English subject in this school was held for two hours a week. However, due to the pandemic era, learning hours have decreased, so students are required to master the material in less

time. Further, in this school, guided by the teacher, the students are accustomed to being trained by various kinds of questions as an assessment through offline and online platforms whose implementation schedule is carried out sequentially for each grade or is carried out independently in each class. The tests also have various forms according to the teacher who is designing or preparing it**.** The results of the students' scores have various ranges.

Based on the above problems, a correct approach to the analysis of the English assessment constructed by the teacher is needed. The researcher proposes to use the checklist table of Bloom's Taxonomy as a tool to support the data analysis technique of this research. Additionally, Bloom's hierarchical model is often used in educational settings where questions are asked to ensure students' balance and cognitive mastery (Omar et al., 2012). This study focuses only on the cognitive dimension because cognitive levels help classify learning objectives and test them according to their complexity, from memorization to near transmission to long-distance transmission (Sidauruk & Gultom, 2021). With some reasons has been mentioned, the researcher proposes to conduct a research entitled **"Analysis of English Formative Assessment for 11th Grade Students of SMA N 1 Bobotsari Purbalingga based on the Cognitive Dimension of Revised Bloom's Taxonomy"**

## B. Clarification of the Key Terms

Definitions of key terms are important to provide guidance for conducting the research. Regarding this research there are three key terms that guide the conduct of this research. They are:

1. Formative Assessment

   According to Brown (2003), Formative assessment is used to assess the process by which students develop competencies and skills, with the goal of helping them continue this process of growth. Formative assessment is done while students are still in the process of learning

something and is used to monitor progress (Carr, 2011). The formative assessment that will be analyzed in this research is the English daily test question items for the eleventh-grade students of SMA N 1 Bobotsari at the first semester in the 2022/2023 academic year.

2. Cognitive Dimension

The revised Bloom's taxonomy introduces six levels of cognitive process dimensions, namely remembering (C1), understanding (C2), applying (C3), analyzing (C4), evaluating (C5), and creating (C6) of which the first three levels are classified as lower-order thinking skills (LOTS) and the other three upper levels are classified as higher-order thinking skills (HOTS) (Anderson et al., 2001).

3. Revised Bloom's Taxonomy

In 1990, Anderson, a former student of Bloom, updated and revised the taxonomy to reflect its relevance to the work of students and teachers in the 21st century (Anderson et al., 2001). Anderson modified the original term by changing Bloom's category from noun to verb. Anderson also renamed the Knowledge category to Remember, Comprehension to Understand, and Synthesize to Create categories. Moreover, the new version of the taxonomy, it is not evaluating category as the highest level, but create category. Thus, the level of the revised Bloom's taxonomy became: Remember, Understand, Apply, Analyze, Evaluate and Create. In addition, in the modified Bloom's taxonomy, the cognitive domain is divided into two dimensions. As mentioned before, the first dimension consists of the six levels of the thinking process, which changed to denote action since thinking implies active participation. Those categories are called cognitive processes dimension. Another category is called the knowledge dimension, which is also divided into different types: factual, conceptual, procedural and metacognitive (Krathwohl, 2002).

## C. Research Questions

In this research, the researcher tries to analyze the English formative assessment for eleventh-grade students of SMA N 1 Bobotsari Purbalingga based on the cognitive process of revised Bloom's taxonomy with two research questions:

1. What is the most applied cognitive dimension in the English formative assessment for eleventh-grade students of SMA N 1 Bobotsari Purbalingga?
2. How is the percentage between LOTS and HOTS questions in the English formative assessment for eleventh-grade students of SMA N 1 Bobotsari Purbalingga?

## D. Aims and Significances of the Study

1. The Aims of the Research

   Based on the research question written above, there are two aims of this research:

   a. To find out the most applied cognitive process dimension of Revised Bloom's Taxonomy that is used in the English formative assessment for eleventh-grade students of SMA N 1 Bobotsari Purbalingga.

   b. To find out the percentage between LOTS and HOTS questions in the English formative assessment for eleventh-grade students of SMA N 1 Bobotsari Purbalingga

2. The significance of this research

   This research provides information about English daily assessment for eleventh-grade students of SMA N 1 Bobotsari related to the cognitive process of Revised Bloom's Taxonomy. There are two significances of this research. They are:

a. Theoretical Significances

The findings of this research are expected to provide significant information about the cognitive process of Revised Bloom's Taxonomy which has been implemented in English daily assessment for eleventh-grade students of SMA N 1 Bobotsari. It is expected to be an input to improve the quality of the English daily assessment prepared by the teacher.

b. Practical Significances

1) For teacher

This research is expected to be beneficial for English teachers in designing and maintaining an appropriate and good assessment relevant to the curriculum that the Government has regulated on the Education system in Indonesia.

2) Test-maker

The result of this research is also expected to give some information and contribution to the test-maker in the effort of designing and maintaining a good test based on the cognitive process of revised Bloom's taxonomy.

3) Other researchers

For other researchers, it is expected that this research can give some information and will be useful as a reference in investigating this kind of topic related to the analysis of English daily assessment based on the cognitive process of revised Bloom's taxonomy, and it can give a contribution to society.

## E. Previous Studies

There has been some preceding research on the subject of this investigation, according to a number of connected sites. First is a thesis written by Putry Sary Dewi from Sriwijaya University entitled The Analyses of Teacher-made English Summative Test based on Higher Order Thinking

Skill (HOTS) for the Eighth-Grade Students of SMP IT Darul Husna. The research was conducted in 2022. This study aimed to describe the item analysis of the English summative test that the English teacher made for the eighth-grade students of SMP IT Darul Husna based on the Higher Order Thinking Skill and to describe the analysis of the index difficulty of the test items (Dewi, 2022). The results of the study showed that the English summative test items that the English teacher made for the final examination for the eighth-grade students of SMP IT Darul Husna were in the Poor category. Because the results of the index difficulty of the test items showed that 12 items (40%) were categorized as medium, 18 items (60%) were categorized easy, and there was no item categorized as difficult. Moreover, the results of the item analysis based on HOTS showed that 22 items (73%) were classified as C1, five items (17%) were classified as C2, 0 items were classified as C3, two items (7%) were classified as C4, 1 item (3%) was classified as C5, and there is no one item classified as C6. It can be concluded that almost of the questions were in the LOTS category (Dewi, 2022). The difference between the previous thesis and the current research is; previous research focuses on higher-order thinking skills found in the summative test for Junior High School graders and the index of difficulty level in test items, while this research focuses on LOTS and HOTS distribution in the formative test for Senior High School. The similarity between these two types of research is in using English test items as the object and cognitive domain of Revised Bloom's Taxonomy theory as a tool to support the data analysis technique.

Second is a thesis written by Sri Aprilia Anwar from Muhammadiyah University of Makassar entitled Analysis of Teacher's Assessment in English based on Cognitive Domain of Bloom Taxonomy. The research was conducted in 2020. This study aimed to know the extent to of EFL teachers apply cognitive domain in the test based on Bloom Taxonomy. The results of the study showed that LOTS was still the most dominant question in remembering and understanding levels used by the teachers for students in the

cognitive domain based on Bloom's Taxonomy. It reached 48 or 74% of questions in the LOTS category. The difference between the previous thesis and the current research is; previous research focuses on higher-order thinking skills found in English tests for Junior High School, while this research focuses on mostly applied cognitive dimension and LOTS and HOTS distribution in the English test for Senior High School. The similarity between these two kinds of research is in applying the descriptive qualitative method by focusing on document analysis in the research and analyzing the data based on the application of revised Bloom's taxonomy.

The third is Journal of English Education Vol. 6 No. 2, December 2020, entitled LOTS and HOTS of Teacher-Made Test in Junior High School Level in Kefamenanu written by Maria Wihelmina Wisrance and Thresia Trivict Semiun from University of Timor, Indonesia. The purpose of this study was to evaluate the effectiveness of teacher-made summative English tests given to students in grades VII and VIII at one junior high school in Kefamenanu. The results revealed that both examinations administered to first- and second-graders at Junior High School of Biboki Utara were based on the Remembering (C1) and Understanding (C2) levels of Bloom Taxonomy Revised Theory (C2) (Wisrance & Semiun, 2020). The difference between this research and current research is in using the test to be analyzed. This research uses more than one English summative test to be analyzed; those are the English test of grades VII and VIII of Junior High Schools in Kefamenanu, while the current research only uses one formative test of grade XI of Senior High School in Bobotsari as the object of the research. The similarity between this study and the current research is in applying the descriptive qualitative method by focusing on document analysis in the research and analyzing the data based on the application of revised Bloom's taxonomy.

Fourth is Journal of English Language Literature and Teaching Vol. 2, No.2, October 2018, entitled Descriptive Analyses on English Test Items based on the Application of Revised Bloom's Taxonomy by Imanuel Kamlasi

and Anselmus Sahan from Universitas Timor. The findings of this investigation revealed that 22 items, or 44%, were made by remembering taxonomy. Then 2 items or 4% in understanding, Applying level made 21 items or 42% and Analyzing has 5 items or 10%. While there was no item found in both evaluating and creating taxonomy (Kamlasi, 2018). The different of this research is about the English test that is used as the object. The object of this study was English test which was used in the final semester test in senior high school, while the current research tries to analyze the English test items, which are used as a daily test in senior high school. The similarity of this research and current research is both of them analyzed the English test items based on the application of revised Bloom's taxonomy, and both researches are categorized as descriptive qualitative research.

Fifth is the thesis written by Nurul Fatkhuril Janah from IAIN Surakarta entitled LOTS and HOTS Items Analysis Based on Bloom Taxonomy Revision in Excercises of English Textbook Entitled Bahasa Inggris: When English Rings A Bell for SMP/MTs Kelas VII. The research was conducted in 2020. Janah examined the LOTS and HOTS implementation in the exercises from the textbook. This study's aim is to examine how students' responses to the activities in the textbook Bahasa Inggris: When English Rings a Bell for SMP/MTS Kelas VII demonstrate their use of lower-order thinking skills (LOTS) and higher-order thinking skills (HOTS) (Nurul, 2020). The study's findings demonstrated that the textbook's exercises included both LOTS and HOTS activities in varying amounts. With a percentage of 55.6% covering 37.7% C1 (remembering), 6.2% C2 (understanding), and 11.7% C3, LOTS dominated the tasks. However, the proportion of HOTS was 44.4%, consisting of 8.6% C4 (analyzing), 6.8% C5 (evaluating), and 29% C6 (creating). It may be said that LOTS dominated the tasks in the 2017 edition of the English Textbook for SMP/MTS Kelas VII, Bahasa Inggris: When English Rings a Bell. (Janah, 2020). The difference between the previous thesis and the current research is that the thesis focused on finding how LOTS and HOTS are implemented in the exercises, which are

stated in the textbook, while this research tries to focus on finding how LOTS and HOTS are implemented in the formative test. The similarity of both two research is about items analyses based on Revised Bloom's Taxonomy.

