HIGHER ORDER THINKING QUESTION FOR ENGLISH WRITING: STUDENTS' CHALLENGE AND STRATEGY

THESIS

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By

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ABSTRACT

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Key Words: Higher Order Thinking Question For English Writing, Student's Strategy, Student' Challenge

The role of higher order thinking skill in the instructional process is undeniably essential especially in this millennial era that demands more critical thinking. However, the unpleasant fact showed that Indonesian students are still unfamiliar and having difficulty to solve HOTS question. Although HOTS has been implemented in Indonesia since 2013. One English language activity that involves HOTS the most is writing. That fact leads this present study to examine; 1) students' challenge in solving HOT question for English writing, and 2) students' strategies in solving HOT question. On top of that, present study also examined the challenge and strategy based on diverse students' thinking level. Researcher used descriptive qualitative method and for obtaining the data, researcher conducted a HOTS testing to determine students thinking level then conducted interview with the students representative from each thinking level to fulfil both of the research questions. The result highlighted that the same level of thinking students indeed had some different challenges and vice versa. Additionally, cognitive challenge becomes the major challenge comparing to the linguistic ones from both of HOT and LOT students' perspective. Then, the strategies that was implemented by

students are; 1) estimating the time, 2) re-reading the HOT question, 3) translating the question, 4) Paraphrasing the question, 5) pointing important keywords, 6) getting background knowledge from semantic and episodic memory, 7) asking peers for help, 8) scratching raw idea, 9) rereading the whole answer and self-reflecting. Overall LOT applied more strategies than HOT students.



ABSTRAK

Satyaputri, Talitha Rizky. (2020). Higher Order Thinking Question for English Writing: Students' Challenge and Strategy. An Undergraduate Thesis, English Language Education Department, Faculty of Tarbiyah and Teacher Training, Sunan Ampel State Islamic University. Advisor: Dr. Irma Soraya, M.Pd and Siti Asmiyah, M.TESOL

Kata Kunci: Pertanyaan Berpikir Tingkat Tinggi Untuk Menulis Bahasa Inggris,

Strategi Siswa, Tantangan Siswa

Peran HOTS dalam proses pembelajaran tidak dapat dipungkiri sangat penting terutama pada era milenial yang menuntut banyak berpikir kritis. Walaupun begitu, terdapat fakta yang kurang menyenangkan yang menyatakan bahwa siswa di Indonesia tidak familiar dan kesulitan dalam mengerjakan soal HOT. Padahal HOTS sendiri sudah di terapkan sejak tahun 2013. Salah satu kegiatan pembelajaran Bahasa Inggris yang paling banyak melibatkan HOTS adalah writing. Beberapa keadaan diatas, membawa penelitian ini untuk menyelidiki: 1) tantangan siswa dalam menyelesaikan pertanyaan HOTS untuk menulis Bahasa Inggris, dan 2) strategi siswa dalam me<mark>nyelesaikan pert</mark>anyaan HOTS untuk menulis Bahasa Inggris. Dan juga, penelitian ini akan meneliti tantangan dan strategi siswa berdasarkan tingkat pemikiran yang berbeda. Peneliti menggunakan metode kualitatif deskriptif. Untuk memperoleh data, peneliti melakukan HOTS testing untuk menentukan tingkat berpikir siswa dan melakukan interview mendalam kepada perwakilan siswa dengan tingkat berpikir yang berbeda. Hasil dari studi ini menunjukkan bahwa siswa dengan tingkat berpikir yang sama memiliki tantangan / kesulitan yang berbeda begitu juga sebaliknya. Ditambah lagi, berdasarkan perspektif siswa HOT dan LOT kesulitan kognitif adalah yang utama dibandingkan kesulitan lingusitik. Kemudian, beberapa strategi yang diterapkan oleh siswa adalah: 1) memperkirakan jangka waktu, 2) membaca kembali pertanyaan HOT, 3) menerjemah pertanyaan HOT, 4) Memparafrase pertanyaan, 5) menunjuk kata kunci penting, 6) mendapatkan ide dari memori periodic dan semantic, 6) meminta bantuan teman, 7) membuat coretan untuk ide mentah, 8) membeca kembali semua jawaban dan refleksi diri. Secara keseluruhan siswa LOT melakukan lebih banyak strategi dari pada siswa HOT.

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LIST OF ABBREVIATIONS

1. HOTS : Higher Order Thinking Skill

2. HOT : Higher Order Thinking

3. PISA : Program International School Assessment

4. INAAP : Indonesia National Assessment Program

5. K-13 : Kurikulum 2013

6. LOT Student : Lower Order Thinking Students

7. **HOT Student** : Higher Order Thinking Students

8. EFL : English for Foreign Language

9. LS : LOT student

10. HS : HOT student

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CHAPTER I INTRODUCTION

This chapter presents the background of the study which contains of some present study related issues that leads researcher to conduct this study and the importance of present study. Following sections are the research questions and objectives that formulated from the research background. Then, significance of the study, scope and limitation, and definition of key term are also provided in this chapter.

