DESIGNING HIGHER ORDER THINKING SKILLS (HOTS) ASSESSMENT FOR DIVERSE STUDENTS: TRENDS AND CHALLENGES

THESIS

Submitted in partial fulfillment of the requirement for the degree of Sarjana Pendidikan (S.Pd) in Teaching English



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ABSTRACT

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Advisors: Fitriah, PhD and Dr. Mohammad Salik, M.Ag Key words: Higher Order Thinking Skill, Trend, Challenge, Diverse Student

Designing a test with Higher Order Thinking Skills (HOTS) component is in line with the goal of the curriculum 2013 within the context of Indonesian schools. The aspect of thinking in HOTS should be attached in test items, and this may be challenging for teacher in Indonesia. This research aimed to explore the trends and challenges of Indonesia EFL teachers in designing HOTS assessment, particularly for diverse students. To explore this issue, this study interviewed four EFL teachers and analyzed their made tests. The finding indicated that teachers tend to design the test that cover three aspects of HOTS: analysis, judgment and critical thinking, and logic and reasoning skills. Also, participating teachers said that they found some challenges when designing HOTS assessment: limiting knowledge about HOTS assessment, finding a source about how to design HOTS assessment for English subject, finding idea to write question that assess HOTS, managing time, mapping learning domain, deciding level of difficulty, and building literacy assessment. This finding highlights that it is essential for English teachers to have a professional program, particularly on how to construct good test that cover the aspect of HOTS. Thus, this can minimize the challenges that the teachers found in this study.

ABSTRAK

Jannah, Indah Miftakhul. (2019). "Designing Higher Order Thinking Skill (HOTS) Assessment For Diverse Students: Trends and Challenges" An undergraduate Thesis. English Education Department. Faculty of Education and Teacher Training, Sunan Ampel State Islamic University, Suarabaya.

Kata kunci: Kemampuan berfikir tingkat tinggi, kecenderungan, tantangan

Mendesain sebuah tes yang memiliki unsur kemampuan berfikir tingkat tinggi siswa selaras dengan tujuan Kurikulum 2013 dalam konteks Sekolah Menengah Atas di Indonesia. Aspek berfikir dalam kemampuan berfikir tingkat tinggi harus diberikan dalam tes siswa, dan ini mungkin menjadi tantangan bagi guru di Indonesia. Penelitian ini bertujuan untuk mengetahui kecenderungan dan tantangan guru dalam mendesain berbasis kemampuan berfikir tingkat tinggi (HOTS) assessmen khususnya untuk siswa yang berbeda-beda. Untuk mengekplorasi masalah ini, penelitian ini mewawancarai empat guru Bahasa Inggris dan menganalisa bentuk tes mereka. Hasil dari penelitian ini mengindikasi bahwa kebanyakan guru mengukur kemampuan berfikir tingkat tinggi siswa pada 3 aspek yakni analisis, berfikir kritis, dan kemampuan bergumen yang logis. Guru mengatakan bahwa mereka menemui berbagai macam tantangan ketika mendesain HOTS assessmen:keterbatasan pengetahuan mengenai assessmen untuk HOTS, mencari sumber bacaan tentang bagaimana menyusun soal HOTS untuk mata pelajaran Bahasa Inggris, mencari ide untuk menulis pertanyaan vang mengukur HOTS. mengatur waktu, memetakan bidang pembelajaran, menentukan tingkat kesulitan, membangun assessmen literasi. Guru Bahasa Inggris harus memiliki sebuah program pelatihan lagi khususnya dalam menyusun sebuah tes untuk HOTS yang dapat melingkupi seluruh aspek berfikir dalam HOTS. Dengan begitu segala tantangan yang ditemukan dalam penelitian ini dapat diminimalisir.

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LIST OF ABBREVIATIONS

- 1. HOTS : Higher Order Thinking Skills
- 2. MAN : Madrasah Aliyah Negeri
- 3. MA : Madrasah Aliyah
- 4. K 13 : Kurikulum 2013



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CHAPTER 1 INTRODUCTION

This chapter presents the researcher's purpose in conduct this study. Then, it continues with the research questions that came up from some cases. It also continues with the objective of the study to show the aim of this research. Furthermore, scope and limitation and definition of key terms also provided in this research to avoid misunderstanding and help the reader know this study.

A. Background of Study

High Order Thinking Skills or HOTS became a hot issue when K-13 applied in Indonesia. It becomes a current issue among educators because higher order thinking skill is needed to face challenges in 21st Century. Bernie Trilling classified 21st century life skill into seven skills: (1) critical thinking (2) creativity (3) communication (4) collaboration career and learning self-reliance (5) cross cultural understanding and (6) computing / OCT literacy.¹ Critical thinking is part of Higher Order Thinking Skills by many researcher and scholars. Crowl et.al stated that "critical thinking" as a part of the process of evaluating the evidence collected in problem solving or the results produced by thinking creatively.² Additionally, 21st century life skill needs a skill that supports the quality worker in Indonesia, especially for business and industry. HOTS is the gate to face industry 4.0 in the future.

Othman et al defined High Order Thinking Skills as a skill to describe, interpret, create, reflect and correlate with new condition that need by student.³ According to Bloom, three taxonomies (cognitive, affective, and psychomotor), lower levels provides a base for higher levels of learning and Higher Order Thinking Skills

¹ I Wayan Widana, "Higher Order Thinking Assessment (HOTS)". JISAE. Volume 3 No.1 Ikacana Publisher, 2017, 32

² F.J King et.al. Higher Order Thinking Skill, 17

³ Mohd Syaubari Bin Othman and Ahmad Yunus Bin Kassim, "Teaching Practice of Islamic Education Teachers Based on Higher Order Thinking Skill (HOTS) in Primary School in Malaysia: An Overview of the Beginning". International Journal of Academic Research in Business and Social Sciences". Vol.7 No 3, 2017, 401

provides analyzing, evaluating and creating.⁴ Bloom's theory became the major concept of High Order Thinking Skills. Through those theory, it could be discuss that HOTS is refers to the ability of student to apply their knowledge and manipulates the information to solve the problem in situation. It means that students are forbidden to be passive in the class. Student should make some efforts to gain the knowledge by themselves. Students are required to curious about the current issue in life. They should active and use their thinking about the phenomenon that happened.

Teachers are expected to promote HOTS elements to encourage deeper thinking activities of students. HOTS cannot be directly given to student. Student could develop their thinking skill if they get the assessment regularly. Lauren said that student needs a direct assessment like a complex reasoning and problem solving that improve higher order thinking.⁵ Teacher as a driver in the classroom has a big part to train HOTS for student. Giving a good assessment is one of the best way to train HOTS for student. Higher Order Thinking Skills should present in all of assessment in curriculum 2013, include English language assessment. The assessment is not only recall or restate, recite the information but it should be more to make student analyze, synthesize, evaluate and create. The concept of HOTS question refers to the abilities (1) transfer one concept to another, (2) process and apply the information, (3) find the relevance from different information, (4) solving problem using information, and (5) critical thinking.

Moreover, the rapid growth of High Order Thinking Skills in education for 21st century skill is fast. The government had been held many workshops to train the teacher in constructing HOTS assessment. Teachers have been applied many form of assessments to train High Order Thinking Skills of student. But, the problems came up when the teacher designs the assessment in class. Teacher should give the HOTS assessment for different student in term of cognitive development. Teachers who teach several class also feel the different challenge, because every class has their own characteristic. There is a class who student is active and follow the

⁴ FJ King et.al. High Order Thinking Skills, 20

⁵ Lauren B Resnick. *Education and Learning to Think* (Washington : National Academy Press, 1992), 46

learning without any troubles. Opposite, there is a class that the student is passive. In this case, teacher should make a decision when design a higher order thinking assessment based on those different characteristic.

Based on the phenomenon, many researcher did studies about Higher Order Thinking Skills. Studies conducted by Mertha Dewi Kusuma et al (2017) and Desi Fitriani et al (2018) about constructing test item to measure Higher Order Thinking Skills of student. These studies are development research. They developed test item in form of multiple choice and essay question. The test item also tried for student for several times. Studies indicate that indicator that stated in the material include analyzing ability, evaluating and creating. Those are dimension in form of factual knowledge, conceptual procedure and metacognitive.⁶ The result of study conducted by Desi Fitriani et.al showed that Higher Order Thinking Skills may applied in outdoor learning for elementary school.⁷ The next study is different, because the study is about student teacher ability in constructing Higher Order Thinking Skills test item. Hamidah Salam used qualitative method on her study. She collected and analyzed 20 lesson plans which are designed by student teacher. The result showed that mostly student teacher of UINSA facilitated HOTS in the level of 4 (analyze) and 6 (creative) of Bloom's cognitive domain.⁸ In 2017, Shamilati et al also did research to discuss challenge that faced by teacher when teaching and learning Higher Order Thinking Skills. She used semi-structured interview to gain the data. The finding showed that there are three aspects of challenge that faced by teacher: teacher, teaching and learning, and pupils.9

⁶ Mertha Dhewa Kusuma et.al. "The Development of Higher Order Thinking Skills (HOTS) Instrument Assessment in Physics Study". *IOSR Journal of Research & Method in Education (IOSR-JRME)*. Vol 7, 2017, 26

⁷ Desi Fitriani et.al. "Pengembangan Instrumen Tes Higher-Order Thinking Skill pada Pembelajaran Tematik berbasis Outdoor Learning di SD. *Pedadiktika: Jurnal Ilmiah Pendidikan Guru Sekolah Dasar.* Vol 5, No.1, 2018, 252

⁸ Hamidah Salam. Student Teacher Designed-Task in Facilitating Higher Order Thinking Skills at Microteaching Classess of UIN Sunan Ampel Surabaya, (UINSA, 2017), 83

⁹ Shamilati Che Seman et.al. "Teachers' Challenges In Teaching and Learning For Higher Order Thinking Skill (HOTS) in Primary School". Vol.7 No.7 AESS Publication, 2017, 534

Major previous studies study which is conducted by many researchers, mostly they study about teaching strategy and construct the test item for Higher Order Thinking Skills (HOTS). However this study is different, this study is analyze the trend of teacher in designing HOTS assessment for diverse students. The aspect of thinking in HOTS is discuss deeply. This study also investigated the challenges faced by teachers in designing HOTS assessment for diverse students. This study was conducted in Senior High School that applied K-13.

The result of this research is expected to help the teachers to find out the reference in designing HOTS assessment for diverse students. The finding of this research also helps the teacher to know the challenges in designing HOTS assessment for diverse students. If the teachers know the challenges in designing HOTS assessment for students, they will prepare anything to deal with the challenge.