## F. Organization of the Paper

In order to conduct a systematic study, it is necessary to classify the structure of this study. This study is divided into five chapters, which are explained as follows:

Chapter I explain the introduction, which consist of background of the problem, clarification of key terms, research question, objectives and significance of the study and organization of the paper.

Chapter II clarifies the literature review. This chapter consists of previous research and theory, which deals with the characteristic of the daily assessment, the concept of Revised Bloom's Taxonomy, and the classification of LOTS and HOTS.

Chapter III contains the research methodology, which consists of research design, data sources, data collection techniques and data analysis techniques.

Chapter IV presents the findings and discussion of the research. It includes a data presentation about research findings and a discussion about the analysis of English formative assessment for eleventh-grade students of SMA N 1 Bobotsari Purbalingga based on the cognitive dimension of revised Bloom's Taxonomy.

Chapter V presents the conclusion and suggestions of the research. This chapter consists of a conclusion about the research, the limitation of the study and suggestions related to the research.

# CHAPTER II
# LITERATURE REVIEW

This chapter discusses the theoretical framework that was used in this study

## A. Assessment and Revised Bloom's Taxonomy

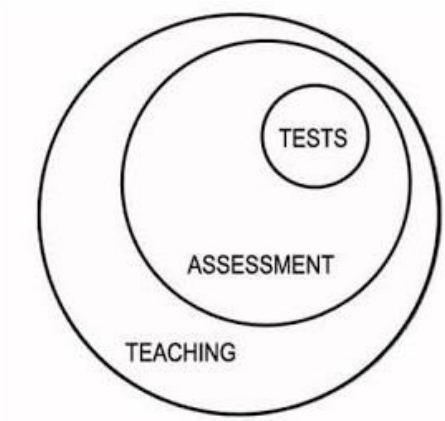
1. Assessment

   a. Definition

      Assessment is part of the learning and teaching process. Assessment also becomes the foundation of teaching, measuring ability, achievement, manner, and whatever teachers need to teach students to achieve the goals of the learning process. According to Brown (2003), assessment is an ongoing process with a wider scope. Through assessment the teacher can measure the extent to which students' understanding and competence of the material that has been studied. Teachers can also use the results of the assessment for analysis which material should be reinterpreted and which instruments should be repaired.

      Tests are a subset of assessment; they are certainly not the only form of assessment that teachers can conduct, and they can be useful tools, but they are just one of many techniques that teachers can ultimately use to assess students (Brown, 2003). Further, according to Brown (2003), test is a method to measure the ability of a person in knowledge or performance in a given program. In addition, testing is a technique or method that consists of some questions, statements or tasks that are presented to students to measure their performance or behavior (Arifin, 2012). The correlation for each term can be seen in picture 1 as follows:

Picture 1
Correlation between Testing and Assessment




(Brown, 2003)

b. Type of assessment

1) Based on the time and schedule

Based on the time and schedule adopted for assessing the learning outcomes of the learners, there are two types of assessment in the shape of formative and summative (Mangal & Mangal, 2019).

a) Formative assessment

According to Brown (2003), with the aim of assisting students in continuing their growth process, formative assessment is used to evaluate students as they are developing their competencies and skills. The giving of appropriate performance evaluation by the teacher and acceptance of that feedback by the student with attention toward future learning are critical components of this formation. While learners are still learning a concept, formative tests are given to assess how well their understanding is developing (Carr, 2011). Formative assessment should aim to diagnose the problem in teaching

and learning and provide constructive feedback to students and teachers. This feedback is expected to help teachers design alternative, beneficial lessons to meet the individual needs of students. It will also help the student correct his or her mistakes. When a student answers a question, comments, or tries out a new word or structure, the teacher implicitly assesses the student's performance (Brown, 2003). In Indonesia, formative assessments are identical to daily test; teachers rarely use other forms of assessment, such as interviews, observation or self-evaluation (Mahendra et al., 2020).

According to the statement above, it can be concluded that formative assessment is a continuous process of assessing the learning outcomes of the students. In formative assessment, the teacher tries to assess the progress of students from time to time on the learning path. The feedback is used to help the learner improver their language ability.

b) Summative assessment

Summative assessment, which usually takes place at the end of a course or instructional unit, tries to measure or summarize what a student has learned. Summative assessments are primarily constructive in purpose because they are typically given at the end of a semester or academic year to determine whether and to what extent students have mastered ideas taught during the course (Brown, 2003).

Relate to the above statements, Carr (2011) stated summative assessments provide information about how much students learned. As such, they are closely related to achievement tests; in fact, most achievement tests are largely summative, and summative tests are usually

designed to assess a learner's achievement. Also, in order to draw a line between formative and summative, for example, If teachers observe students performing the material they were given that day without giving grades, this is obviously a formative assessment and is in no way summative. When students are required to take an exam to complete a course, this is clearly a summative assessment

According to the experts mentioned above, summative assessments can be simplified to assessments that take place after the completion of a course, semester or other specified period. This means reviewing how well students have completed the course.

2) Based on Formality

a) Formal

Formal assessments are tasks or processes created especially to gather from a source of abilities and information. They are intentional, systematic procedures designed to inform teachers and students on the impact of performance reviews (Brown, 2003).

b) Informal

According to Brown (2003) Various sorts of casual feedback to the students, mentoring, and unintentional, spontaneous comments and replies are just a few examples of informal assessment. When the teacher saying “Good job!” “You’re doing very well” or even writing an emoticon of smile on students’ homework is included in the informal assessment. Further, Brown stated that usually formative assessment is informal.

3) Based on the scope and extent of their application

Based on the scope and extent of their application, assessment are divided into two forms; standardized and teacher-made test (Mangal & Mangal, 2019).

a) Standardized tests or assessment

As the term indicates, standardized tests or instruments are activities that are quite official and standardized. These evaluations are discovered to be founded on an organized, scientific research process and are typically of the objective form (Mangal & Mangal, 2019).

b) Teacher-made test or assessment

In the context of their naming, these tests are constructed by teachers to measure student performance from time to time. Such tests are limited in scope and almost all teachers do it according to their needs. It is directly involved in their teaching. The format of the exam can include oral, practical and written (short answer, very short answer and objective types). Additionally, teacher-created tests have advantages over standardized tests because they can be constructed to measure outcomes that are directly related to specific class goals and specific classroom situations (Mangal & Mangal, 2019).

c. Tool of assessment

The term "assessment tool" refers to the methods and techniques that are used to test and evaluate the teaching-learning results, in other words, to determine how much the learner's behavior has changed.

1) Quantitative Tools

Quantitative tools are those assignment devices or techniques that help in obtaining quantitative data for explaining

the quantitative changes occurring in the behavior of the learners through the specified learning experiences in one or other learning experiences (Mangal & Mangal, 2019). In other words, quantitative tools help in quantitative measurement or description of the learning outcomes of the students. The most commonly used quantitative tools for the assessment of students' learning outcomes are concerned with the use of different types of teacher-made tests or standardized tests. A teacher may make use of those for the day-to-day assessment of the students' learning progress in the form of weekly, monthly, quarterly, or half-yearly tests. These may be conducted in oral, written or practical test.

a) Oral test

These tools are based on oral communication between examiners and examinees. As a rule, students are asked to answer oral questions orally. In addition to the question-and-answer method, other oral communication and dialogue techniques, such as interviews, quizzes, group discussions, debates and explanation competitions, can also be used to assess students' oral skills and learning potential (Mangal & Mangal, 2019).

b) Practical test

In practical exams or tests, students are challenged and demonstrate their learning by participating in experimental and hands-on activities. They must create or produce something, report their observations of relevant phenomena, demonstrate the applicability of theoretical information in concrete form, and perform some motor behavior or manual activity that they are asked to do to test their results. (Mangal & Mangal, 2019)

c) Written test

Written tests require writing material such as paper and pencil from the test-taker and test-giver. Students as test-taker receive test questions in a written mode, such as question paper and require to give their response on the supplied answer sheet or the question sheet itself in the written form. The scoring and interpretation of those answer sheets thus become a basis for the assessment of students' achievements, competencies, and teaching-learning results. Written test is the most frequently and popularly used evaluation technique. The question set in these tests may be of five types; Essay, Short answer, Very short answer, Objective and Situational (Mangal & Mangal, 2019).