A. Research Background

In the recent few years, the results from several surveys and previous researches strongly indicate that Indonesian students are not accustomed to solve HOT Question and still confront some hurdles answering them. Starting from survey of PISA (Program International School Assessment) in 2016 conveyed that the Indonesian pupils' HOTS and literacy skill is a way too far from satisfaction. The survey revealed that 70% of Indonesian pupils were only able to accomplish the C1 until C4 of Blooms Taxonomies learning objectives, meanwhile for C5 and C6 were still seemed complicated. Along with that survey, Indonesia National Assessment Program (INAP) also showed that pupils are still weak in HOTS cognitive skills such as reasoning, analysing, and evaluating. Similarly, researches also have discovered there were still many

¹ OECD. PISA 2015 results: Excellence and equity in education (Vol. 1). 2016. Retrieved from www. oecd.org.

² Kemendikbud. *Assessment for 21st Century Learning, Learning from various assessment results*. Jakarta: Badan Penelitian dan Pengembangan. 2016

pupils who are not capable to complete the HOTS test.^{3,4} By realizing the fact that HOTS technique such as HOT Questioning has been implemented in schools since 2013 exactly when K-13 curriculum officially established, this sort of issue was supposedly preventable.

As a matter of fact, several theories indeed believe that questioning technique is one of the basic methods to encourage students' thinking skill. One impactful teaching method towards the purpose of boosting pupils' learning and thinking, as well as easing the teacher to deepen the suitable learning strategy is through question.⁵ Similarly, Steven also believed that the level of question will determine the level of pupils' way of thinking.⁶ The teachers' questioning in classroom has been used for centuries as a tool to assess pupils' knowledge, promote comprehension and to develop higher order thinking skills among pupils.⁷ Furthermore, a previous study about HOT Question, proved that the pupils were able to respond HOT question better when they've got used to cope with teacher's higher order thinking skills question throughout the instructional process.⁸ According to those mentioned studies, due to its

³ Kurniati, D. Harimukti, R. Jamil, NA." Kemampuan Berpikir Tingkat Tinggi Siswa Smp Di Kabupaten Jember Dalam Menyelesaikan Soal Berstandar Pisa." *Jurnal Penelitian dan Evaluasi Pendidikan*, Vol.20 No 2, 2019.

⁴ Yulianti, SR. Lestari I. "Higher Order Thinking Skill (HOTS) Analysis of Studentsin Solving HOT Question in Higher Education." *Perspejtif ilmu Pendidikan*, Vol. 32 No. 2, 2018.

⁵ Shen, P. & Yodkhumlue, B. "Teacher's Questioning and Students' Critical Thinking in College EFL Reading Classroom." *The 8th International Postgraduate Research Colloquium: Interdisciplinary Approach for Enhancing Quality of Life IPRC Proceedings.* 2011, 44 – 53.

⁶ Stevens, R. "The question as a measure of efficiency in instruction: A critical study of classroom practice". *Teachers college contributions to education. New York, NY: Teachers College Press*, Vol. 48. 1912.

⁷ Tofade, T., Elsner, J., & Haines, S. T. "Best practice strategies for effective use of questions as a teaching tool." *American journal of pharmaceutical education*, Vol. 77 No. 7, 2013. 155

⁸ Nazriani, L. "A Survey on the Levels of Questioning of ELT: A Case Study in an Indonesian Tertiary Education." *Advances in Language and Literary Studies*. 2017

function as the basic methods to encourage thinking skill, a questioning technique is proved to hold an important role in students' learning process. That is why higher level questioning technique is mostly used in instructional process or in survey evaluation to measure students' thinking skill. It is also as the supporting fact for this study to focus on the questioning technique.

Measurement of students' thinking skill can be conducted using HOT Question. HOT Question has been already applied in the majority of school subjects, such as Mathematic¹⁰, Physics¹¹, English Language¹², and some other school subjects. Furthermore, it also appears in Indonesia national examination. Based on several theories regarding with the types of question.¹³

Higher Order Thinking Question is included in divergent and referential question. Because it is required broad understanding, reasoning ability and aptitude to apply knowledge in less traditional contexts. Despite the term about what types of question higher order question is, there is also an aspect about how HOT Questions normally being delivered.