B. Research Question

The research question can be formulated as these following questions.

- 1. What are the trends of HOTS assessment designed by teacher for diverse students?
- 2. What are the challenges in designing HOTS assessment for diverse students?

C. Objective of the Research

The objectives of the research are below.

- 1. To explore the trends of teacher in designing HOTS assessment for diverse students. This study analyzes deeply the form of Higher Order Thinking Skill assessment to know what aspect of thinking mostly assess by teacher for diverse students.
- 2. To describe the challenges of teacher in designing HOTS assessment for diverse students. Particularly, this study

investigates challenge in designing HOTS assessment for high and low achieving student.

D. Significance of Research

The advantage in conducting this research expected below.

1. Theoretically

The result of this research increases the valuable of knowledge and information in education term especially for High Order Thinking Skills in English language teaching.

2. Practically

The result of this research is expected to give contribution for teacher and further researcher.

a. For Teacher

The result of this research is informing the English teacher about assessment in HOTS. It may be used as reference in designing assessment to train all of aspect of thinking in HOTS. The result of this research may be used as the consideration to design HOTS assessment for high and low achieving student. This study also may increase the awareness of English teacher in designing HOTS assessment for diverse students to be ready faced the challenge that probably came.

b. For Further Researcher

This research will give academic information for the future research in English language teaching especially in Higher Order Thinking Skills. This research may be used as previous study for the further researcher who does a research that relates with Higher Order Thinking Skills. The further researcher also may take the information of this research as consideration to analysis the data.

E. Scope and Limitation

There are two scope on this research, they are trends and challenges. In the term of trends, this research focused on form of questions' made by English teacher to train Higher Order Thinking Skill for diverse students. In this part, the study discussed deeply the aspect of thinking in Higher Order Thinking Skill mostly used by English teacher. The aspects of thinking in Higher Order Thinking Skills are analysis, evaluation, creation, logical reasoning, judgment and critical thinking, problem solving, creativity and creative thinking. Besides, this study also focus on the challenges that faced by English teacher in designing assessment for HOTS especially for diverse students.

Furthermore, this study limited to English teachers who teach in Senior High School in MAN Surabaya, MAN 1 Mojokerto, MA Al Fatich and MA Hasyim Asyari, because the level domain of Higher Order Thinking Skills (analyze, evaluate and create) mostly found in high school level. This research conducted in Senior High School that applied K- 13 and category class system. In category class system, high and low achieving student place in different class like Excellent and Regular class. So, the trends and challenges in design HOTS assessment for diverse students may be detect. The differences of assessment that given to students Excellent and Regular class may be revealed.

F. Definition of Key Terms

In order to have the same idea and concept in this study, the researcher clarifies the terms used in this study, as the details are:

1. Higher Order Thinking Skills

According to FJ King et al, critical, logical, reflective, metacognitive, and creative thinking are include in Higher Order Thinking Skills¹⁰. In this study, Higher Order Thinking Skills is

¹⁰ F.J King et.al . Higher Order Thinking Skill, 1

ability of student to apply their knowledge and manipulates the information to solve the problem in their environment.

2. Trend

According to Maryati trend is a general development or change in a situation or in the way that people are behaving, it is an activity of tendency up or down for a period of time.¹¹ In this study trend defined as the majority of teacher in deciding the assessment of Higher Order Thinking Skill especially for diverse students in their daily activity.

3. Challenge

According to Toynbee is something difficult which requires great effort and determination, something like test, strength, skill or ability.¹² This study defined challenge as situation that make teacher to do effort more when give a HOTS assessment for diverse students.

4. Diverse Students

Tileston said that student who came from different ways such as race, ethnicity, socio economic, status, gender, learning, modalities, cognitive development, social development.¹³ In this research, diverse student means students who have different cognitive development. It refers to high and low achieving student. School who has category class system will easy to detect high and low achieving student, because the school place student based on their cognitive skill. For example, students in same level have several class, XI 1, XI 2,

¹¹ Mei Dyanggita Yustiari. Penggunaan Trend Forecasting 2017/18 Greyzone Sebagai Acuan dalam Pencipataan Karya Desainer Yogyakarta (Universitas Negeri Yogyakarta, 2018), 13

¹² Arnold J Toynbee, "A study of History" (London : Oxford University Press, 1987), 125

¹³ Dona Walker Tileston. *Training Manual for What Every Teacher Should Know* (Thousand Oak : Corwin Press), 2005, 1

and XI 3. The order of class represents the rank of students cognitive.

5. Designing HOTS Assessment

F.J King stated that assessment of HOTS requires students with unfamiliar questions or task. Students asked to answer or perform using their Higher Order Thinking Skills in answering question or performance task.¹⁴ In this study, designing HOTS assessment is questions or instruction made by English teacher to train the aspect of thinking in HOTS (analysis, evaluation, creation, logical reasoning, judgment and critical thinking, problem solving, creativity and creative thinking).



¹⁴ F.J King et.al . Higher Order Thinking Skill, 2

CHAPTER II REVIEW OF RELATED LITERATURE

This chapter presented a brief explanation about the theories that support this research. There are two parts of this chapter, the review related literature and review related studies. In review related studies discussed the principal, trend in assessment and challenges regarding with designing Higher Order Thinking Skills assessment.

A. Review of Related Literature

1. Principle for Assessing HOTS

According to Brookhart, there are three basic principals to construct the assessment. The three basic are specify clearly and exactly what it is you want to assess, design task or test items that require student to demonstrate the knowledge or skill, and decide what you will take as evidence of the degree to which students have shown the knowledge or skill.¹⁵ First, Specify clearly and exactly what it is you want to assess. In this part, before give the assessment, teacher should check clearly the learning goal of the lesson. It will help the teacher to make sure that the assessment is relevant. Second, design task or test items that require students to demonstrate the knowledge or skill. Teacher should give an assessment which is make student interest to make effort to apply their knowledge or skill. The assessment provides individual test or task that represents the knowledge. Third, decide what you will take as evidence of the degree to which students have shown the knowledge or skill. Teacher should has a plan after give an assessment. Those probably formative or summative assessment. Teacher should give a feedback for student if give formative assessment. On other hand, teacher should show the score if give summative assessment.

There are several additions to assess Higher Order Thinking Skills based on Brookhart, use introductory material,

¹⁵ Sussan Brookhart. *How to Asses High Order Thinking in Classroom*. (USA : ASCD), 2010, 17-25

novel material and manage cognitive complexity and difficulty separately.¹⁶ First, use introductory material. Students allowing to use resource material. Through this way, students train to think about. The introductory material may be used in different way such as give an assessment which includes paper and project. This activity will make student to think. Second, use novel material. Novel material means that teacher may give a new material that student never know before. Through this way student will do effort to think. Third, manage cognitive complexity and difficulty separately. Difficulty and level of thinking are two concept that usually make people misconception. Many people believe that asking student to memorize or recall something do not provide student to think and the difficult task is Higher Order Thinking Skill. This table proves that thinking task probably easy or hard.

2. Designing HOTS Assessment

According Sugrue, there are three ways to measuring Higher Order Thinking Skills: (1) selection (multiple choice, matching), (2) generation (short answer, essay, performance), and (3) explanation (giving reasons for selection or generation of a response).¹⁷ Moreover, there are another form to deliver HOTS assessment from PISA which is used in *Modul Penyusunan Higher Order Thinking Skill (HOTS)* from the Ministry Of Education and Culture Indonesia. They are (1) multiple choice (2) complex multiple choice (3) short essay or gap filling task (4) short answer question (5) essay.¹⁸

a. Multiple Choice

According to Brown, multiple choice is an item that has a stem and option or alternative. Stem is present the

¹⁶ Sussan Brookhart. *How to Asses High Order Thinking in Classroom*. (USA : ASCD), 2010, 17-26

¹⁷ F.J King et.al. Higher Order Thinking Skill, 76-80

¹⁸ Direktorat Pembinaan Sekolah Menengah Atas Kemmentrian Pendidikan dan Kebudayaan.. *Modul Penyusunan Soal Higher Order Thinking Skill (HOTS)*. 2017, 6

stimulus while option or alternative are several choices to choose.¹⁹ One of the option is the key answer and others are distractors. Usually the option is contain of three until five choices.

QUESTION 3.1

The purpose of each of these letters is to

A. explain what graffiti is.

- B. present an opinion about graffiti.
- C. demonstrate the popularity of graffiti.
- D. tell people how much is spent removing graffiti.

Figure 2.1 Multiple Choice Adopted from PISA²⁰

This is an example of multiple choice question. To asses Higher Order Thinking Skills, the key answer on multiple choice question should present explicit in stem or the reading text.²¹ It means that student are hoped to use their thinking in logic, and analyze to find out the answer.

b. Complex Multiple Choice

Complex multiple choice question is aimed to examine the student's comprehension toward problem in comprehensive.²²

¹⁹ H Douglas Brown. Language Assessment: Principle and Classroom Practices (USA: Longman. 2004), 56

²⁰ OECD'S PISA Assessment .Take the test Sample Question. 2009, 22

 ²¹ Direktorat Pembinaan Sekolah Menengah Atas Kemmentrian Pendidikan dan Kebudayaan.. *Modul Penyusunan Soal Higher Order Thinking Skill (HOTS)*. 2017, 7
 ²² Direktorat Pembinaan Sekolah Menengah... 7

QUESTION 4.4

Suppose that information about the labour force was presented in a tree diagram like this every year.

Listed below are four features of the tree diagram. Show whether or not you would expect these features to change from year to year, by circling either "Change" or "No change". The first one has been done for you.

Features of Tree Diagram	Answer
The labels in each box (e.g. "In labour force")	Change No change
The percentages (e.g. "64.2%")	Change / No change
The numbers (<i>e.g.</i> "2656.5")	Change / No change
The footnotes under the tree diagram	Change / No change

Figure 2.2 Complex Multiple Choice Adopted from PISA²³

This is the example of complex multiple choice question. Complex multiple choice question actually same with Multiple Choice question in general that contain of stem or stimulus and option. But, in complex multiple choice the option are true/false or yes/no.

c. Short Essay or Gap Filling Task

Brown stated that gap filling task provide the test taker to response a word or phrase in writing. It also asks the test taker to create sentence completion. The test taker should read a part a sentence then complete it by writing a phrase, symbol, number or word.²⁴

²³ OECD'S PISA Assessment .Take the test Sample Question. 2009, 39

²⁴ H Douglas Brown. Language Assessment: Principle and Classroom Practices (USA: Longman. 2004), 200-201

QUESTION 9.3

The table below lists theatre technicians involved in staging this extract from *Léocadia*. Complete the table by indicating one stage direction from Text 1 which would require the involvement of each technician. The first one has been done for you.