2. Revised Bloom's Taxonomy

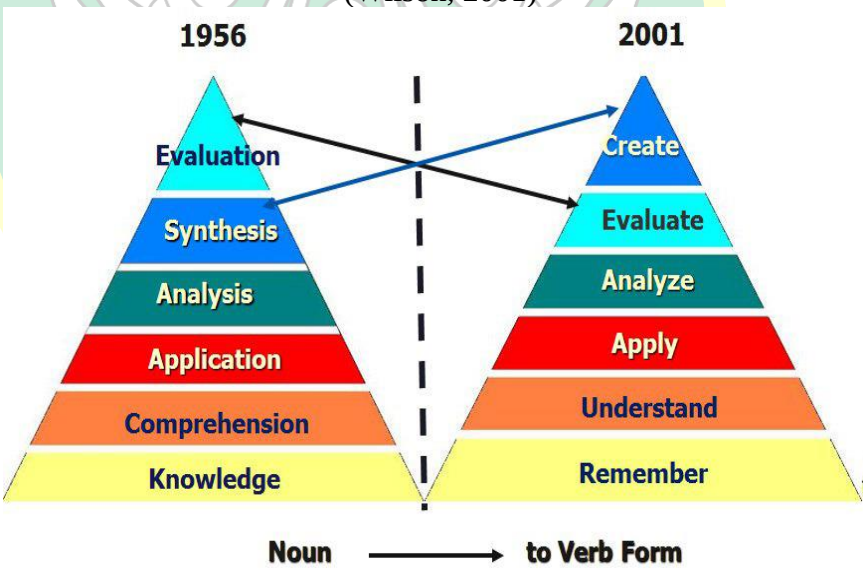
a. Definition of Bloom's Taxonomy

Benjamin Bloom, an education psychologist, created Bloom's Taxonomy classification system in 1956 to group intellectual abilities and behaviours that are crucial to learning. In the cognitive domain, Bloom (1956) presented a classification of academic objectives. Benjamin Bloom, then an Associate Director of the University of Chicago Board of Examinations, prompted a discussion among a group of evaluation experts from across the United States to outline some educational objectives and assessments for institutions to use, and Bloom's Taxonomy was named in his honour (Krathwohl, 2002). Based on the mental processes that learners engage in learning, Bloom and his colleagues defined several types and levels of learning (Darwazeh & Branch, 2015).

b. Concept of Revised Bloom's Taxonomy

Former Bloom student Lorin Anderson updated and improved the taxonomy in 1990 to reflect relevance to 21st-century work for both teachers and students. Bloom's categories were originally nouns, but Anderson changed them to verbs. The categories for knowledge, comprehension, and synthesis were changed by Anderson to remember, understand, and create, respectively. The create level was elevated to the top of the category by Anderson as well. As a result, Bloom's taxonomy was modified by Anderson (2001) to become Remember, Understand, Apply, Analyze, Evaluate, and Create.

Picture 2
The Difference between Original Ttaxonomy by Bloom and the Revised Bloom's Taxonomy by Anderson (2001)
(Wilson, 2001)




In terms of the cognitive domain, Anderson (2001) also made structural modifications to the original Bloom's taxonomy. The new framework has two dimensions as opposed to the original Taxonomy's one dimension. The two dimensions are Knowledge and cognitive process dimension. The six categories that make up

the cognitive process dimension are Remember, Understand, Apply, Analyze, Evaluate, and Create. Understanding is seen to be more cognitively complex than Remembering, applying is thought to be more cognitively complicated than Understanding, and so on, along a spectrum of cognitive process aspects. Then, the four categories that constitute the knowledge dimension are factual, conceptual, procedural, and metacognitive. These classifications are predicated on a continuum ranging from concrete (Factual) to abstract (Metacognitive) (Anderson et al., 2001).

A goal statement in the updated Bloom's taxonomy, also known as Anderson's taxonomy, consists of a verb and a noun(Anderson et al., 2001). In general, the verbs express planned cognitive processes. The noun generally refers to a set of knowledge that students are expected to build or acquire. Take the sentence below as an illustration: "The student will learn to discriminate (the cognitive process) among different sorts of language assessments." Additionally, it may be said that Anderson Taxonomy and Bloom's original taxonomy both attempted to group the cognitive processes related to students' learning into six categories in a pyramid structure sorted from the lowest to highest (Mangal & Mangal, 2019).

c. Cognitive Process of Revised Bloom’s Taxonomy

The part of the cognitive process after Revision in 2001:

1) Remembering (C1)

The Remembering category is taking the knowledge needed from a student's long-term memory. Two cognitive processes related to this category are aware or recognizing and recalling. The types of knowledge relevant to this category are factual knowledge, conceptual knowledge, procedural knowledge, and metacognitive knowledge, as well as possible

combinations of some of this knowledge (Anderson et al., 2001).

2) Understanding (C2)

In understanding a student will understand if they can construct the meaning of learning messages both in oral, written, and graphical form conveyed through teaching, presentation in books, and presentation through computer screens. Students understand when they connect the new knowledge they are learning with the knowledge they already have. More specifically, the new knowledge they learn is integrated with existing cognitive models and frameworks. Cognitive processes in the category of "understanding" include the processes of interpreting, modeling, classifying, summarizing, guessing, comparing, and explaining (Anderson et al., 2001).

3) Applying (C3)

This category of applying is very closely related to procedural knowledge. Practice questions or exercises are types of tasks whose completion procedures are known to students, so students can use them routinely. A problem is a type of task for which students have no known solution, so they must find the right procedure to solve the problem. The cognitive process included in applying are executing and implementing (Anderson et al., 2001).

4) Analyzing (C4)

Included in the category of analysis is the process of breaking down material into its constituent parts and determining the relationship between the parts and the relationship between these parts with the material as a whole. This process analysis category includes the processes of

differentiating, organizing, and connecting (attribute) (Anderson et al., 2001).

5) Evaluating (C5)

Evaluating category is defined as the act of making a judgment based on certain criteria and standards. The most commonly used criteria are quality, effectiveness, and consistency. These criteria are determined by the students themselves. Standards that can be used can be either quantitative or qualitative standards. The standards are then applied to the criteria selected earlier. The evaluation category includes several cognitive processes, namely checking and critiquing. The process of checking is the process of assessing an internal criterion, while the process of criticizing or critiquing is the process of making an assessment based on external criteria (Anderson et al., 2001).

6) Creating (C6)

Creating category is the process of arranging multiple specific elements into a coherent or functional unit. Instructional objectives in the Creating category teach students to create new products by organizing some elements or parts into patterns or structures that have never existed or been predicted before. Cognitive processes that fall into this category are also often pre-aligned with the student's learning experience. Although this type of creation requires students' creative thinking, creative thinking is not entirely free from the needs or constraints identified in the course, or the constraints encountered in specific situations (Anderson et al., 2001).

The categories of the cognitive process dimension are displayed in the table below in order to clarify each stage and make them more understandable.

Table 1
The Categories of Cognitive Process Dimension
(Anderson et al., 2001).

| **Categories and Cognitive Process** | **Alternative Names** | **Definition and Examples** |
|---|---|---|
| 1. Remember – Recalling relevant knowledge from long-term memory | | |
| 1.1 Recognizing | Identifying | Storing data in line with the material being presented in long-term memory (e.g., recognize the dates of important events in Indonesia) |
| 1.2 Recalling | Retrieving | Retrieving relevant knowledge from long-term memory (e.g., recall the dates of important events in Indonesia) |
| 2. Understand – Build meaning from instructional messages, including oral, written, and graphic communication | | |
| 2.1 Interpreting | Clarifying<br>Paraphrasing<br>Representing<br>Translating | Changing from one form of illustration (e.g., numerical) to another (e.g., verbal) (e.g., paraphrase important speeches from the written article) |
| 2.2 Exemplifying | Illustrating<br>Instantiating | Discover a specific example or illustration of a concept or principle (e.g., give examples of various genres of music) |
| 2.3 Classifying | Categorizing<br>Subsuming | Determining that something belongs to a category (e.g., concept or principle) (e.g., classify observed or described cases of bullying) |
| 2.4 Summarizing | Abstracting<br>Generalizing | Abstracting a general theme or major point(s) (e.g., write a short summary of the events happened on a videotape) |
| 2.5 Inferring | Concluding<br>Extrapolating<br>Interpolating | Drawing a logical conclusion from presented information (e.g., in learning a foreign language, |

| | | |
|---|---|---|
| | Predicting | infer grammatical principles of the texts) |
| 2.6 Comparing | Contrasting<br>Mapping<br>Matching | Detecting correspondences between two ideas, objects, and the like (e.g., compare past events to present situations) |
| 2.7 Explaining | Constructing models | Constructing a cause-and-effect model of the system (e.g., explain the causes of important event happened in Hiroshima and Nagasaki in 1945) |
| 3. Apply – Carry out or use a procedure in a given situation | | |
| 3.1 Executing | Carrying out | Applying a procedure to a familiar task (e.g., divide one whole number by another whole number, both with multiple digits) |
| 3.2 Implementing | Using | Applying a procedure to unfamiliar tasks (e.g., use Pascal Law in situations in which it is appropriate) |
| 4. Analyze – Break material into its constituent parts and determine how the parts relate to one another and to an overall structure or purpose | | |
| 4.1 Differentiating | Discriminating<br>Distinguishing<br>Focusing<br>Selecting | Distinguishing relevant from irrelevant parts or important from unimportant parts of presented material (e.g., distinguish between relevant and irrelevant situation based on the reading text) |
| 4.2 Organizing | Finding Coherence<br>Integrating<br>Outlining<br>Parsing<br>Structuring | Determining how elements fit or function within a structure (e.g., structure evidence in a historical description into evidence for and against a particular historical explanation) |
| 4.3 Attributing | Deconstructing | Determine a point of view, bias, values, or intent underlying presented material (e.g., determine the point of view of the author of a novel in terms of his or her experience) |
| 5. Evaluate – Make judgments based on criteria and standards | | |
| 5.1 Checking | Coordinating<br>Detecting | Detecting inconsistencies or fallacies within a process or |

| | | |
|---|---|---|
| | Monitoring Testing | product; determining whether a process or product has internal consistency; detecting the effectiveness of a procedure as it is being implemented (e.g., determine if a researcher's conclusions follow from observed data) |
| 5.2 Critiquing | Judging | Detecting in the consistencies between a product and external criteria, determining whether a product has external consistency; detecting the appropriateness of a procedure for a given problem (e.g., judge between two methods is the best way to solve a given problem) |
| 6. Create – Put elements together to form a coherent or functional whole; reorganizing elements into a new pattern or structure | | |
| 6.1 Generating | Hypothesizing | Coming up with alternative hypotheses based on criteria (e.g., general hypotheses to explain for an observed phenomenon) |
| 6.2 Planning | Designing | Devising a procedure for accomplishing some task (e.g., plan a research paper on a given topic) |
| 6.3 Producing | Constructing | Inventing a product (e.g., build a typical location for a specific purpose) |

The table of instructional verbs and question stems for each level of cognitive dimension in the revised Bloom's Taxonomy below was used to identify each question as the object of this study. The operational verb was used by Anderson (2001) and the questions stems was adopted from Danise Tarlinton (as cited in Arolina, 2021).