⁹ Nappi, J. S. "The Importance of Questioning in Developing Critical Thinking Skills." International Journal for Professional Educators. 2018

¹⁰ Sagala, P. N., Andriani, A. "Development of Higher-Order Thinking Skills (HOTS) Questions of Probability Theory Subject Based on Bloom's Taxonomy". J. Phys.: Conf. Ser. 1188 012025. 2018

¹¹ Supeno., Astutik, S., Bektiarso, S., Lesmono, A. D., & Nuraini, L. "What Can Students Show About Higher Order Thinking Skills in Physics Learning?" *IOP Conference Series: Earth and Environmental Science*. 243 012127. 2019

Damanik, S. T., Zainil, Y. "The Analysis of Reading Comprehension Questions in English Textbook by Using Higher Order Thinking Skill at Grade X at SMAN 2 Padang". *Journal of English Language Teaching*, Vol. 8 No. 1. 2019

¹³ Kubota, M. "Question-answering Behaviours in ESL and EFL Classrooms: Similarities and Differences". 1989. *ERIC ED 313913*.

¹⁴ Nunn, R. "The purposes of language teachers' questions". IRAL, Vol. 37 No. 1, 1999. 23-42.

Based on several previous study, the delivery of questioning technique can be through oral and written question. ^{15,16} Specifically, for English Language subject, written higher order questions are mostly utilized for formal test or examination Numerous previous studies also discovered some ways of using English written higher order question. Firstly, English written higher order question used for national examination in the form of multiple choice ¹⁷. The second implementation of English written higher order question can be for reading comprehension test. For reading comprehension, the types of items are multiple choices, true / false, and short answer. ¹⁸ And lastly, written English higher order question is mostly implemented as the elicitation for students' writing. ¹⁹ This sort of HOT Question is required a long written answer, systematic, and in-depth thinking. ²⁰ That is why it is considered as one of the challenging question for students.

Looking back to the current issue regarding student' unfamiliarity and difficulties of HOT Question, it can be realized that implementing HOT Question is not as smooth as people might think. In response to that case, some

¹⁵ Filippone M. Questioning at The Elementary Level. Kean. Master Thesis. Kean University.

¹⁶ Çepni S, Ayvacı HŞ, Keleş E. "School and High School Entrance Examination in Science Asked by Bloom Taxonomy Comparison of The Question at The Beginning of The New Millennium". *Science Education Symposium in Turkey*, 2011.

¹⁷ Putra, K. T. "Higher Order Thinking Skill Question in English National Examination Indonesia". *Jurnal Bahasa Lingua Scientia*, Vol. 11, No. 1. 2019

Damanik, H. N., Zainil, Y. "The Analysis of Reading Comprehension Questions in English Textbook by Using Higher Order Thinking Skill at Grade X Of SMAN 2 Padang." *Journal of English Language Teaching* Vol. 8 No. 1. 2019

¹⁹ Sopiani, P.S., Said, S., Ratnawati. "Investigating Students' Higher Order Thinking Skills (HOTS) in Writing Skill (A Case Study at the Eleventh Grade of a Senior High School in Banjar)." *Journal of English Education and Teaching (JEET)*. Vol. 3, 2019. 328-342.

²⁰ Stecher, B. Using Alternative Assessments in Vocational. 1996. 19-23.

previous studies investigated the teachers' challenge in implementing HOT Question. The results highlighted that teachers had insufficient knowledge and unskilled towards applying thinking skill.²¹ On top of that, teachers also lacked experience in teaching thinking skills creatively, graphic management, questioning HOT open-ended questions and teaching HOTS in a whole.²² In fact, there is a bunch of hurdles and challenges that teachers need to cooperate with. Also many things that teachers required to mastered such as creative learning media and more understanding related to their students' needs.

Furthermore, not only from teacher's perspective, others previous researches investigated from students' point of view regarding with the HOT Question difficulties. Those studies focus on the several school subjects, such as Mathematic²³, work and energy²⁴, and English Language. Particularly for English language subject, a study has uncovered the students' difficulty in solving English oral HOT Question.²⁵ The result conveyed that oral HOT Question students were unable to manage the nervousness and it leads students cannot show the best performance. Time issue also becomes the students'

²¹ Zamri, M. and B. Jamaludin. "Penyebatian Kemahiran Berfikir dalam Pengajaran Guru Bahasa Melayu (Integrating Thinking Skills in Teaching Malay Language)". *Bangi, Penerbitan Fakulti Pendidikan UKM: Proceedings of the International Conference on Teaching and Learning in the 21 Century.* 1999, 1318-1328.

²²Sukiman, S., S.S. Noor and U.D. Mohd. "Pengajaran Kemahiran Berfikir: Persepsi dan Amalan Guru Matematik Semasa Pengajaran dan Pembelajaran di Bilik Darjah (Teaching Thinking skills: Mathmetics Teachers Percerptions and Practices during Teaching and Learning)". *Jurnal Pendidikan Sains & Matematik*, Vol. 2, No. 1, 2013, 18–36.

²³ Hadi, S., Retnawati, H., Munadi, S., Apino E., & Wulandari, F. N."The Difficulties of High School Students in Solving Higher-Order Thinking Skills Problems". *Problems of Education in The 21st Century*, Vol. 76, No. 4, 2018.