Theatre technicians	Stage direction
Set designer	A circular bench around a small obelisk
Props manager	
Sound technician	
Lighting technician	

Figure 2.3 Short Essay Adopted from PISA²⁵

Oscar:	Doctor, what should I do if I get sick?
Doctor:	It is best to stay home and
	If you have a fever,
	You should drink as much
	The worst thing you can do is
	You should also

Figure 2.4 Gap Filling Task Adopted from Brown²⁶

These are the example of short essay and gap filling task. The characteristics are:

- 1. Part of sentence that would be complete should be one or two in one question.
- 2. The answers are short and clear that are phrase, number, symbol, place or time.

²⁵ OECD'S PISA Assessment .Take the test Sample Question. 2009, 22

²⁶ H Douglas Brown. *Language Assessment: Principle and Classroom Practices* (USA : Longman. 2004), 200

d. Short Answer Question

In short answer question, the test taker should give the answer in short. The form of the answer could be a word, short sentence or phrase.

QUESTION 3.2

Why does Sophia refer to advertising?

.....

Figure 2.5 Short Answer Question Adopted from PISA²⁷

This is an example of short answer question. Based on the *Modul Penyusunan Higher Order Thinking Skill* (*HOTS*), there are several characteristics in short answer question:²⁸

- 1) Use direct question or command sentence.
- 2) The question should be clear to get the short answer.
- 3) The length or size of the answer should be equal for all the question.
- 4) Avoid the word, sentence, or phrase which is taken from text book. It will motivated student just to memories what written on their book.
- e. Essay

According to Darling, in English language art, essay is used to evaluate writing or as a stand-alone writing assessment.²⁹

²⁷ OECD'S PISA Assessment .Take the test Sample Question. 2009, 22

²⁸ Direktorat Pembinaan Sekolah Menengah Atas Kemmentrian Pendidikan dan

Kebudayaan.. Modul Penyusunan Soal Higher Order Thinking Skill (HOTS). 2017, 7

²⁹ Linda Darling. Developing and Measuring Higher Order Skills: Models for State

Performance Assessment Systems (Washington: CCSCO, 2017), 8

QUESTION 3.3

Which of the two letter writers do you agree with? Explain your answer by using your own words to refer to what is said in one or both of the letters.

QUESTION 3.4

We can talk about what a letter says (its content).

We can talk about the way a letter is written (its style).

Regardless of which letter you agree with, in your opinion, which do you think is the better letter? Explain your answer by referring to *the way* one or both letters are written.

Figure 2. 6 Essay Adopted from PISA³⁰

This is the example of essay question. In essay, test taker need to responding to a question or interpreting literature.

3. Trends in HOTS Assessment

In designing Higher Order Thinking Skills assessment of student, the important is not only the form assessment that made by teacher but also the aspect that developed in the assessment. Susan Brookhart said that there are various aspects of thinking in Higher Order Thinking SkillS: (1) analysis, evaluation and creation, (2) logical reasoning, (3) judgment and critical thinking, (4) problem solving, (5) creativity and creative thinking.³¹

³⁰ OECD'S PISA Assessment . Take the test Sample Question. 2009, 23

³¹ Sussan Brookhart. *How to Asses High Order Thinking in Classroom*. (USA : ASCD, 2010), 14

- a. Analysis, Evaluation and Creation
 - 1) Analysis

In assessing analysis, student should break down the information into small part. Student may deep in comprehend during break down the information. Additionally, student tries to figure out the information each other

a) Multiple Choice

Questions 4 and 5 refer to the passage below from the Declaration of Independence.

> We hold these truths to be self-evident, that all men are created equal, that they are endowed by their Creator with certain

unalienable Rights, that among these are Life, Liberty and the pursuit of Happiness. That to secure these rights, Governments are instituted among Men, deriving their just powers from the consent of the governed, that whenever any Form of Government becomes destructive of these ends, it is the Right of the People to alter or to abolish it, and to institute new Government, laying its foundation on such principles and organizing its powers in such form, as to them shall seem most likely to effect their Safety and Happiness.

- 5. Which statement best summarizes the main point being made in the passage?
 - *A. The people should be in control of their own government.
 - B. The church should help governments determine what is right.
 - $\label{eq:constraint} \text{C.} \quad \text{The main function of government is to keep people happy.}$
 - D. Governments need to be changed regularly to keep them from becoming unjust.

Source: National Assessment of Educational Progress, Civics, grade 8, Block 2006-8C4, nos. 4–5. Available: http://nces.ed.gov/nationsreportcard/itmrlsx/landing.aspx

Figure 2.7 Example of Assessing Analysis in Multiple Choice Adopted from Susan Brookhart³²

This figure is the example of Higher Order Thinking Skill assessment to train analysis skill for student in multiple choice form. The question is ask student to find out the main idea of the passage. To find out the passage, student should analyze every part of the passage including the main sentence and supporting sentence.

b) Essay

[Teacher inserts the passage here.]

What is the main point of the passage above? State the main point in your own words, and then give evidence from the passage.

Figure 2.8 Example of Assessing Analysis in Essay Adopted from Susan Brookhart³³

It is the example of essay version. In this model, teacher provides a text for student with number of questions. The question asks student to find out the main idea of the text in student's own

³² Sussan Brookhart. How to Asses ... Page 43-44

³³ Sussan Brookhart. How to Asses ... Page 45

word. Same with the example in multiple choice above, to find out the main idea, student should analyze the text.

2) Evaluation

In evaluation, student train to judge something that support with the evidence. In assessing evaluation skill, teacher may give some material and command student to judge its function for some purpose.

In Maya's science class, the teacher wanted students to design experiments to find out about temperature changes. Each student was to plan and conduct a simple experiment, measure and graph temperature changes, and write a report about the findings. Maya decided she wanted to study how long it takes coffee to cool. Her teacher said she would bring a coffeemaker to class. Here are Maya's plans for the experiment.

> Maya's Plan I'm going to ask my teacher to make the coffee. I'll put it in a cup, and I'll measure its temperature with a thermometer, every five minutes for an hour. I'll make a line graph of the temperature. I should be able to see how fast the line drops as the coffee gets cooler.

Do you think Maya's plan is a good one? Why or why not? Would you suggest any changes to her plan? If so, tell what you would change and explain why.

Figure 2.9 Example of Assessing Evaluation in Essay Adopted from Susan Brookhart³⁴

It is the way how to design question to train evaluation of skill. This is an example on essay form. It is a part of evaluation question, because this question asks student to evaluate Maya's experimental plan. Students also should complete their argument with the evidence.

3) Creation

In creation term, it ask student to reorganize something in a new way. It also may discuss that student should do

³⁴ Sussan Brookhart. How to Asses ... Page 54

something different than existing thing. In Susan Brookhart's theory, creation is synthesize in Bloom's Taxonomy.

A language art assessment (teacher insert the story which does not has an ending) Please, make an ending of story in your paper. Use your own word and idea!

Figure 2.10 Example of Assessing Evaluation in Performance Task

It is performance task to assess creation. This question asks students to make an ending of story in their own word and idea. The component of the story like plot, character and setting are provide in the story.

b. Logic and Reasoning

It is the ability of student to deliver the reason. In this part, teacher ask student to give argument or reason logically and clearly. Student may use the reason to share the opinion. There are two kinds of reasoning, inductive and deductive reasoning. Inductive reasoning is the method of reasoning which is start from small to big thing. Opposite, deductive reasoning is the method of reasoning that start from big to small thing or general to special.

1) Multiple Choice

Bill of Rights of the United States Constitution

AMENDMENT 1.

Congress shall make no law respecting an establishment of religion, or prohibiting the free exercise thereof; or abridging the freedom of speech, or of the press; or the right of the people peaceably to assemble, and to petition the Government for a redress of grievances.

AMENDMENT 2.

A well regulated Militia, being necessary to the security of a free State, the right of the people to keep and bear Arms, shall not be infringed.

AMENDMENT 3.

No Soldier shall in time of peace be quartered in any house, without the consent of the Owner, nor in time of war, but in a manner to be prescribed by law.

AMENDMENT 4.

The right of the people to be secure in their persons, houses, papers, and effects, against unreasonable searches and seizures, shall not be violated, and no warrants shall issue, but upon probable cause, supported by Oath or affirmation, and particularly describing the place to be searched, and the persons or things to be seized.

AMENDMENT 5.

No person shall be held to answer for a capital, or otherwise infamous crime, unless on a presentment or indictment of a Grand Jury, except in cases arising in the land or naval forces, or in the Militia, when in actual service in time of War or public danger; nor shall any person be subject for the same offense to be twice put in jeopardy of life or limb; nor shall be compelled in any criminal case to be a witness against himself, nor be deprived of life, liberty, or property, without due process of law; nor shall private property be taken for public use, without just compensation.

AMENDMENT 6.

In all criminal prosecutions, the accused shall enjoy the right to a speedy and public trial, by an impartial jury of the State and district wherein the crime shall have been committed, which district shall have been previously ascertained by law, and to be informed of the nature and cause of the accusation; to be confronted with the witnesses against him; to have compulsory process for obtaining witnesses in his favor, and to have the assistance of counsel for his defense.

AMENDMENT 7.

In Suits at common law, where the value in controversy shall exceed twenty dollars, the right of trial by jury shall be preserved, and no fact tried by a jury, shall be otherwise re-examined in any Court of the United States, than according to the rules of the common law.

AMENDMENT 8.

Excessive bail shall not be required, nor excessive fines imposed, nor cruel and unusual punishments inflicted.

AMENDMENT 9.

The enumeration in the Constitution, of certain rights, shall not be construed to deny or disparage others retained by the people.

AMENDMENT 10.

The powers not delegated to the United States by the Constitution, nor prohibited by it to the States, are reserved to the States respectively, or to the people.

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Figure 2.11 Example of Assessing Logic and Reasoning in Multiple Choice Adopted from Susan Brookhart³⁵

It is the example of multiple choice version to assess reasoning skill for student. This question uses deductive

³⁵ Sussan Brookhart. How to Asses ... Page 68 - 70

method, because the process of reasoning started from general (a lot of text) to special.

2) Essay

Select one of the amendments in the Bill of Rights of the U.S. Constitution. Describe a specific example of one of the rights in the Bill of Rights. The example can be from a real event or something you make up yourself, but it must be a clear illustration of one of the rights in the Bill of Rights. Tell the story of your example. Then explain which right your story exemplifies, from which amendment, and tell why.