Table 2
Operational Verbs and Question Stems for Each Level of Cognitive Dimension in Revised Bloom's Taxonomy

| No. | Cognitive Dimension | Operational Verbs | Question Stems |
|---|---|---|---|
| 1. | Remembering (C1) | remembering, listing, repeating, imitating, knowing, mentioning, identifying | • What happened after..?<br>• How many...?<br>• What is...?<br>• Who was it that...?<br>• Name...<br>• Find the definition of...<br>• Describe what happened after...<br>• Who spoke to...? |
| 2. | Understanding (C2) | explaining, clarifying, accepting, reporting, describing, distinguishing, repeating | • Explain why...<br>• Write in your own words...<br>• Would you feel if...?<br>• How effective are...?<br>• What are the consequences<br>• How would you explain...<br>• Write a brief outline...<br>• What do you think could have happened next...?<br>• Who do you think...?<br>• What was the main idea...?<br>• Clarify...<br>• Illustrate... |
| 3. | Applying (C3) | using, demonstrating, illustrating, operating, clarifying, checking, using | • Explain another instance where…<br>• Group by characteristics such as...<br>• Which factors would you change if...? |

| | | | |
|---|---|---|---|
| | | | • What questions would you ask of...?<br>• From the information given, develop a set of instructions about… |
| 4. | Analyzing (C4) | comparing, checking, critiquing, assessing, analyzing categorizing, differentiating | • Which events could not have happened?<br>• If... happened, what might the ending have been?<br>• How is...similar to...?<br>• What do you see as other possible outcomes?<br>• Why did...changes occur?<br>• Explain what must have happened when...<br>• What are some of the problems of...?<br>• Distinguish between...<br>• What were some of the motives behind...? |
| 5. | Evaluating (C5) | evaluating, assessing, refuting, deciding, concluding, supporting, checking | • Judge the value of…<br>• What do you think about...?<br>• Defend your position about...<br>• Do you think...is a good or bad thing?<br>• How would you have handled...?<br>• What changes to...would you recommend?<br>• Do you believe...?<br>• What influence will...have on our lives?<br>• What are the pros and cons of...? |

| | | | |
|---|---|---|---|
| | | | • Why is...of value?<br>• What are the alternatives?<br>• Who will gain & who will lose? |
| 6. | Creating (C6) | constructing, designing, creating, developing, writing, arranging, formulating | • Design a...to...<br>• Devise a possible solution to...<br>• If you had access to all resources, how would you deal with...?<br>• Devise your own way to...<br>• What would happen if...?<br>• How many ways can you...?<br>• Create new and unusual uses for...<br>• Develop a proposal which would... |

## B. Classification of LOTS and HOTS

Within the cognitive process dimension, Bloom established six levels, from the simple reminder or identification of information, as the lowest level, increasingly by mental stages, more complex and abstract, to the highest order. Lower order thinking is the foundation of skills required to move into higher-order thinking (Bloom, 1956 as cited in Fachrunnisa et al., 2020) The skills needed to transition into higher-order thinking are built on the foundation of lower-order thinking. These abilities are effectively taught in educational institutions, and include tasks like reading and writing. When faced with new problems and questions, Bloom (1956) claimed that HOTS represent critical, logical, reflective, metacognitive, and creative thinking that is engaged.

Moreover, Bloom's taxonomy after being revised by Anderson, L. and Krathwohl, D (2001) has six level of cognitive dimension that

indicate action namely remembering, understanding, applying, analyzing, evaluating and creating (Anderson et al., 2001). Three up levels; C6, C5, C4 (evaluating, creating and analyzing) is called higher order thinking skill (HOTS). Students are stated to engage in designing, building, planning, producing, inventing, checking, hypothesizing, criticizing, experimenting, judging, comparing, organizing, deconstructing, questioning, and finding at the higher stages of thinking. Then, the three down levels, C3, C2, C1 (understanding, remembering, and applying) are called lower-order thinking skills or ability (LOTS). In lower-order thinking information needs to be recalled and slightly understood and applied to any real life examples.

UIN PROF. KH. SAIFUDDIN ZUHRI

# CHAPTER III
# METHODOLOGY

This chapter describes the research methodology. This chapter consists of research design, data sources, data collection techniques and data analysis techniques.

## A. Research Design

This study focused on document analysis using the descriptive qualitative method. According to Cresswell (2012, as cited in Purnama, 2022), qualitative research offers the chance to investigate an issue, acquire a thorough grasp of the central phenomenon, use text analysis to uncover descriptions and themes in the data, and evaluate the larger implications of the findings. Content or document analysis as a research technique used to identify certain characteristics of ctextual or visual resources (Ary et al., 2014). Textbooks, newspapers, online pages, speeches, television shows, commercials, musical compositions, and a wide variety of other forms of documents can all be included in the materials being studied.

Content analysis or document analysis method was used in this study because this research analyzed the items of daily tests based on the cognitive process of revised bloom's Taxonomy. The source of data is the daily test prepared by an English Teacher, the English teacher for the Eleventh Grade Students of SMA N 1 Bobotsari in the first semester of the academic year of 2021/2022.

This research was conducted by analyzing the data and then categorizing the data into the cognitive process of Revised Bloom's Taxonomy and followed by calculating the percentage of the mostly implemented level of thinking process in English summative test. The analysis will be created by collecting the understanding about six levels of cognitive dimension from the revised edition of Bloom's Taxonomy. Additionally, the researcher used the checklist table to assess the level of

thinking abilities based on the Revised Bloom's Taxonomy after collecting data. The distribution of HOTS and LOTS in the test items was then measured by the researcher using the percentage of each level of thinking. Finally, the researcher used descriptive analysis to interpret the findings of the data analysis.

## B. Research Site and Participants

This research is located at SMA N 1 Bobotsari, Purbalingga, Central Java. The reason for choosing the location of SMA N 1 Bobotsari is because this school is one of the Senior High School in Purbalingga who has good accreditation and one of favourite school in Bobotsari. This school has many of student achievements such in English competition. The Teacher has various kinds of innovative and creative learning process including in doing assessment. Based on the results of the former interview that was done with a teacher who teach for the second grade students of SMA N 1 Bobotsari, the test as a part of students' assessment is usually arranged in various forms according to the teacher who arranged it. The total student of second grader at SMA N 1 Bobotsari is 362 students and is divided into ten classes. The data was obtained from September 2022 until October 2022 after getting the permission from the English teacher.

## C. Object and Subject of the Research

1. Object of the Research

The data of this research was collected from the questions of English daily test for eleventh-grade students of SMA N 1 Bobotsari Purbalingga in the 2022/2023 academic year given by the English Teacher. The daily test was given to students through online and offline. It consists of 58 total questions. The daily test that was given through online was used a platform, namely 'liveworksheet'. Liveworksheet allows the teacher to transform the traditional printable

worksheet into interactive online exercises. Teachers are able to upload their document as the exercise for the students or they can use another teachers' document, which has been uploaded there. Liveworksheet has thousands collections of interactive worksheet that can be used by the teacher to prepare an assessment for their students. Students can do the worksheet online and send their answers directly to the teacher through an email account. Students and teacher have their username account and password to enter the worksheet and do the exercise. Teachers are possible to get the answer from the students directly through their email.

The research's main tool is a content analysis for an English assessment prepared by the English teacher. This study focuses on the test questions at the level of the Revised Bloom Taxonomy's cognitive dimension. The cognitive dimension of the revised Bloom's Taxonomy table was used to determine the level of each question is based on remembering (C1), understanding (C2), applying (C3), analyzing (C4), evaluating (C5), or creating (C6). After analyzing each question in accordance with its level, quantitative data will demonstrate the percentage of which level in the revised Bloom's Taxonomy's cognitive dimension was applied more frequently and less frequently during the test.

2. The subject of the Research

The subject in this research is an English teacher. A research subject is a person who participates in the research of a human subject by being the object of the researcher's observation. The selection of participants was based on purposive sampling. As Sugiyono (2013) stated, purposive sampling is the selection of individuals suitable for their research as a sample based on the researcher's goals. Therefore, using this kind of sampling helps researchers to select samples suitable for research purposes.

Moreover, the subject of this study is English teacher of SMA N 1 Bobotsari Purbalingga who teaches in the eleventh grade of 2022/2023 academic year. There are two English teachers who teach in eleventh grade of SMA N 1 Bobotsari Purbalingga at the first semester of 2022/2023 academic year. This research chose one English teachers who teach in the science program of the eleventh grade. The reason for choosing her as an informant was based on the results of previous interviews; she met the criteria needed by researchers in collecting data to be used in this study. She is an English teacher who teaches the eleventh grade, where the second grade is the last grade in this school to use the 2013 curriculum as the teaching curriculum in the 2022/2023 school year. She teaches in a science program where the science program in that school is more favourable for the students. Additionally, she is the youngest English teacher in that school and is known to have an innovative and creative learning system also, she is one of favorite English teachers based on students' perceptions. Furthermore, as we know, the second grade is a productive grade where many students take part in various competitions, especially in English subjects. Based on previous data, several students at this level have won several English competitions. For this reason, the role of teachers is very important in assisting students to achieve many achievements. This research is intended to find out how the cognitive level in each item compiled by the teacher is in the formative test which is carried out along the half of first semester.

## D. Data Collection Technique

The data collection technique in this research was documentation. The documentation technique is a way to collect data through document analysis. Document is the records of past events, which consisted of scripts, pictures, or other personal's monumental works (Sugiyono, 2013).

Meanwhile, Creswell (2014) stated the researcher might gather qualitative documents during the research process. Public records like newspapers, meeting minutes, and government reports as well as private documents are both possible (e.g., personal journals and diaries, letters, e-mails). In this research, the researcher used the public documents. The documents used by the researcher are the questions sheet of the daily test for eleventh-grade students of SMA N 1 Bobotsari in academic year of 2022/2023. Firstly, the researcher categorized the type of information based on the frameworks that have been created. Then, the data was analyzed based on the theory used.