Figure 2.12 Example of Assessing Logic and Reasoning in Essay Adopted from Susan Brookhart³⁶

It is the model of essay. Same with the example before, the process of reasoning in this question is deductive reasoning. In essay model, student requires to reading, comprehend, reasoning and writing.

3) Performance Task

Make a notebook with a section for each amendment in the Bill of Rights. Using news stories from newspapers, news magazines,

and the Internet, illustrate each amendment with at least one specific example of the exercise of this right. Include a copy of each news story, cut from the paper or printed from the Internet. For each story, write a brief essay explaining what specific amendment(s) and right(s) are illustrated, and explain your reasoning.

Figure 2.13 Example of Assessing Logic and Reasoning in Performance Task Adopted from Susan Brookhart³⁷

³⁶ Sussan Brookhart. How to Asses ... Page 70 - 71

³⁷ Sussan Brookhart. How to Asses ... Page 71

This question shows the example of performance task. This question not only elicits the reasoning skill of student but also student's performance. Students have to read, understand, find other source and write.

c. Judgment and Critical Thinking

In this skill, student train to have ability to criticize with a wise judgment. Teacher may give issue, news and other to be criticize by student.

1) Multiple Choice

Multiple-choice version

A marketing executive for a sports shoe company wanted to make the most of his advertising budget. He decided to buy advertising time on television sports broadcasts, reasoning that many people who watched sports would also like to play sports, and therefore need sports shoes. What assumption has to be true in order for this argument to represent sound thinking?

- A. More men than women watch TV sports, and more men than women buy sports shoes.
- B. People will want to buy the shoes they see professional athletes wearing during their games.
- *C. People who don't watch sports don't buy sports shoes as frequently as those who do.

Figure 2.14 Example of Assessing Judgment and Critical Thinking in Multiple Choice Adopted from Susan Brookhart³⁸

This is a multiple choice version. In this example, student encourages to think critically about the marketing program of sport shoes. Student may train to use their assumption.

³⁸ Sussan Brookhart. How to Asses ... Page 89

2) Essay



The poster shown above was made during the First World War. What was the poster designed to do? Explain how you came to this conclusion.

Figure 2.15 Example of Assessing Judgment and Critical Thinking in Essay Adopted from Susan Brookhart³⁹

It is the example of essay model to assess critical thinking of student. In this model, the question uses poster to elicit student argument. Teacher may use other authentic assessment.

d. Problem Solving

In assessing problem solving, students not only identify the problem but use strategy to solve the problem. Specially, student may use more than one solution to solve the problem. Students also have to give the reason.

³⁹ Sussan Brookhart. How to Asses ... Page 92 - 93

1) Short Answer Question

Mr. Jones bought 12 cookies. He gave Deon 3 cookies and Tyrone 5 cookies. How many more cookies did Tyrone have than Deon?

Figure 2.16 Example of Assessing Problem Solving in Short Answer Question Adopted from Susan Brookhart⁴⁰

This is an example of short answer question to assess problem solving. In short answer question need a short answer. Although it is short answer but the answer of student should main the point.

2) Multiple Choice

Teresia is a small country that has been invaded by its neighbor Corollia. The king of Teresia is a long-standing United States ally who has been living in exile since the Corollian invasion. Teresia is an important exporter of uranium; it sends most of its supply to members of the European Union. The king appeals to the United States and the United Nations for military help in driving Corollia from his country.

- 12. What official argument would members of the United Nations be most likely to make for supporting military efforts against Corollia?
 - A. The stability of the international system depends on countries maintaining their current forms of government.
 - B. The United Nations and the European Union should control the mining of uranium worldwide.
 - *C. The stability of the international system depends on absolute respect for national borders and sovereignty.
 - D. Countries such as the United States should become the main judges in all international disputes.

Figure 2.17 Example of Assessing Problem Solving in Multiple Choice Adopted from Susan Brookhart⁴¹

⁴⁰ Sussan Brookhart. How to Asses ... Page 104

⁴¹ Sussan Brookhart. How to Asses ... Page 113

It is multiple choice form. It is the part of problem solving question because student may identify the obstacles to solve the problem.

3) Essay

Amanda and her friends have noticed a problem in their neighborhood. The garbage cans in the public park are overflowing.

Scenario source: National Assessment of Educational Progress, Civics, grade 8, Block 2006-8C6, no. 13. Available: http://nces.ed.gov/nationsreportcard/itmrisx/landing.aspx

- Name at least two things Amanda and her friends could do on their own to help solve this problem. Which one would you recommend they try first? Explain why.
- Name at least two things local government could do to help solve this problem. Which one would you recommend they try first? Explain why.

Figure 2.18 Example of Assessing Problem Solving in Essay Adopted from Susan Brookhart⁴²

In the essay form, students explore the problem solving because they may write reason or strategy to solve the problem more than one. It is good because if student cannot give the reason its mean that student does not know the problem.

e. Creativity and Creative Thinking

In assessing creativity and creative thinking, open new idea is required. Student should think out of the box. It is does not mean not normal, but something different. Sussan Brookhart stated in *How to asses higher order thinking skill in your classroom* book, the example of assessing creativity and creative thinking is performance task. In English subject, there is a teacher who asks the student to combine Shakespeare story and contemporary newspaper. Student

⁴² Sussan Brookhart. How to Asses ... Page 107

may use all of the part of newspaper to figure out the Julius Caesar story.⁴³

4) Challenges in HOTS Assessment

Masters stated that there are several challenges in reforming educational assessment. They are repurposing assessment, mapping learning domain, implementing a learning assessment system, building assessment literacy, and concluding comment.⁴⁴ First, repurposing assessment. People still have a concept that assessment is to judge the student have learned the material that have been taught by teacher. Over time, educators try to change this misconception of assessment. The mindset should be change. Assessment is aim to establish the learner in their process to reach the goal of learning. It refer how teacher monitoring the progress of student. Second, mapping learning domains. Teacher should concept the learning process appropriate with the goal. It means that the teacher make a sure that student in their learning progress represent the learning domain that should be achieve. Third, implementing a learning assessment system. Sometimes, teacher still doubt how to apply the assessment that linear with the learning assessment system from the government. The alignment of learning assessment system with a teacher's concept in assessment is proves that the student in their learning well-defined learning domain. Fourth, building assessment literacy. The development of education assessment try to assume that the assessment which is given appropriate with system. It requires student to explore their thinking on learning process. So, it needs a deep assessment practice. Improve the literacy skill be a good way to upgrade the assessment into high-quality professional development. Fifth, concluding comments. To know the progress of student, teacher should monitor the student in their learning process. Through the monitoring, teachers recommend to give their feedback for student. A good communication between teacher and student as

⁴³ Sussan Brookhart. How to Asses ... Page 108

⁴⁴ Geoff N Masters. Australian Education Review, Reforming Educational Assessment: Imperative, principles and challenges. (Australia: ACER), 2013, 57 - 63

the element of education is needed to identify the successful of assessment.

The challenges in learning Higher Order Thinking Skills for student also revealed by Shamilati and friends.⁴⁵ In teaching and learning aspects, there are some challenges faced by teacher. First, planning domain. In planning domain, teacher plan teaching and learning Higher Order Thinking Skills which is appropriate toward curriculum. Teacher modified the lesson plan that can cover the domain goal. But, usually teacher difficult to cover the domain goal for poor student. So, the syllabus does not finished. Second, achievement of objective or outcomes. Teacher is difficult to achieve the indicator of level of students' mastery in HOTS. The indicator is needed to make sure that outcome of learning could be achieve. Teachers are expected to manage wisely their teaching in learning in classroom. Third is time. Time is one of great challenge in teaching and learning Higher Order Thinking Skills of student. Teacher does not have enough time to teach HOTS in classroom for students. Fourth, interruption of teaching and learning processes. Teachers feel that teaching Higher Order Thinking Skills could interrupt the process of teaching and learning in the class. It is happened because teacher more focus on train HOTS. Impact, the topic of the material is delay. Fifth is content. In this case, content of the material will be given in the class is too heavy. The topic is full of material and skill. Teacher difficult to fulfill the broad content. cover the basic skill and train Higher Order Thinking Skills in a limited time. Sixth is classroom environment Teachers have challenge in creating a good atmosphere in classroom to elicit student to think. Higher Order Thinking Skills difficult to train if the students do not have spirit. It is a deep pressure of teacher to develop a creativity and skill to build a classroom environment

 ⁴⁵ Shamilati Che Seman et.al. "Teachers' Challenges In Teaching and Learning For Higher Order Thinking Skill (HOTS) in Primary School". Vol.7 No.7 AESS Publication, 2017, 539
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B. Review of Related Studies

There are some studies that have related topics with this research were conducted by other researchers. Therefore, the researcher mentions the previous studies below in order to give gap among upcoming research. The first study is conducted by I Wayan Widana. His study is aims to provide knowledge and understanding about the concept and characteristic of HOTS assessment. His study also aims to improve the skills of teachers to develop HOTS assessment. The data analyzed used exploratory method. This study included literature research. The result showed that the characteristic of Higher Order Thinking Skills assessment were assess student abilities to analyze, evaluate and create based on contextual issues. This study also showed the steps to compose HOTS items are (1) analyze the KD, (2) arrange the blueprint, (3) write down the items, (4) determine the answer key and (5) perform a qualitative and quantitative essay.⁴⁶

It is important to focus on how to construct the test item that appropriate with the criteria of HOTS assessment. Many research also conduct to developing the instrument of HOTS assessment. Studies conducted by, Jailani Agus Budiman (2015), Mertha Dewi Kusuma et.al (2017) and Desi Fitriani et al (2018). Their research have a same main goal about developing Higher Order Thinking Skills for student. The different is the subject and how the Higher Order Thinking Skills instrument is implemented. Jailani developed the instrument of HOTS in Math subject for secondary school. He developed 24 multiple choice and 19 essay. The instrument is tried out in 4 Junior High Schools with 209 students in total.⁴⁷ Merta et.al constructed the HOTS assessment for Senior High School student in Physic study.⁴⁸ The instrument of HOTS tried out in 3 Senior High

⁴⁶ I Wayan Widana. "Higher Order Thinking Skills Assessment (HOTS)". *Journal of Indonesian Student Assessment and Evaluation*. Vol 3 No.2, 2017, 32

⁴⁷ Jailani Agus Budiman. "Developing an Assessment Instrument of Higher Order Thinking Skill (HOTS) in Mathematics for Junior High School Grade VIII Semester 1. *Proceeding of International Conference On Research, Implementation and Education of Mathematics and Science Yogyakarta State University.* 2015, 81

⁴⁸ Mertha Dewi Kusuma et.al. "The Development of Higher Order Thinking Skill (HOTS) Instrument Assessment in Physics Study". *IOSR Journal of Research & Method in Education (IOSR-JRME)* Vol.7 No.1. 2017, 26

Schools with 95 students in total While Desi Fitriani et.al applied the HOTS instrument in primary school in thematic learning.⁴⁹ The instrument is tried out for 20 primary school student. The instrument needed 2 try out and 3 revision process. The test item that developed in knowledge dimension in form of factual knowledge, conceptual procedure and metacognitive. All the result showed that the instrument is effective to train HOTS of student. The instrument also valid and reliable as a form of assessment. The result revealed that the assessment instrument is suitable to be used.