After gathering the data, the researcher divided it according to the Revised Bloom's taxonomy to assess the level of cognitive process involved in each question. The six categories that build up the theory of cognitive domain are: remember (C1), understand (C2), apply (C3), analyze (C4), evaluate (C5), and create (C6). Remembering, understanding, and applying are examples of lower order thinking skills (LOTS). The revised edition of Bloom's Taxonomy classifies analyzing, evaluating, and creating as high-order thinking skills (HOTS). The table below contains an analysis of the data for the cognitive dimension of the revised Bloom's Taxonomy utilized in this study:

Table 3
Data Analysis Table of Cognitive Dimension of Revised Bloom's Taxonomy

| **Number of Questions** | **Operational Verb/Questioning Stems** | **Cognitive Level** | | | | | |
|---|---|---|---|---|---|---|---|
| | | **Lower-Order Thinking Skill (LOTS)** | | | **Higher-Order Thinking Skill (HOTS)** | | |
| | | C1 | C2 | C3 | C4 | C5 | C6 |
| *The number of the test item* | *Operational verb or questioning stems that are stated in the test.* | *The appropriate cognitive level of the instructional item based on Revised Bloom's Taxonomy* | | | | | |

## E. Data Analysis

After collecting the data, the next step is analyzing the data. This study used content analysis, which investigates information that has been recorded in text, media, or physical objects. This research, it is analyzing formative assessment for eleventh-grade students of SMA N 1 Bobotsari Purbalingga in the 2022/2023 academic year. The researcher's method for analyzing the data in this study consists of a number of steps. The data will be analyzed in four steps: identifying, classifying, calculating and displaying.

a) Identifying

This step was done by identifying each test item which were used in the test sheet. The activity in this step is reading the instructional verbs or question stems one by one in the English daily test to identify the question itself, then give a code in each question which has similar questioning stems.

b) Classifying

Sorting the data into test item categories is the task to be completed in this section. According to the checklist table of the cognitive dimension in the Revised Bloom's Taxonomy, this technique is used to categorize the instructional verbs, or questioning stems one by one in order to determine the level it applied in the questions: remembering (C1), understanding (C2), applying (C3), analyzing (C4), evaluating (C5), and creating (C6). The emphasis is on the lower (LOTS) and higher level (HOTS) categories of each item according to the revised Bloom's taxonomy. The researcher used indicators of the operational verb for the questions by Anderson and Krathwohl to classify the data into what level the question belongs to.

c) Calculating

In this stage, the researcher counts the number of each level cognitive dimension used in every question. Also, calculate which order thinking skill that more dominant or less applied in the questions of daily test as student assessment. The researcher used the following formula to calculate the percentages of each component of the cognitive dimension and the two thinking orders:

$$\frac{X}{Y} \text{ X } 100\% = \%$$

In which:

X: the number of question with C1/C2/C3/C4/C5/C6

Y: the total number of questions in a part/unit.

In addition to the previously mentioned procedure, the researcher used a calculator to compute the data and Microsoft Excel 2010 to create pie charts to display the findings.

d) Displaying

In this stage of data analysis, the researcher illustrated the finding of the study by describing how the data analysis findings were interpreted.

# CHAPTER IV
# FINDINGS AND DISCUSSION

This chapter discusses the analysis of the cognitive dimension applied in the English daily test for eleventh-grade students of SMA N 1 Bobotsari. The data to support the discussion were obtained through documentation. The discussion is divided into two parts, the first is about the mostly applied cognitive dimension of Revised Bloom's Taxonomy, and the second is about the percentage of LOTS and HOTS in the English formative test items for eleventh-grade students of SMA N 1 Bobotsari.

## A. The mostly applied Cognitive Dimension in the English Formative Assessment Items for Eleventh Grade Students of SMA N 1 Bobotsari

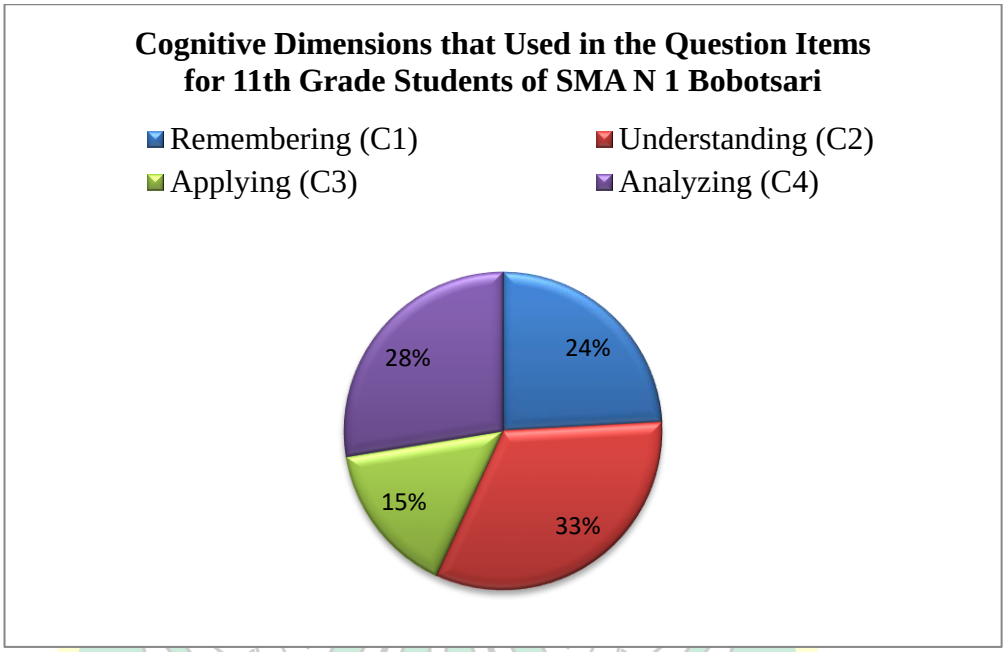
The result of the analysis of the cognitive dimension, which has been applied in the questions items of formative assessment, is shown in the table below:

Table 4
Classification and Frequency of Cognitive Dimension

| No. | Classification of Cognitive Level | Frequency of Questions Items |
|---|---|---|
| 1. | Remembering (C1) | 14 |
| 2. | Understanding (C2) | 19 |
| 3. | Applying (C3) | 9 |
| 4. | Analyzing (C4) | 16 |
| 5. | Evaluating (C5) | 0 |
| 6. | Creating (C6) | 0 |
| Total | | 58 |

Based on table 5 there were 14 items of questions in remembering level (C1), 19 items of questions of understanding level (C2), 9 items of questions in applying level (C3) and 16 items of total questions in analyzing level (C4). So the most applied cognitive level in question is the understanding level (C2) with 19 items of the total questions. The distribution of the cognitive dimensions presented in the chart below:

Picture 3
Cognitive Dimensions that Used in the Question Items for Eleventh-Grade Students of SMA N 1 Bobotsari




Based on Picture 3, it is shown that there are only four levels of cognitive dimension in Revised Bloom Taxonomy that are applied for the question items in English formative assessment for eleventh-grade students of SMA N 1 Bobotsari. Those levels are remembering, understanding, applying and analyzing. To answer the first question of this research, so it can be said that the most dominant level that has been applied for the question items in the English formative assessment for the eleventh grade of SMA N 1 Bobotsari based on Revised Bloom's Taxonomy is C2 or Understanding level.

The first step used by the researcher to analyze the data is to identify each of the questions in the test. In SMA N 1 Bobotsari, along half of the first semester in eleventh grade, there were five daily tests given to the students in the typical of reading test. Four of five tests were carried out online. There were 3 materials tested in the test, namely asking and giving opinion, the second was asking and giving suggestions and

offering, and the last was analytical exposition. Regarding the material on asking and giving an opinion, the first test that was tested was in the form of an objective test, and it consisted of one questioning stem with 15 statements. The second test for asking and giving an opinion is also in the form of an objective test consisting of 10 questions with multiple-choice answers. For asking and giving suggestions and offering material, there are 20 multiple-choice questions and one question in the form of a true-false question. As for the analytical exposition material, the questions consist of 20 numbers still in the form of multiple-choice questions. So the total number of questions in the daily test, which were carried out online was 42 questions. The display of all questions is presented in the appendix at the end of this research.

Furthermore, one of the daily tests that became the object of this research came from daily test question items of the eleventh grade, which were carried out offline. It has 6 question items consisting of several tasks with several sub-units to be completed by students with the right answer. The types of questions are in the form of objective tests. Therefore the total question used by English teachers for the daily test is 58 items.

After identifying all the 58 questions of the test, the next step is classifying the question items into what they are supposed to place between C1/C2/C3/C4/C5/C6 by using the checklist table below:

Table 5
Data Analysis of Cognitive Dimension of Revised Bloom's Taxonomy in English Daily Test Item for Eleventh-Grade Students of SMA N 1 Bobotsari

| **Number of Questions** | **Operational Verb** | **Lower-Order Thinking Skills (LOTS)** | | | **Higher-Order Thinking Skills (HOTS)** | | |
|---|---|---|---|---|---|---|---|
| | | C1 | C2 | C3 | C4 | C5 | C6 |
| **Daily Test 1** | | | | | | | |
| 1 | Classifying the statement into the right expression | | √ | | | | |
| **Daily Test 2** | | | | | | | |
| 1, 2, 3, 4, 6, 10 | Analyzing the suitable expression in giving opinion to complete the dialogue | | | | √ | | |
| 5 | Using the appropriate word in asking for opinion to complete the dialogue | | | √ | | | |
| 7, 8 | Classifying the right expression used by a certain speaker | | √ | | | | |
| 9 | Concluding the statement based on the dialogue | | √ | | | | |
| **Daily Test 3** | | | | | | | |
| 1a, 2, 3, 4, 5, 19 | Applying the right words to complete the dialogue | | | √ | | | |
| 6, 7, | Explain the message based on the dialogue | | √ | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 8 | Classify the statement into the right expression | | √ | | | | |
| 9, 10, 16, 17, 20 | Analyzing the best expression in giving suggestions based on the question | | | | √ | | |
| 11, 12, 13, 14, | Choose the right grammatical words to complete the expression | √ | | | | | |
| 15, | Concluding the message from the dialogue | | √ | | | | |
| 18 | Using the right offering expression to complete the dialogue | | | √ | | | |
| 1b | Classify the statements between the true or false statement | | √ | | | | |
| **Daily Test 4** | | | | | | | |
| 1, 6, 7 | Identifying the name of a certain part in analytical exposition | √ | | | | | |
| 2, 4, 18, 19, | Tell the main idea of a certain paragraph | | √ | | | | |
| 3, 8, | Distinguish between the correct or incorrect statement based on the paragraph | | | | √ | | |
| 5, 10, 12, 14, 20, | Recalling the synonym of a certain word | √ | | | | | |
| 9 | Detect the impact of the text on the reader | | | | √ | | |
| 11 | Reviewing the | | √ | | | | |