Different with the several previous study before, Hamidah Salam conducted research to investigate teacher ability in HOTS. Her study focus on the ability of student-teacher in constructing task to facilitate Higher Order Thinking Skills. She used qualitative method. The research conduct in PPL class of English subject UINSA. This study used documentation and checklist to collect the data. The researcher collected and analyzed 20 lesson plans which are designed by student teacher. The result showed that mostly student teacher of UINSA facilitated HOTS in the level of 4 (analyze) and 6 (creative) of Bloom's cognitive domain.⁵⁰

This study also supported by Heri Retnawati et al. She described teacher's knowledge about Higher Order Thinking Skills. This study used qualitative method with phenomenological approach. The participants of this research are 27 mathematic junior high school teachers across 7 provinces in Indonesia. The data was collected through focus group discussion and interview. The study found that the teacher knowledge and their ability to improve student's HOTS, solve HOTS based problems and measure student's HOTS are still low. In fact, the important was teacher already know the importance of HOTS and teaching by using creative models.⁵¹

⁴⁹ Desi Fitriani et.al. "Pengembangan Instrumen Tes Higher-Order Thinking Skill pada Pembelajaran Tematik berbasis Outdoor Learning di SD. *Pedadiktika: Jurnal Ilmiah Pendidikan Guru Sekolah Dasar.* Vol 5, No.1, 2018, 252

 ⁵⁰ Hamidah Salam. Student Teacher Designed-Task in Facilitating Higher Order Thinking Skills at Microteaching Classess of UIN Sunan Ampel Surabaya, (UINSA, 2017), 59
 ⁵¹ Heri Retnawati et al. "Teacher's Knowledge about Higher Order Thinking Skills and Its Learning Strategy". *Problems of Education in 21 Century Yogyakarta State University*. Vol 78. No 2.. 2018, 215

Teaching practices in Higher Order Thinking Skills is publish by Malini et.al in 2017. Her study is gain to look deeper the type of ICT (Information and Communication Technologies) used in class, the views on the integration into curriculum and the method using ICT in promoting HOTS. This is an exploratory study. 40 ESL lectures university in Malaysia is the respondent. This study used questionnaires and semi-structured interview. The study describe that student's academic learning will improve if the student able to interact with the lecturer through variety of HOTS activity when used ICT. It needs more time to integrate ICT in lesson plan. Here, the challenges in use ICT is the lecturer should up to date with the current ICT.⁵²

Higher Order Thinking Skills should appear in all of teaching process to give for all of the students. Mohd Syaubari and Ahmad Yunus tried to investigate the implementation of Higher Order Thinking Skills in Islamic education. The aims of this study are to identify of HOTS at the beginning of lesson, identify HOTS based on the development t of teaching and identify of HOTS under cover of teaching. This study used quantitative method via questionnaire. There are 400 teachers participated in this study and selected based on gender, academic qualifications, age and teaching experience. The result showed that teacher significantly higher level of practice pedagogical skills to teach Higher Order Thinking Skills through Islamic education. Teacher believes the lack of readiness in terms, inventory of aspects of knowledge, pedagogical skills and attitudes to teach education because the teaching process will only be static and boring.⁵³

This study also supported by Tajularipin Sulaiman et.al. At the same year, Tjularipin et al conducted a research about implementation of Higher Order Thinking Skills in teaching of science as a case study in Malaysia. Their study aims to explore the perceptions of science teachers in the implementation of Higher

⁵² Malini Ganapathy et.al. "Promoting Higher Order Thinking Skills via Teaching Practices". *3L: The Southeast Asian Journal of English Language Studies*. Vol 23, No.1. 2017, 75

⁵³ Mohd Syaubari Bin Othman and Ahmad Yunus Bin Kassim. "Teaching Practice of Islamic Education Teachers Based on Higher Order Thinking Skills (HOTS) in Primary Scholl in Malaysia: An Overview of the Beginning. International Journal of Academic Research in Business and Social Sciences. Vol 7 No.3, 2017, 401

Order Thinking Skills in the teaching process of science. This study used qualitative method and used interview to collect the data. There are three teachers who participated in this study. The result of this study revealed that teachers are aware and they have applied HOTS in their teaching process. This study also revealed that knowledge and competence are crucial to ensure quality the implementation of Higher Order Thinking Skills.⁵⁴

In 2017, Shamilati et al discuss deeply challenge that faced by teacher when teaching and learning Higher Order Thinking Skills for student in classroom. This research used qualitative method to collect and analyzed the data. Semi-structured interview conducted to gain the data that used open ended question. Nine teachers who taught Bahasa Melayu, Math and Science were interviewed on this research. The finding showed that there were three aspects of challenge that faced by teacher: teacher ability, teaching and learning, and pupils.⁵⁵

Generally, the study of Higher Order Thinking Skills discuss about developing instrument or test item for HOTS and the teacher ability in teaching and learning HOTS. Therefore, this research focus on trend of teacher in designing HOTS assessment for diverse students to know deeply the form of HOTS assessment that mostly used by English teacher. Additionally, this study is reveals the challenge that face by English teacher in designing HOTS assessment for diverse students.

⁵⁴ Tajulairpin Sulaiman et.al. "Implementation of Higher Order Thinking Skills in Teaching of Science: A case Study in Malaysia". *International Research Journal of Education and Sciences (IRJES)*. Vol 1. Issue 1. 2017, 1

⁵⁵ Shamilati Che Seman et.al. "Teachers' Challenges In Teaching and Learning For Higher Order Thinking Skill (HOTS) in Primary School". Vol.7 No.7 AESS Publication, 2017, 534

CHAPTER III RESEARCH METHOD

This chapter presents the researcher's procedure in conducting this study. It covers research design, subject and setting of study, data and source of the data, research instrument, data collection technique, data analysis technique, and research stage.

A. Research Design

Research design is a plan or a concept made by the researcher for the plan of action that will be conducted.⁵⁶ This study used qualitative method to conduct the research. This study used qualitative approach because this study is going to explore the phenomena of Higher Order Thinking Skills. According to Gary Anderson, qualitative research is a form of inquiry that explores phenomena in their natural settings and uses multi-methods to interpret, understand, explain and bring meaning to them.⁵⁷ Furthermore, qualitative approach is appropriate with this study since it is used to describe and analyze the trends and challenges of teacher in designing Higher Order Thinking Skills assessment for diverse students.

B. Subject and Setting of Study

The subject of this research is English teacher who selected purposively with the criteria (1) applied K-13 in English subject and (2) has experience in teach several class in school that applied category class system. This research took category class because the research easy to collect the data. In category class, the high and low achieving students stay in different place. The trends and challenges of teacher in designing HOTS assessment for diverse students are easy to detect. The researcher curious to investigate what the assessment that given to student in excellent and regular class to

⁵⁶ Suharsini Arikunto. *Prosedur Penelitian Suatu Pendekatan Praktek* (Jakarta : Rineka Cipta, 2002), 51

⁵⁷ Garry Anderson – Nanci Arsenault, *Fundamentals of Educational Research*, 2th edition. (USA:The Framer Press), 126

assess Higher Order Thinking Skill is different or same. 4 English teachers from different school at MAN 1 Mojokerto, MAN Surabaya, MA Al Fatich, and MA Hasyim Asyari, be the subject of this research. These school have category class system.

C. Data and Source of Data

1. Data

The data used in this study is the teacher's questions made to train Higher Order Thinking Skill (HOTS) for student. The result of teacher's interview about challenges in designing HOTS assessment also a data for second problem.

2. Source of Data

Dealing with the assessment to train HOTS, the teacher's assessment had been collected. The document gained from English teacher. The document was analyzed to know the trends of English teacher in designing an assessment to train HOTS for diverse students. The researcher also interviewed the English teacher to know their challenges in constructing the HOTS assessment for diverse students.

D. Research Instruments

Data are required to carry out the findings of this study. Those data can be obtained by using these following instruments:

1. Documents

On the process of research, the researcher collected qualitative documents. Specifically, documents in this research are the assessment of teacher to train Higher Order Thinking Skills of students. It is required to know the form and the aspect of thinking in Higher Order Thinking Skills assessment mostly used by teacher for diverse student. Document analysis guideline is required to help the researcher in analyzing the data of documentation. (*see appendix 1*)

2. Interview

This research used semi-structured interview. In this process, the researcher prepared and developed questions based on the research question. Interview conducted to investigate the challenges that faced by English teacher in designing Higher Order Thinking Skills assessment especially for diverse students. The interview guideline is required to help the researcher in the process of interviewing. (*see appendix 2*)

E. Data Collection Technique

Creswell stated that the data collection steps include setting the boundaries for the study, collecting information through unstructured or semi structured observations and interviews, documents, and visual materials, as well as establishing the protocol for recording information.⁵⁸ In this study, the data is collected from researcher's interview and documentation. At first, the research found the subject of this study. To find the subject, the researcher searched the information from students, teachers, and internet to know the schools that have category class system. Second, the researcher asked the permission to conduct the study in those schools. Third, the school and the researcher decided together the English teacher that being an informant of this study based on several criteria. Fourth, the researcher made an appointment with English teacher to get the data. Fifth, the researcher had asked the document (assessment to train HOTS for student). Sixth, the researcher interviewed the teacher to reveal the challenges in designing HOTS assessment for diverse students. The interview was semi-structured interview, so the questions developed or reduced in conditionally. Moreover, the process of collecting the data was specified in the table below.

 $^{^{58}}$ John W Creswell. Research Design Qualitative , Quantitative and Mixed Methods Approaches (UK Sage Publication, 2009), 178

Research	D	*	
Research	Data	Instrument	Data and Source
Question	Collection		of Data
	Technique		
What are	Documentation	Document	Question's Made
trends of		analysis	by English
teacher's		guideline	Teacher
designing			
HOTS			
assessment			
for diverse			
student?			
What are the	Interview	Interview	English Teacher
challenges of	No. And No.	Guideline	
teacher's			
designing			
HOTS			
assessment			
for diverse			
student?		/	

 Table 3.1 Technique to Collect the Data Based on Research

 Questions

This table shows the way the researcher in gathering the data specifically. In answering the first research question which is about trends of HOTS assessment for diverse students, the researcher used documentation technique. The researcher collected the assessment of English teacher. After that, it analyzed using document analysis guideline. For the second research question which is about challenges in designing HOTS assessment for diverse students, the researcher used semi-structure interview. The researcher interviewed the English teacher. In the process of interview, it needs an interview guideline to help the researcher keep in the topic.

F. Data Analysis Technique

The data, after collection, it processed and analyzed in accordance with the outline laid down for the purpose at the time of developing the research plan. In analyzing qualitative data, this study used inductive analysis to gain the conclusion from documentation and interview. In inductive analysis, the data comes from specific fact or phenomenon to conclude in general. In inductive analysis, the finding data integrated with the exist theory.

1. Document analysis

After collect the assessment of teacher, the researcher read and observed the document. The researcher analyzed 8 questions made by English teacher to assess HOTS. The researcher used a document analysis guideline to check one by one. This research used theory by Sussan Brookhart to classify and analyze the data. Document analysis guideline provides several criteria for every aspect of thinking in HOTS. The researcher categorized the teacher's question made based on the appropriate criteria in document analysis to reveal the reason why the teacher's made question categorized in every aspect. If there is a finding data that does not exist in the theory, it becomes a new finding.

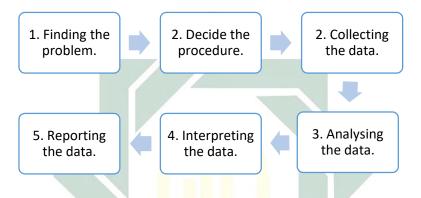
2. Interview analysis

After get the result of interview, the researcher processed the data. The researcher transcript all the process of interview. To coding the data, the researcher categorized and classified the data using color. Every color showed different topic. After that, the researcher made an interview summary transcript. Then, the researcher gained the main information about teacher's challenges in designing HOTS assessment for diverse students. This research used the theory by Geoff to classify and analyze the result of interview. If there is a challenges that does not exist in the theory, it becomes a new finding.

G. Research Stages

Based on Creswell's theory, a general procedure of qualitative approach follow this figure.⁵⁹

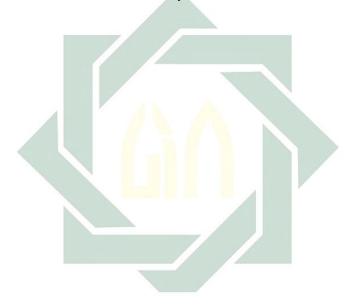




The first step of this research was finding the problem. The researcher found the problem based on the hot topic that happened in Indonesia. Second, the researcher did a deep discussion with the lecture to gain the main problem. The problem is catch from English language teaching which is about trends and challenges in giving HOTS assessment for diverse students. Next, the researcher decided the method that will be used in this research. This research used qualitative method approach because this research is discuss deeply about the phenomena about Higher Order Thinking Skills in Indonesia. The researcher also discussed with the advisor to decide what the instrument that appropriate to collect the data. After discussing, the researcher asked the permission to do research in Senior High School. The researcher made an appointment with English teacher who has been decided by the Headmaster and the researcher to meet. After that, the

⁵⁹ John W Creswell. Research Design Qualitative, Quantitative and Mixed Methods Approaches (UK Sage Publication, 2009), 4

research collected the data from English teacher to investigate trends and challenge using documentation and interview. In documentation, the researcher asked the English teacher's question made. In interview, the researcher used a recording to record the process of interview. Then, the researcher analyzed the data that already get using inductive analysis. After that, the researcher interpreted deeply about the finding and integrated with the theory and previous study. The last, the research wrote a report to show the result of this study.



CHAPTER IV RESEARCH FINDING AND DISCUSSION

This chapter shows the research findings and discussion about the trends and challenges of teacher in designing Higher Order Thinking Skills for diverse students. In addition, it provided with the analysis of the data which is got from English teacher.

A. Research Findings

There are two terms that discussed in research finding based on research questions. The first sub-section discussed about the trends of HOTS assessment to know the aspect of thinking in HOTS mostly assess by teacher in school. While, in second subsection described about challenges faced by teacher in designing HOTS assessment for diverse student. The researcher collected the data from 22^{nd} May – 30^{h} May 2019. The data had been gathered from English teacher. The following explanations are the result:

1. Trends in HOTS assessment for Diverse Students

In case of trends of teacher in designing Higher Order Thinking SkillS for diverse students, the researcher finds that there is no differences of assessment that given by English teacher for students in Excellent and Regular class. The teachers gave the same assessment for all of students although they have different cognitive development. There are 8 questions made by English teacher have been analyzed and categorized based on the aspect of thinking in Higher Order Thinking Skills of Susan Brookhart's theory (*see appendix 4*). The data is showed in the figure below.

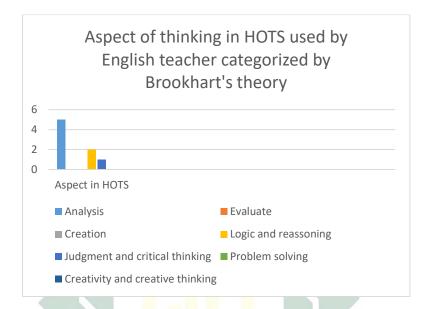


Figure 4.1 Aspect of Thinking in HOTS Categorized on Brookhart's Theory

This figure shows the result of analyzing the teacher's made question to assess HOTS for student. There are three aspects, *analysis, logic and reasoning,* and *judgment and critical thinking*. Based on the figure above, English teacher made 5 questions to assess *analysis* aspect in HOTS. In addition, there are 2 questions to assess higher order thinking skill in *logic and reasoning aspect*. In *judgment and critical thinking* aspect, there is only 1 question. Opposite, no one English teacher make questions for the other aspect in Brookhart's theory. The finding details data about aspect of thinking in Higher Order Thinking Skill is described below.

a. Analysis Aspect

In analysis aspect, there are 5 questions found to train this skill. In this aspect, five questions are created in multiple choice form. There is no question to assess analysis aspect that is created in essay or another model. Multiple choice is the majority selection of teacher to assess Higher Order Thinking Skill for analysis aspect. The questions are made in different kind of topic such as invitation, trade, recount text, descriptive text and letter. The finding showed that the teachers have a same model and strategies to build a question that assess analysis skill.



1.	What can be inferred from the text?		
	A.	Hilary will have a party with me.	
	B.	The party will be held in our green nature.	
	C.	Hilary's buddies will attend the party.	
	D.	Hilary invites her friends for the party.	
	E.	Hilary conducted the party after school.	

Figure 4. 2 Example of Teacher's Made Question in HOTS for Analysis Aspect (1)

This is the example of multiple choice question version to assess higher order thinking skill of student. This is an interesting question because the topic of this question is invitation. It is interesting because mostly the question about invitation asks student in recall level such as asking about place and time, but this question stated implicitly. However, this question is analysis level based on the criteria in Brookhart's theory. The teacher uses a sentence What can be inferred from the text?, it means that student should take the implicit information form the text. Based on the criteria in Brookhart's theory, find or describe the information that does not state explicitly is part of assess Higher Order Thinking Skill in analysis aspect. The process include differentiating (mapping every components of invitation), organizing (put in order the provided information), and attributing (connect of every component to find the information). From the invitation, Hilary will held the party with his close friend that is showed implicitly in option C. The other model of questions that assess analysis skill in higher order thinking skill also is showed in picture below.

Do you know what volcano is? I guest you all know volcano is a mountain with magma inside it. There are some famous volcanoes in Indonesia such as mount merapi and mount <u>krakatau</u>. Mount <u>merapi</u> erupted on <u>october</u> 2010 and mount krakatau erupted in 1883. The eruptions were really massive and destructive. Do you want to know how is the volcano erupting?

At first, the eruption begins when pressure on a magma chamber inside the volcano forces magma up through the <u>condult</u> and out the volcano's vents. Then, when the magma chamber completed filled, the pressure is getting higher. Finally, the magma reaches up the surface. When Magma reaches earth's surface it is called lava. The lava destroys everything in its path because it is very hot. The big rocks can destroy everything because the sizes are super big.

There's no doubt that volcano eruption is really dangerous. Many people were dead because of it. People had to abandon their homes and land forever. Even the whole world's climate was changed for a while as a result of an eruption. But volcano eruptions bring good effect too, because after a long time it can make the land fertile.

What is the general statement of the text?

A. How volcano eruption occurred

B. Mount Krakatau erupted in 1883

C. Mount Merapi erupted in October 2010

D. Magma pours out in gentle streams into the air

E. It begin with pressure on a magma chamber inside the volcano

Figure 4.3 Example of Teacher's Made Question in HOTS for Analysis Aspect (2)

This an example of question in multiple choice version. This question provides a text to be read by student. This question encourages the student's literacy. The teacher uses a sentence What is the general statement of the text?. In this question, the teacher wants to assess the analysis skill of student. Different with the previous question, this question asks students to identify the general statement of the text. To arrive at the correct answer, students have to consider the part of the text. It includes the volcano month in Indonesia, process of volcano, and the impact of volcano. During finding the answer, the students break down the information into small part, it includes finding the main sentence and supporting sentence. Then, students find the information and figure out how relate each other. In the end, students find the general statement in a text that does not state idea explicitly.

Both of questions 4.2 and 4.3 are Higher Order Thinking Skill questions to assess analysis aspect. 4.2 asks student to infer the information from the text, while 4.3 asks student to find the general statement. Those questions ask student to break down the information into small part and find the implicit information. These are part of analysis aspect in Higher Order Thinking Skill based on Brookhart's theory.

b. Logic and Reasoning Aspect

In logic and reasoning aspect, there are two questions made by English teacher to assess this aspect. Those two question is created in form of essay question.

You Are <u>The</u> Reason By <u>Calu</u>	<u>m Scott</u>
There goes my	heart beating
'Cause you an	e the reason
I'm losing:	mv sleep
Please come	
There goes my	mind racing
And you are	-
That I'm stil	
I'm hopel	5
Thi hoper	css now
I'd climb ever	ry mountain
And swim e	
Just to be	
And fix what	I've broken
Oh, 'cause I ne	ed you to see
That you are	the reason
There goes my	hand shaking
And you are	the reason
My heart kee	ps bleeding
I need yo	
If I could turn b	back the clock
I'd make sure the ligh	
I'd spend every ho	
Keeping y	you safe

"If I could turn back the clock, I'd make sure the light defeated the dark" (line.19-20).