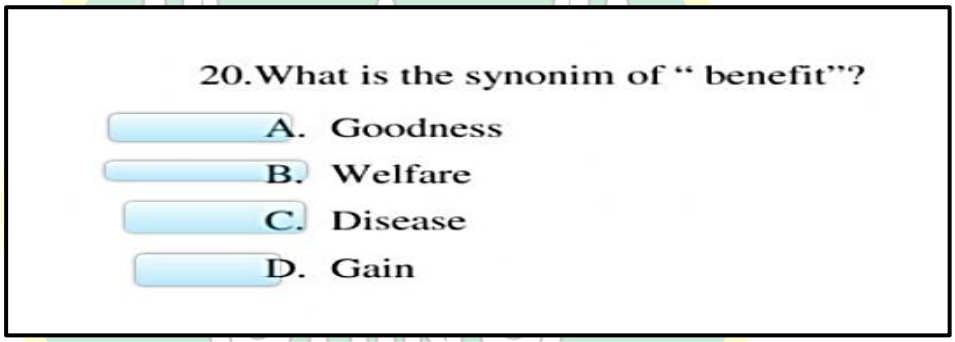
| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | definition of word in a simple way based on the text | | | | | | |
| 13, | Describing the effect of cramming based on the paragraph in simple way | | √ | | | | |
| 15, | Explain the bed effect of cramming on students based on the paragraph | | √ | | | | |
| 16, | Identify the function of a certain part in analytical exposition | √ | | | | | |
| 17 | Explain the importance of learning English based on the text | | √ | | | | |
| **Daily Test 5** | | | | | | | |
| Task 1, task 3 part 2 | Inferring the statement which is true or false based on the dialogue | | √ | | | | |
| Task 2 | Differentiating the statement between polite and less polite | | | | √ | | |
| Task 3 part 1 | Apply the right word to complete the sentence | | | √ | | | |
| Task 3 part 2 | Match the vocabulary with the definition | √ | | | | | |
| Task 3 part 3 | Choosing five possible expressions in answering the question or responding the statements | | | | √ | | |

The level of cognitive dimension in Revised Bloom's Taxonomy that has been applied in the question of daily tests for the eleventh grade of SMA N 1 Bobotsari would be explained one by one as below:

1. Remember Level (C1)

   This stage is included in the small-order thinking skills and is the lowest and easiest process in the Revised Bloom's Taxonomy. Memory for retrieving relevant knowledge from long-term memory is important. Problems at this level include retrieving relevant knowledge from long-term memory or retrieving information from the text (Anderson et al., 2001).

   Example 1:


20.What is the synonim of " benefit"?

A. Goodness
B. Welfare
C. Disease
D. Gain

   In this section, students are faced with questions about the synonym of a word, namely benefit. To find answers about the synonyms of these words, students will process the memory of the knowledge they have learned before. The ability of students to recall the vocabulary they learned before is included in the cognitive domain C1 or remembering. So it can be said that this question is entered at level C1 or remembering level based on the Revised Bloom's Taxonomy table.

Example 2:

**Match the vocabulary with the definitions and write a–f next to the numbers 1–6.**

| | |
|---|---|
| 1…. awful | a. excellent |
| 2…. No way! | b. a lot |
| 3…. strict | c. really bad |
| 4…. loads | d. doesn't let anyone break the rules |
| 5…. Embarrassing | e. That's impossible! |
| 6…. brilliant | f. making you feel stupid or confused in front of other people |

In this part of question items, students are asked to pair the vocabulary (on the left) with its definition (on the right) by writing the letters a-f according to the correct answer. In this type of match, there are six numbers with six vocabularies that students must answer the definition correctly. This kind of question has an instructional verb that is to identify the meaning of the word that was mentioned in the text written before. The students must be able to remember the material about the definition of the vocabulary mentioned in order to be able to answer the questions correctly. So this question can be classified into the C1 cognitive domain or remembering level.

2. Understand level (C2)

Understanding involves determining the meaning of instructional messages, including those presented orally, in writing, and visually (Anderson et al., 2001). Understanding has seven divisions; interpreting, exemplifying, classifying, summarizing, inferring, comparing, and explaining. Interpreting means changing information obtained in another form. Exemplifying is finding a specific example of a general concept or principle. Classifying means identifying something that belongs to a certain category. Summarizing means produces a short explanation about providing information or to summarize general information theme. Inferring means drawing a logical conclusion from the information provided. Comparing means identify similarities and differences between two or more objects,

ideas, questions or situations. Explaining means constructing and using causal models of a system or series.

Example 1:

**The Importance of Learning English**

In this modern era, there are a lot of people who still can't speak English. Actually, there are many benefits of learning English. Here are two reasons why it's important.

First, English opens new career opportunities. These days, many companies need employees who can communicate with clients from around the world. Usually, it means someone who can speak English because English is an international language. Being a bilingual person, you can get the opportunity to work in a global company.

Second, English tests can get you into schools. You probably already know English tests such as TOEFL and IELTS. If you learn English well enough to pass English tests like TOEFL, you can study in English-language universities across the globe. Although you aren't going to study abroad, learning English can help you in making the thesis because there are a lot of sources use English languages.

There are indeed many other benefits of learning the English language. But, the two reasons above help us to believe that English is important for our life and by learning English languages we can communicate with many people from other countries.

https://blog.cakap.com/apa-itu-analytical-exposition-text/

19.What is the main idea of the last paragraph?

A. English is to communicate with native only.
B. English is important to enhance our life.
C. English gives a chance to learn more about life.
D. English gives benefit for the learners only.

In this type of question, the instructional verb used is finding the main idea in paragraph 1. At this stage the student's ability is tested at the stage of understanding the main idea of a paragraph in the text presented. Students should read all the parts of paragraph to get the main idea. This process of summarizing the paragraph into one sentence that being the main idea of building the paragraph included in level C2 or understanding.

Example 2:

**Circle True or False for these sentences.**

| | | |
|---|---|---|
| 1. Gemma and Jack both had good holidays. | T | F |
| 2. Jack enjoyed his French lesson. | T | F |
| 3. Gemma thinks Madame Martin is a good teacher. | T | F |
| 4. Jack doesn't like speaking French. | T | F |
| 5. Jack is happy with his maths teacher. | T | F |
| 6. Jack hates Mr Greenwood. | T | F |
| 7. Jack changes his mind about Mr Greenwood when he talks to Gemma. | T | F |
| 8. Jack and Gemma both like Miss McCloud. | T | F |

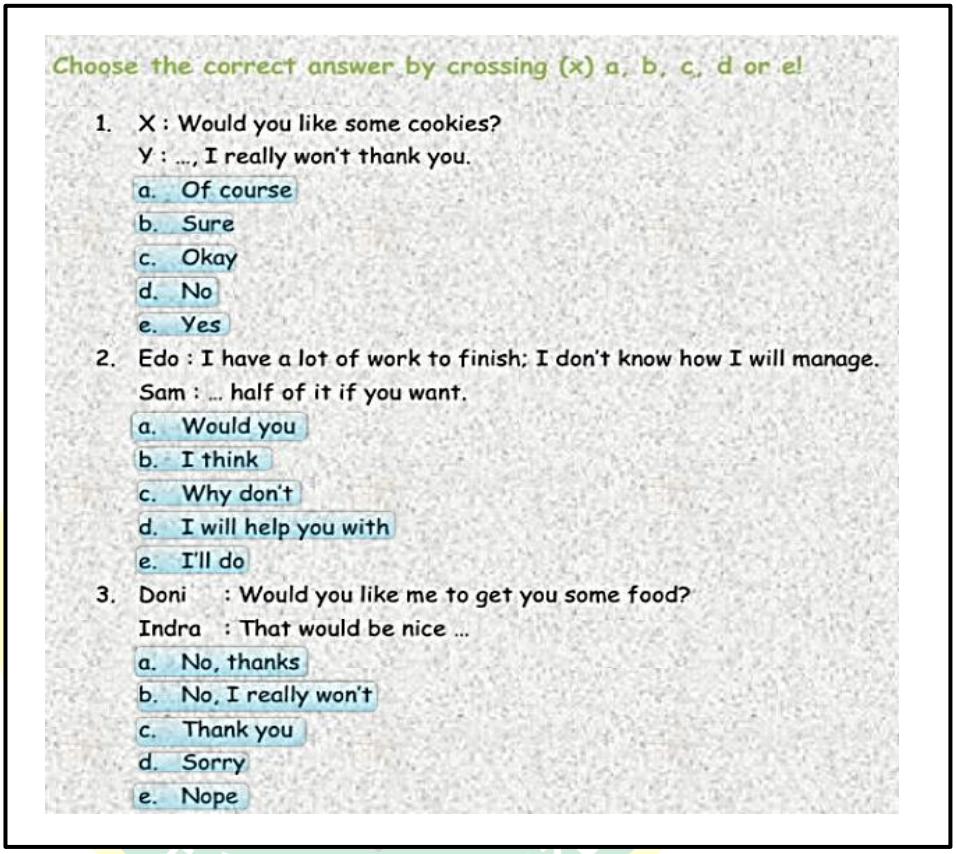
In task 3 part 1 above, students are faced with a true-false type of question. A dialogue is provided between two people, and students are asked to answer eight statements, which one is a true statement and which one is a false statement based on the dialogue given. To answer these questions, students need to understand the information that was stated in the dialogue.

3. Apply Level (C3)

Apply level is a process using a procedure in a given situation. Student ability was assessed in applying a procedure to a familiar task and unfamiliar tasks (Anderson et al., 2001). Students can enhance their approach to problem-solving if they already understand it. However, if the student does not understand of the method utilized the students must come up with a different way to approach the issue. When the activity was a routine exercise, students typically used the

strategy without much thinking. When the task involves a topic the students are unfamiliar with, they must decide what data they can use. The operational verb is mainly used in the application processes for completion and use.

Example 1:


Choose the correct answer by crossing (x) a, b, c, d or e!

1. X : Would you like some cookies?
   Y : ..., I really won't thank you.
   a. Of course
   b. Sure
   c. Okay
   d. No
   e. Yes
2. Edo : I have a lot of work to finish; I don't know how I will manage.
   Sam : ... half of it if you want.
   a. Would you
   b. I think
   c. Why don't
   d. I will help you with
   e. I'll do
3. Doni : Would you like me to get you some food?
   Indra : That would be nice ...
   a. No, thanks
   b. No, I really won't
   c. Thank you
   d. Sorry
   e. Nope

For the next example, those questions require the student's knowledge in applying the right expression in the blank. This question is intended to assess the student's capacity to apply what they have learnt in new circumstances. Students must use the appropriate expression in each case. In order to complete the dialogue by inserting the appropriate expression into the blank, the students must also produce and recall from memory the concepts and details that are expressly presented in the dialogue.

Example 2:

**Task 3: Complete the sentences with the words in the box**.

do / doing/ should/ suggested/ sure/ too/ try/ were

1. What do you think I …… do?
2. If I …… you, I'd ask her to stop.
3. I'm not …… that's a good idea.
4. Perhaps you could …… talking to Noelia about it.
5. Why don't you try …… nothing?
6. Perhaps you could just …… nothing.
7. I'm not …… sure about that.
8. So, I tried what you ……

In task 3 of the test, students are asked to complete the gap text. In this section, there are eight incomplete sentences and students are asked to complete them according to the words that are already available in the box.

As seen in items 1 to 8 in Task 3, students have to complete the dialogue using the suitable word provided in the table. The instructions of task 3 show that the students need to use a suitable word to complete the sentence based on the context of the sentence. So this question can be included in the level of C3 or applying level.

4. Analyze Level (C4)

Analyzing is the first level in the highest level of question. The ability of the pupils to recognize, isolate, and distinguish the parts or elements of a fact, concept, opinion, assumption, hypothesis, or conclusion—and then to investigate each of these parts to determine whether or not a contradiction exists—is the level of analysis (Anderson et al., 2001). At this level, students are required to show the

connections between various concepts by comparing them with previously learned standards, principles, or methods.

Example:

**Choose 5 possible answers of each question**

| **How was your summer holiday?** | **He's my favourite.** | **She's strict but you learn loads in her classes.** | **Miss McCloud's a brilliant teacher.** |
|---|---|---|---|
| P<br>○ Yeah, definitely.<br>○ Good, thanks.<br>○ Mmm, it was all right.<br>○ Amazing!<br>○ Great, thanks.<br>○ Not really.<br>○ He was nice.<br>○ Awful. | ○ Really?!<br>○ Yeah, mine too.<br>○ I don't think so.<br>○ No way!<br>○ Is he?!<br>○ Me neither.<br>○ Yeah! I like him too.<br>○ When? | ○ Why not?<br>○ No.<br>○ Yeah, I see your point.<br>○ Let's agree.<br>○ Yeah, I see what you mean.<br>○ But she makes you speak French all the time!<br>○ Yeah, but it's so embarrassing!<br>○ That's true. | ○ I know! I love her!<br>○ It's OK.<br>○ Yeah, I agree with you there.<br>○ It was awful.<br>○ Do you like her? I'm not sure.<br>○ Yes, she is!<br>○ Finally, we agree about something!<br>Don't worry. |

At the end part of the offline test, students are instructed to choose several possible answers to a question. There are four questions, each of which has five possible answers according to the question. Students must choose five answers from the seven or eight answers that have been provided.

In this question item, students' abilities are tested at the analysis level. The questions are presented with the verb choose. Students are asked to choose which answer might be used according to the question. In this question, the actual instructional verb used could fall into the C1 or C2 category, namely ‘Choose’. However, looking at the context of the definitions that fall into the realms of C1 and C2, they do not meet the criteria. In this type of question, students not only recall the material that has been studied but are required to understand what the message from the questions presented is and then sort out the 5 correct answers among the eight available answers. The instructional verb

used in this question is analyzing. Students need to sort the possible expression to be used based on the question or statements presented before. The ability of students to sort out what is suitable among those that are not suitable as an answer to a question is included in the category of level analysis with differentiating sub-units. In this section, the student needs to distinguish relevant from irrelevant parts of the presented material.

According to the analysis performed by the researcher, not all of the questions on the daily test for SMA N 1 Bobotsari's eleventh grade utilized the cognitive dimension from the revised Bloom's Taxonomy. The teacher who composed the test did not spread all the cognitive dimensions for the questions in the test. But, one other level applied has different amounts to be used. The most applied cognitive dimension in the test is understanding.

In the understanding level, students should be able to understand if they can construct the meaning of learning messages both in oral, written, and graphical form conveyed through teaching, presentation in books, and presentation through computer screens. Students understand when they connect the new knowledge they are learning with the knowledge they already have. The number of question items used understanding is 19 of 58 or 33% of all the question items.

Furthermore, the second most frequently applied in the test questions is Analyzing level used for 28% of all the question items or 16 of 58 question items. The third most frequently applied is remembering, with 24% of all the question items or 14 of 58 question items. The following level, with 15% applied in the test, is applying level with the number of question items used are 9 of 58. Two last cognitive levels are evaluate and create level which has 0% and 0% with 0 of 58 and 0 of 58, so they were not used at all in the test items.

**B. The Percentage of LOTS and HOTS in the English Formative Assessment for Eleventh-Grade Students of SMA N 1 Bobotsari**

The second research question of this study, to determine the percentage between LOTS and HOTS on the test, is answered after identifying the data for each question in the eleventh-grade daily test of SMA N 1 Bobotsari Purbalingga. After being classified into its categories, the following table displays the percentage results for each of the test's cognitive dimensions:

Calculated with

$$\frac{X}{Y} \text{ X } 100\% = \%$$

In which:

X: the number of question with C1/C2/C3/C4/C5/C6

Y: the total number of questions

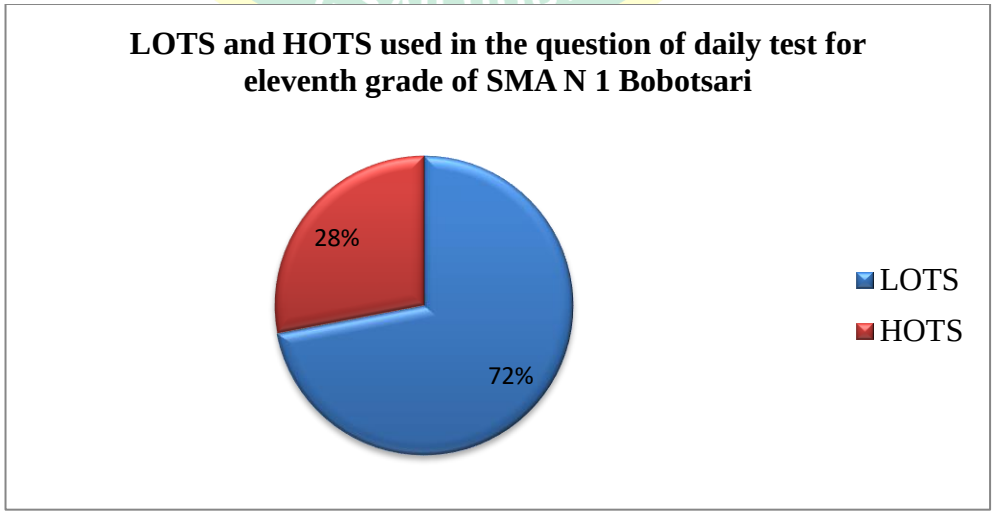
Based on Anderson (2001), three up levels of cognitive dimension, C6, C5, and C4 (evaluating, creating and analyzing), called higher-order thinking skills (HOTS). Students are stated to engage in designing, building, planning, producing, inventing, checking, hypothesizing, criticizing, experimenting, judging, comparing, organizing, deconstructing, questioning, and finding at the higher stages of thinking (HOTS). Then, the three down levels, C3, C2, and C1 (understanding, remembering, and applying), are called lower-order thinking skills or ability (LOTS). In lower-order thinking information needs to be recalled and slightly understood and applied to any real-life examples. The result of the percentage between LOTS and HOTS in question items can be seen at the table below:

Table 6
Percentage of LOTS and HOTS in English Daily Test for Eleventh-Grade Students of SMA N 1 Bobotsari

| No. | Cognitive Level | | Frequencies | Percentage | |
|---|---|---|---|---|---|
| 1. | **LOTS** | C1 | 14 | 24,14% | **72,41%** |
| 2. | | C2 | 19 | 32,76% | |
| 3. | | C3 | 9 | 15,51% | |
| 4. | **HOTS** | C4 | 16 | 27,59% | **27,59%** |
| 5. | | C5 | 0 | 0,00% | |
| 6. | | C6 | 0 | 0,00% | |
| | Total | | 58 | 100,00% | 100% |

Based on table 6, it is said that the question items with lower-order thinking skills in the question of daily test for second grade of SMA N 1 Bobotsari are 72,41% or 72%. The number of question items used in lower-order thinking is 42 question items. The manifestation of higher-order thinking skills is 16 question items; it reaches 27,59% or 28% out of 100%. It is shown that the percentage in the use of lower-order thinking skills for the questions in daily assessment for the eleventh grade of SMA N 1 Bobotsari is higher than the use of higher-order thinking skills. It is 72% of all the question items.

Picture 4
LOTS and HOTS Used in the Question of the Daily Test for the Eleventh-Grade of SMA N 1 Bobotsari



According to the picture 4 above, the use of LOTS for the question items in the daily test for SMA N 1 Bobotsari's eleventh grade is more significant than the use of HOTS alone. Only 28% of the total were question items using the HOTS model. However, the use of LOTS received 72% of the total. By the data shown in the table, the numbers used of LOTS and HOTS are different. The gap for the total number of LOTS and HOTS in the test is 28 questions. It reveals that most of the questions used are to train students in recognizing, understanding and applying the knowledge they previously learned; where these abilities can be categorized at the LOTS level questions, and only 28% of the questions can train students' abilities to think critically, to think creatively, to be problem solvers, and have a decision maker competencies where these abilities are classified into HOTS level thinking abilities.

It is not an easy task to implement Revised Bloom's Taxonomy in testing, especially those consisting of several types of test items. Since each cognitive level's action verbs are rarely found in the test parts tested in this study and Bloom's categorization of each cognitive level is still conceptual, it is necessary to have a careful and comprehensive observation of the instructions on each part of the test and on the test item itself. In addition, even though it has an important part of the 2013 curriculum, in fact, the implementation of learning using HOTS in Indonesia is still slowly being applied in the teaching and learning process (Arolina, 2021). Furthermore, Srihidayanti (2015) claims that some Indonesian teachers struggle to decide on assessments that are based on suitable core competency, basic competence, and indicator. However, in this case of giving formative assessment questions, teachers have managed to show that there is a HOTS-based learning process integrated into formative assessment questions, even though the percentage is still below 50%. Referring to the HOTS component applied to the government's evaluation instrument in the form of the National Examination; these

questions are close to the percentage used by the government, which is 10% of the total questions used for the national exam.