Why does the writer write these lyric? Because

Figure 4.4 Example of Teacher's Made Question in HOTS to Assess Logic and Reasoning Aspect (1)

This is the example of essay question to assess logic and reasoning skill of student. Teacher uses a sentence *Why does the writer write these lyric?*. Question in essay is open ended question. This is linear to assess logic and reasoning skill because in open ended question student can explore their argument and assumptions without limit like in multiple choice version. This question provided a lyric. Through this way student will do effort to think. To answer this question, student should read to get understanding about the lyric. Then, students know the aim of author to write this lyric. During this process, students give their argument about why the author created the lyric. Furthermore, students give their argument and assume with logic conclusion with their own word. The other form to assess Logic and Reasoning is showed in figure below.

Please answer the question below!

Television Fact

Television gives several programs for its viewers. One kind of television program is News Report. News Report is a program that is reported all of the news in the world. This is the factual program, all of the news is a fact. A fact is something that is true. Some of the news program in television, namely Liputan 6 Siang, Dunia Dalam Berita, Fokus Siang, and etc. Another program is an infotainment program Same as news program this program is the factual program and giving an information to viewers. Difference with news program, the infotainment programme informs the celebrity's news, for example Kisah Seputar Selebriti, Silent, Sinden Gossip, Hot Spot. etc.

Questions	Answers
a. From the text above, in your opinion what are the differences between the news program and infotainment program?	
b. From the text, can you give your opinion about the advantages from TV program.	

Figure 4.5 Example of Teacher's Made Question in HOTS to Assess Logic and Reasoning Aspect (2)

This question asks student to give their opinion and argument about TV program in Indonesia. Different with previous question, teacher provides a problem in student real life. Provide a case in student real life help student to explore their opinion easily because they know the issue well. Through this question, students also explore their knowledge about the issue that related with their life. The criteria to assess Logic and Reasoning skill based on Brookhart's theory are ask student to reason about something and give their statement to assume with logic conclusion. The questions in figure 4.4 and 4.5 can be categorized into Logic and Reasoning skill based on these criteria.

c. Judgment and Critical Thinking Aspect

Based on the result in the field, there is only one question made by English teacher to assess judgment and critical thinking in higher order thinking skill of student. The model of question is multiple choice question.



Figure 4.6 Example of Teacher's Made Question in HOTS to Assess Judgment and Critical Thinking Aspect

This is a model of multiple choice question assess student's abilities to recognize the strategy used in this poster. This question provides a picture that student should catch the meaning and aim of the picture. In this question, the teacher assessed critical thinking skill of student. To answer this question, student would have to identify the picture. The picture contains the sentence on the spot littering fines from \$60 to \$375. Litter. It's in your hands adding with the picture of hand. The aim of the picture is encourage people to keep everything clean from the litter which is show in option A. This question encouraged students to identify rhetorical and persuasive strategies. The persuasive communication of gathers from news media, advertisement, political campaign and historical accounts. Based on Brookhart's theory, asking student to identify persuasive communication, asks students what statements or strategies the author uses, what effects the author expects are criteria to assess Logic and Reasoning skill.

2. Challenges in Designing HOTS Assessment for Diverse Students

In case of challenges, the researcher found several challenges faced by teacher in designing higher order thinking assessment for diverse students. The challenges revealed when the researcher gathered the data through interview. The several challenges showed in chart below.

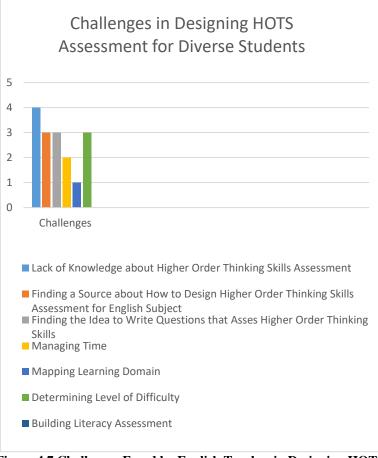


Figure 4.7 Challenges Faced by English Teacher in Designing HOTS Assessment for Diverse Students

This figure shows the several challenges that found in field. The chart shows that mostly English teachers have challenge with the limited knowledge about Higher Order Thinking Skills assessment. The detail finding data described deeply below.

a. Lack of Knowledge about Higher Order Thinking Skills Assessment

Based on the result interview of English teacher, the researcher found that the English teacher still has limited knowledge about Higher Order Thinking Skills assessment. They have already known what is Higher Order Thinking Skills through individual learning in book. But they still need a more knowledge to make them steady about the concept of HOTS in English subject assessment.

"... but in real, especially me, I need training again. My concept about HOTS is not really stronger. In workshop training, we asked to create HOTS question, I do not know my question categorized HOTS or not. I just try. But, the instructor said that my question is correct." (Teacher 1)

"... in workshop, when the instructor said that HOTS question is implicit. HOTS question is not only for difficult question. The teacher is shock after got this information. (Teacher 2)

" ... actually there is a material review in workshop. But I do not understand.) (Teacher 4)

Although the teacher had been followed the training in constructing Higher Order Thinking Skills assessment that held by the government, they wants to be train again to make them sure that their question's made is categorized in Higher Order Thinking Skills. Furthermore, the next training helps them to apply Higher Order Thinking Skills question for student.

> "... need a training again, because yesterday the workshop held in a hall. It consists of many participants. So, it needs training again for

teacher. In goal, the teacher may understand and apply on students." (Teacher 3)

b. Finding a Source about How to Design Higher Order Thinking Skills Assessment for English Subject

The researcher found that three teachers faced problem to find source or book about that contains about how the way to construct the questions to assess Higher Order Thinking Skills especially for English subject. The teachers just do searching in internet if they want to find the information about HOTS but they do not have a guide book.

" yes, so far, I don't have a guide book. Just find the information in internet." (Teacher 3)

In the workshop held by government, the teacher did not get a guide book especially for English subject to assess Higher Order Thinking Skills, they should find by themselves.

"Nothing, everyone bring the book by themselves. Searching" (Teacher 2)

In the workshop training, the instructor just gave the direction how to design Higher Order Thinking Skills question, but in fact the teacher did not really understand.

"... I think, I don't get a book. There is a presentation but I don't understand so just looking" (Teacher 4)

c. Finding the Idea to Write Questions that Asses Higher Order Thinking Skills

For the next challenge, the researcher found that three teachers difficult to find the idea in designing HOTS questions. The teacher is not easy to find the idea to process the question. "it is very difficult to find the inspiration" (Teacher

2)

In designing HOTS assessment, mostly teacher adopt and modified by themselves. They adopted text, dialog, or story from a book or internet then modified it. The faced came up when build or process the provided text into Higher Order Thinking Skills questions.

" hmm the dialog is provided. If the dialog like this, what should I do to make this becomes HOTS. Hmm maybe like this or like this.." (Teacher 1)

In constructing HOTS questions, teacher has deep pressure for a moment, because the teacher thinks hardly to create it. It is need an extra energy to deep thinking.

"... finding again and again. How to dig HOTS question. Finally, to create a HOTS question we should sit in hot chair" (Teacher 2)

".. yes like that, time, thinking, everything is extra than LOTS" (Teacher 3)

d. Managing Time

Time becomes one of problems to create a questions that assess Higher Order Thinking Skills of student. There are two teachers said that time is problem. Teacher felt difficult to process Higher Order Thinking Skills assessment. It took a longer time during processing question for Higher Order Thinking Skills assessment. It is really need an extra time to construct Higher Order Thinking Skills question than usual question. The process concluded finding the text or dialog, modifying, and deciding distractor option in multiple choice questions.

"... yes like that, **time**, thinking, everything is extra than LOTS" (Teacher 3)

"...to create one HOTS question, I start from 11.00 AM until 12.30 PM I can finish. Yes it's take a long time. Maybe because I don't have experience and habit to create HOTS question. It's take time. (Teacher 1)

In addition, teachers have not much time to create HOTS question because they have a lot of task as a teacher especially in administration task.

"Today, teachers have a lot of demand. 50 : 50. 50% for learning and 50% for administration. And, it takes our time..." (Teacher 1)

e. Mapping Learning Domain

Mapping learning domain is one of challenge faced by teacher in creating Higher Order Thinking Skills questions. The result of interview revealed one teacher difficult to bring into line the indicator with the questions.

" yes, it is not easy to create the question. Starts from deciding level of difficulty and alignment with the indicator. It is should thinking deeply... process to equal with the indicator... it is not a simple that we think" (Teacher 1)

During the process of creating the question, the teacher should deciding the model of question that appropriate with the indicator. It is so important because to make sure the student achieve the learning goal.

f. Determining Level of Difficulty

The researcher found that deciding level of difficulty is one of interrupt in designing Higher Order Thinking Skills assessment for diverse students. There are two teachers said that it is a challenge for them. Teacher should construct the questions that make their student use their thinking. Deciding level of difficulty that appropriate with student cognitive is confusing. Teacher taught in several class with different characteristic each class. To support it, the teachers question's made should appropriate with student condition.

"... the problem is we should think the level of difficulty. When we create the question automatically we think this question appropriate or not with my students. It is appropriate or not with their competence." (Teacher 1)

Deciding level of difficulty of student is difficult because the learning ability of students who placed in Excellent and Regular glass are different. Students in Excellent class are habit to work with a lot of task and active in the class. It happened because they also take another course out of the school, especially subject for final exam. It different with students in Regular class, just several students who take a course. In Excellent class, teacher did not really face the problem to decide a level of difficulty of HOTS question. It happened because majority of students in Excellent class did well.

> "for the clever student, there is no problem. But for student who .. but in general there is no problem because the class who I try the HOTS question a special class" (Teacher 1)

"yah superior class is good. The average student in this class is fast. They take another course out of school. The treatment is different" (Teacher 2)

Sometime, teachers gave the different task if the task that given in a class is difficult to execute by student. In a fact, teachers often gave a same task than different task for all the class with different characteristic. " sometime same and sometime different. At first, we try. If the first class feel difficult to work with the question, we will make easier one for another class." (Teacher 4)

g. Building Literacy Assessment

Building literacy assessment for student is one of problem faced by teacher. Encourage student to read is one of way to train Higher Order Thinking Skills of student. Although today student easy to access kind of book around the world through internet, but they were lazy to read and understand the content of book. Students prefer to look the summary of book than read the book. In addition, the student could not answer the Higher Order Thinking Skills questions that given by teacher.