The analysis above, it revealed that the use of LOTS is higher than the use of HOTS for the question items in the formative assessment of eleventh-grade students of SMA N 1 Bobotsari in the first semester of 2022/2023. The percentage in the chart from picture 4 is shown that the use of LOTS is 72% and HOTS is 28%. The result of LOTS and HOTS percentage is nearly in line with the result of the research by Sri Aprilia Anwar (2020) where the use of LOTS and HOTS in the English test of Junior High School UNISMUH Makassar l does not balance. The percentage of LOTS is 74% of the total questions. Other research that has a similar result came from Putry Sari Dewi (2022), where LOTS is the dominant level used in the test. Dewi's research showed that the test has 90% of LOTS questions. Then, other research about cognitive domain analysis by Imanuel Kamsalasi and Anselmus Sahan (2018) also showed that based on the result of data analysis from English test items, the higher order level obtained 10% out of 100%. The results nearly in line with this research findings show that the use of LOTS and HOTS is still not proportional. Most of the test items were dominated by LOTS.

# CHAPTER V
# CONCLUSION AND SUGGESTION

## A. Conclusion

Following a review of the English formative assessment in the form of a daily test for students in the eleventh grade at SMA N 1 Bobotsari based on the cognitive dimension of Bloom Taxonomy in the preceding chapter, 58 total questions were used by an English teacher in the eleventh grade that was created by using various levels of the cognitive process. The study's findings demonstrated that the test questions did not cover all cognitive abilities. In the test, only four of the six levels were present: C1 for remembering, C2 for understanding, C3 for applying, and C4 for analyzing, which belonged to the HOTS category. The total number of thinking processes used in the test is as follows there were 42 or 72% of questions in the LOTS category, which are divided into three levels, namely remembering 14 questions or 24,14%, understanding 19 questions or 32,76%, and applying nine questions or 15,51% of the total question. While in the HOTS category only has one level, namely analyzing, which reaches 16 questions or 28% of the total question. A good test should have a cognitive level in the range of 30% of C1 and C2, 40% of C3 and C4, and 30% of C5 and C6. This result did not meet these requirements.

Based on the analysis of the researcher, the most cognitive level that has been applied in the test is the understanding level. Meanwhile, two of the cognitive levels that did not apply in the question were the evaluating level followed by the highest level, namely the creating level based on Revised Bloom's Taxonomy. The percentage between the LOTS category and the HOTS category was not proportional. The total number of LOTS-based questions was used higher than HOTS questions. It can be concluded that the daily test as the student assessment for second-grade students of *SMA N 1 Bobotsari* was dominated by LOTS questions with

understanding level as the most applied cognitive process dimension based on Revised Bloom's Taxonomy.

## B. Limitations of the Study

In order to make the research more focused and not be too far away from the discussed issues, this study limits the scope of the research as follows. First, this research only takes the assessment of the reading test to be analyzed and focuses on the cognitive dimension and does not take other assessments to be analyzed on the other dimensions based on the revised Bloom's taxonomy. Second, this study obtains the daily test within the middle of the semester in eleventh-grade students of SMA N 1 Bobotsari in the first semester of the 2022/2023 academic year and does not carry out research on further tests after the midterm. Third, this study took research data in the form of tests prepared by only one English teacher in grade 11 of the science program and did not take tests prepared by another teacher in class 11 of the social program.

## C. Suggestion

After doing research on the cognitive level of revised Bloom's taxonomy used in daily test items, here are some suggestions relevant to this research outcome based on the above conclusion. The suggestions are presented as follows:

### 1. For English Teacher

The English teacher is required to add the frequency of items used to determine the level of applying and include the level of evaluating and creating since students need to be accustomed to abstract thoughts rather than concrete ones. The questions in the test which still in the lower order thinking skill (LOTS) should be increased by the English teachers to the higher order thinking skill (HOTS). In this industry 4.0 era, Teachers must be able to include HOTS-based questions more than LOTS questions or at least balance lower-order thinking skills with higher-order thinking skills while conducting an assessment or test items, especially for senior high school students.

**2. For the Test Maker**

Test maker needs to arrange question levels based on the purpose of the test. It is appropriate to use the HOTS level more than the LOTS level refers to revised Bloom's taxonomy, especially in this 21st era which is many people are competing to innovate, so a good test item will support the development of an advanced human way of the thinking along with the resulting technological developments.

**3. For Next Researcher**

It is necessary to perform research on test item variations that take into account all levels of cognitive dimension for future researchers who wish to carry out the same study. There are currently a few studies in English that have been conducted on this issue. It might be helpful for English teachers to learn fresh knowledge about additional test item examples that were used to evaluate those levels.

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## REFERENCES


Anderson, L. W., Krathwohl, D. R., Airasian, P. W., Cruikshank, K. A., Mayer, R. E., Pintrich, P. R., Raths, J., & Wittrock, M. C. (2001). *A Taxonomy for Learning, Teaching, and Assessing : A Revision of Bloom's Taxonomy of Educational Objectives*. Longman. https://www.pdfdrive.com/a-taxonomy-for-learning-teaching-and-assessing-a-revision-of-blooms-taxonomy-of-educational-objectives-d187836328.html

Arifin, Z. (2012). Evaluasi Pembelajaran. In *Evaluasi Pembelajaran*. Direktorat Jenderal Pendidikan Islam Kementerian Agama RI.

Arolina, R. (2021). *Cognitive Dimension Analysis of Examination Preparation in" Mandiri: Practice Your English Competence" Textbook for 9th Grade of Junior High School* [IAIN PURWOKERTO]. http://repository.iainpurwokerto.ac.id/id/eprint/9610

Ary, D., Jacobs, L. C., Sorensen, C. K., & Walker, D. A. (2014). *Introduction to Research in Education 9th Edition*. Wadsworth, Cengage Learning.

Bloom, B. S. (1956). Taxonomy of Educational Objectives, The Classification of Educational Goals, Handbook 1: Cognitive Domain. In *Cataloging and Classification Quarterly* (Vol. 3, Issue 1). David McKay Company. https://doi.org/10.1300/J104v03n01_03

Brown, H. D. (2003). *Language Assessment: Principles and Classroom Practices*. Longman. https://doi.org/10.1002/9781118533406.ch15

Carr, N. T. (2011a). *Designing and Analyzing Language Tests*. Oxford University Press. https://doi.org/10.1017/S0272263112000800

Carr, N. T. (2011b). *Oxford Handbooks for Language Teachers: Designing and Analyzing Language Tests*. Oxford.

Creswell, J. W. (2014). *Research Design: Qualitative, Quantitative and Mixed Methods Approaches* (4th ed.). Sage Publications, Inc.

Darwazeh, A. N., & Branch, R. M. (2015). A Revision to The Revised Bloom's Taxonomy. *The Annual Proceedings*, *2*(19), 220–225.

Dewi, P. S. (2022). *The Analysis of Teacher-Made English Summative Test based on Higher Order Thingking Skill (HOTS) for the Eight-grade Students of SMP IT Darul Husna* (Issue 8.5.2017). Sriwijaya University.

Fachrunnisa, M., Kurniawati, N., & Ekawati, D. (2020). Indonesian EFL Teachers Competence in Constructing Lots and Hots-based Test : A Case Study in an Indonesian Secondary School. *BELTIC 2018 - 1st Bandung English*

*Language Teaching International Conference*, *105*, 468–476. https://doi.org/10.5220/0008220404680476

Fitri, Y. K., Syarif, H., & Anwar, D. (2019). The Levels of Questions Used on Reading Test with Regards to Revised Bloom's Taxonomy. *Ta'dib*, *22*(1).

Krathwohl, D. R. (2002). A Revision of Bloom's Taxonomy: An Overview. *Theory into Practice*, *41*(4), 212–219.

Kusumawanti, W. D., & Bharati, D. A. L. (2018). The effectiveness of close and explicit reading instructions to enhance reading comprehension to highy and lowly motivated students. *Journal.Unnes.Ac.Id*, *8*(1), 1–9. https://journal.unnes.ac.id/sju/index.php/eej/article/view/21995

Mahendra, I. W. E., Parmithi, N. N., Hermawan, E., Juwana, D. P., & Gunartha, I. W. (2020). Teachers ' Formative Assessment : Accessing Students ' High Order Thinking Skills ( HOTS ). *International Journal of Innovation, Creativity and Change*, *12*(12).

Mangal, S. K., & Mangal, S. (2019). *Assessment for Learning*. PHI Learning Private Limited.

Omar, N., Haris, S. S., Hassan, R., Arshad, H., Rahmat, M., Zainal, N. F. A., & Zulkifli, R. (2012). Automated Analysis of Exam Questions According to Bloom's Taxonomy. *Procedia - Social and Behavioral Sciences*, *59*(May 2014), 297–303. https://doi.org/10.1016/j.sbspro.2012.09.278

Purnama, Y. (2022). The Use of Google Translate by Islamic Education Department Students. *International Journal of Social Science, Education …*, *1*(3), 273–280. http://sinomicsjournal.com/index.php/SJ/article/view/26%0Ahttp://sinomicsjournal.com/index.php/SJ/article/download/26/24

Sidauruk, C. O., & Gultom, J. J. (2021). *Cognitive Levels of English Summative Test of Grade VIII at SMPN 2 Simanindo*. *October*, 44–53.

Srihidayanti, Ma'rufah, D. W., & Jannah, K. (2015). Teachers' Difficulties in Lesson Planning: Designing and Implementing. *The 62nd TEFLIN International Conference 2015*, 256–265. http://repository.iainpurwokerto.ac.id/10061/1/536_Srihidayanti_TEACHERS DIFFICULTIES IN LESSON PLANNING- DESIGNING AND IMPLEMENTING.pdf

Sugiyono. (2013). *Metode Penelitian Kuantitatif, Kualitatif, dan R&D*. Alfabeta.

Wilson, L. O. (2001). Anderson and Krathwohl Bloom's Taxonomy Revised Understanding the New Version of Bloom's Taxonomy. *The Second Principle*, 1–8.

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