"... today the millennial student is instant generation. Everything is provided. Just use internet... in the end, their literacy is low. Student is asked to read the book, they just look the summary...Now, the problem of student is they are lazy to read" (Teacher 2)

B. Research Discussion

In this section, the researcher discusses those finding by reflecting on several theories. The theories already stated in the chapter 2 of this research. The detail discussion is showed below.

1. Classified Trends of Teacher in Designing HOTS Assessment for Diverse Students

At stated by Brookhart, there are several aspects of thinking in Higher Order Thinking Skills. In aspect of thinking of Brookhart's theory, Higher Order Thinking Skills are showed: (1) analysis, evaluation and creation, (2) logic and reasoning, (3) judgment and critical thinking, (4) problem solving, and (5) creativity and creative thinking.⁶⁰ The result of data showed that analysis aspect is the favorite aspect mostly used by English teacher (see chart 4.1). But, the English teachers only confirm the analysis aspect for the first classify in Brookhart's theory. It may happen because the teacher is trained to make HOTS question in this model during workshop training. Furthermore, the form of final exam question in Indonesia is multiple choice question. F.J king stated that multiple choice and constructresponse items can be used for measuring Higher Order Thinking Skills for deduction, inference, and prediction but it less powerful to assess synthesis and evaluation.⁶¹ In another aspect such as problem solving, creativity, logic and reasoning usually need an essay or performance task, sometime teacher difficult to measure open ended question, while if use multiple choice question it will easy to measure. It also can be assumed that many teachers prefer to assess analysis aspect than another aspect because this aspect is easy to asses in multiple choice form which is the model of question in final exam than create question to assess evaluation. It may discuss that teacher still belief final exam is the goal of learning process. Teachers also use a same strategy to measure analysis skill. It can be seem through their structure of questions such as what can be inferred from the text?, From the above dialogue, we can infer that Mariana is excited on the bag because ..., What is the general statement of the text? We can infer from the text that. All of the question is often seemed in final exam.

The result of this research also similar with research conducted by Hamidah Salam. Hamidah Salam who did research about contrasting task-item about HOTS in student teacher classroom found that only 4 from 27 lesson plans made by student teacher categorized in HOTS in cognitive level domain *analysis* and *create* based on Bloom Taxonomy.⁶² It may discussed that question to assess analysis is the favorite aspect

⁶⁰ Sussan Brookhart. How to Asses High Order Thinking in Classroom. (USA : ASCD, 2010), 14

⁶¹ King, FJ, Ludwika Goodson, and Faranak Rohani. Higher Order Thinking Skill. P.101

⁶² Hamidah Salam. Student Teacher Designed-Task in Facilitating Higher Order Thinking Skills at Microteaching Classess of UIN Sunan Ampel Surabaya, (UINSA, 2017), 59

of teacher. It may happen because question or task about analysis is familiar among teacher.

2. Classified Challenges Faced by Teacher in Designing HOTS Assessment for Diverse Students

In this part, the researcher discussed deeply the challenges that finding in the field regarding the several theories. According to Master, there are several challenges in building educational assessment, they are repurposing assessment, implementing a learning assessment system, mapping learning domain, building assessment literacy, and concluding comments. But, in the fact, the researcher found 9 challenges that face by English teacher in designing Higher Order Thinking Skills assessment for diverse students. Two of them are appropriate with Master's theory, they are about mapping learning domain and building literacy assessment of student.

Most challenge found that faced by English teacher come from themselves. The major challenge of teacher is limited knowledge about Higher Order Thinking Skills assessment of English subject. It happened because teacher did not have a guide book to help them in designing Higher Order Thinking Skills question for English subject. Most of book and question that provided Higher Order Thinking Skills found in Math or Science. The guide book will help the teacher to know the guideline and principle to assess Higher Order Thinking Skills of student. Brookhart said that apply all of kind of assessment without general principle is fail.⁶³ Actually, the government had created a book to guide teacher in constructing HOTS question, but there was not questions that provided for language assessment. The book just showed the criteria not the example of question. The workshop training that held by the government also limited because only one teacher who participated for each school. Those challenges could minimize if the government provides a detail guide book for each subject who can access by

⁶³ Sussan Brookhart. How to Asses High Order Thinking in Classroom. (USA: ASCD), 2010, 18

everyone. The training of HOTS assessment also should be given for all of teacher.

It is line with the research conducted by Heri Retnawati et.al. On their research, Heri et al found that not all teachers understand HOTS well, teachers are still unable to distinguish HOTS from ability, skills, learning methods, learning models or learning activities.⁶⁴ The knowledge of teacher about Higher Order Thinking Skills is general. It may discuss that only several teachers who understand well about Higher Order Thinking Skills. Teacher need a training or workshop that given for all of each teacher, not only delegation of school. If the workshop only for one teacher, the impact only this teacher who aware with Higher Order Thinking Skills.

The next interesting discussion is the question that given for diverse students. The teachers know that they should give a different task for their student based on their competence. Although the students who has different competence place in different class, but the teacher often to give a same task than a different task. Make a question that support Higher Order Thinking Skills is difficult, let alone to make it for all of students that have a different competence. The teachers do not have a much time to do it. Teachers have a lot of task to do as teacher. In a day, teachers spent their time in school to teach. Then, they should check out the task of student. The administration task of teacher also cannot ignore.

This result of this research also similar with result on research conducted by Shamilati. Shamilati etc found that time is a great challenge to teacher in teaching and learning HOTS, because they felt did have time, it takes a longer time to plan more accurately and conveniently.⁶⁵ Those problem may be minimize if the school and the teacher give the similar treatment of the student. If the students who placed in excellent class take a special course out of the school, the student who placed in

⁶⁴ Heri Retnawati et al. "Teacher's Knowledge about Higher Order Thinking Skills and Its Learning Strategy". *Problems of Education in 21 Century Yogyakarta State University*. Vol 78. No 2.. 2018, 227

⁶⁵ Shamilati Che Seman et.al. "Teachers' Challenges in Teaching and Learning For Higher Order Thinking Skill (HOTS) in Primary School". Vol.7 No.7 AESS Publication, 2017, 539

regular class should take the same program. If the student who placed in regular class usual to thinking, they will enjoy to work with questions. Although, their score do not equal with excellent class, but they are learn to use their thinking. The school and teacher should motivate the students. It is needed, because in the end of year, they will get a same questions for final exam.

As stated before, only two challenges that appropriate with Master's theory. The result of this research does not reveal that repurposing assessment, implementing a learning assessment system, and concluding comments as the challenges for English teacher in designing Higher Order Thinking Skills assessment for diverse students. It happens because today teacher is modern teacher. They already know the true of assessment not to judge their students are smart or poor, but the assessment is the process the student can achieve the goal of learning or not. If the student cannot achieve the goal of learning, the teacher will evaluate themselves. In implementing a learning assessment system, it is to general if conclude that the English teacher cannot apply a learning assessment system in Indonesia based on the result of challenge in this research, because teacher already know the system of assessment of Curriculum 2013 such as the principle, approach, administration and the scope. The teachers know well the assessment of Curriculum 2013 bold in attitude, skill and knowledge. But of teacher has difficulties in small part of knowledge which is designing HOTS assessment of diverse students. For concluding comment, teachers have not challenge, because teacher can build a good atmosphere in classroom that make a good communication between teacher and student. Teachers always try to make a situation to make them enjoy if they are less motivation in class. Through this situation, a feedback always comes in process of learning.

CHAPTER V CONCLUSIONS AND SUGGESTIONS

This chapter of contains some conclusions regarding the result of this research that is about trends and challenge in designing Higher Order Thinking Skills assessment for diverse students. The suggestions relate this study also provided for English teacher and the further researcher.

A. Conclusions

Based on the result of research finding which is presented in previous chapter, the researcher conclude some points regarding the trends and challenge in designing Higher Order Thinking Skills for student which is described below.

1. Trends in Designing HOTS Assessment for Diverse Students

In case of aspect of thinking in Higher Order Thinking Skill, there are 3 aspects of thinking found in English teacher's question made that are *analysis*, *judgment and critical thinking* and logic and *reasoning* skill. There are four questions made by English teacher to assess *analysis* aspect of student in form of multiple choice question. For *judgment and critical thinking* and *logic and reasoning*, there is only one question each of them. Judgment and critical thinking question made in form of multiple choice question. While, for logic and reasoning aspect question made in essay form.

2. Challenges in Designing HOTS Assessment for Diverse Students

In term of challenges faced by English teacher in Designing Higher Thinking Skills assessment for diverse students, the researcher found some challenges which is showed below.

a. Lack of knowledge about HOTS assessment

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- b. Limiting knowledge about HOTS assessment
- c. Finding a source about how to design HOTS assessment for English subject
- d. Finding the idea to write question that assess HOTS
- e. Managing time
- f. Mapping learning domain
- g. Determining level of difficulty
- h. Building literacy assessment

B. Suggestions

The researcher gives the suggestion and advice that relate with this study. The suggestion is for teacher and the further researcher.

1. School

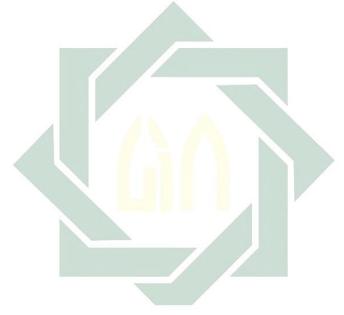
For the school, it should give an opportunity to all of teachers in following workshop and training program about Higher Order Thinking Skills (HOTS) assessment. If only several teachers who follow the workshop from the government, the school should make a small workshop individually to encourage the skill of teacher in HOTS.

2. Teacher

Designing a Higher Order Thinking Skills question is not easy. There are so many challenges faced by teacher, it comes from internal and external. But, as a teacher, delivering the knowledge and experience for students to make them success to face a real life is a major goal. Always try to create a Higher Order Thinking Skills regularly may help teacher to enjoy in construct HOTS question. Teacher may try to train to include the other aspect of thinking in HOTS when create a question. Especially for senior high school teacher, all of the aspects in HOTS prepare their student to welcome job and university world.

3. Further Researcher

For the next researcher, identifying the challenge that faced by English teacher in import of every aspect of HOTS in question also an interesting idea. Besides, investigating the strategy used by teacher in dealing with challenge in designing HOTS assessment is important to reveal since there are many teacher has problem in HOTS.



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