²⁴ Permatasari, A., Wartono., Kusairi, S. "Identification of Students Difficulties in Terms of The Higher Order Thinking Skills on The Subject of Work and Energy". *AIP Conference Proceedings*, 2014. https://doi.org/10.1063/1.5054456.

²⁵ Anil, B. "Higher Order Questioning in SL Classroom". *The Buckingham Journal of Language and Linguistics*, Vol. 8, 2017, 47-55.

challenge in solving HOT Question. Because when students answer HOT Question orally they do not have much time to consider the detail aspects such as the word option, structure of the idea. Etc. Meanwhile, it possibly becomes a different story if the HOT Question is in the written form, since with the written form students have no pressure about nervousness and limited time.

However, it has hardly been investigated regarding with the written form of HOT Question in the written form. As the matter of fact, the majority of important and formal test or evaluation assessment are in the form of written such as national exam, PISA survey, INAAP survey, students' placement test, and so on. That fact, leads the present study to conduct a deep and thorough investigation to reveal the actual factor of students' difficulties in solving HOT Question.

This needs to be emphasized that the type HOT Question that will be used in the present study is HOT Question for English writing or popularly called as HOT essay question. The usage of HOT Question for writing was chosen because every HOTS aspect can be maximally involved while solving a question. Based on some theories this type of question always better than others types of questions when assessing higher order thinking. Because matching exercises, true or false questions, and multiple-choice items belong to selected response sort of questions which from a list of possibilities answer students are required to select the correct answer, meanwhile essay HOT

²⁶ Reiner, C., Bothell, T., Sudweeks, R., & Wood, B. Preparing effective essay questions. 2002

²⁷ Clay, B. *Is This A Trick Question?: A Short Guide to Writing Effective Test Questions.* Kansas Curriculum Center. 2001

Questions for writing obliges students to produce their own answer. HOT Question for writing also diminishes the possibility of guessing and factor luck when answering the question such as owned by others mentioned type of questions. ²⁸ Moreover, a study uncovered that high recall competence students would accomplish higher score in the multiple choice question test, whereas students with great ability of analysing, organizing, and applying knowledge, were successfully scored better in the essay type of test. ²⁹ Those mentioned facts led this research to focus on the HOT question for English writing sort of question.

To obtain in-depth examination about how students work on their HOT Question for English writing, the present study also aims to examine the how students solving HOT Question for English Writing. Additionally, based on previous study, students who own high competence achieved better score in HOT questions contrast with medium and low categories of students.³⁰ Therefore, there is a need to uncover how students actually process their written answer for HOTS based on their level of competence. So that, it can be known the difference between the strategies of students with high competence compare to students with medium and low competence. Furthermore, the result is expected obtained from the high competence students is expected to be a

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²⁸ Reiner, C., Bothell, T., Sudweeks, R., & Wood, B. *Preparing effective essay questions*. 2002

²⁹ Pepple, D. J., Young, L. E., Carroll, R. G. A Comparison of Student Performance in Multiple-Choice and Long Essay Questions in the MBBS Stage I Physiology Examination at The University of the West Indies (Mona Campus). Vol. 34, 2010, 86-89. doi:10.1152/advan.00087.2009.

³⁰ Yulianti, S. R. & Lestari, I. "Higher-Order Thinking Skills (HOT) Analysis of Students in Solving HOT Question in Higher Education". 2018. doi: https://doi.org/10.21009/PIP.322.10.

solution to those who is still lacking. Some previous studies have discovered the students' strategy for writing. But it focuses more into the technical process such as drafting, editing, and so on.³¹ Using the theory of thinking and writing³² and strategy to solve HOTS essay question³³, this present study will reveal the students' strategies in solving HOT Question for English writing with focusing on their thinking process specifically while structuring the idea.

Since the previous study revealed that undergraduate students in Indonesia need a lot of improvement in solving HOTS question.³⁴ Thus, led present study to involve undergraduate English Education Department students of State Islamic University of Sunan Ampel as the participant. Additionally, present study will provide a new contribution related to students' challenges and strategies in HOT Question for English based on diverse student's thinking level with consideration that in the instructional process always includes students with diverse thinking levels With descriptive qualitative method, the data of this research will be taken from the interview to fulfil both research question about challenge and strategy. Furthermore, a HOT question testing is conducted before the interview, with the purpose for determining the student's thinking level based on the obtained score and letting students to experience

³¹ Farida, U. Improving *The Eighth Grade Students' Writing Skill Through A Writing Process Method At Smp N 15 Yogyakarta In The Academic Year Of 2012/2013*. [An Undergraduate thesis]. State University of Yogyakarta. 2014.

³² Helen K. & Arthur E. *Thinking Strategy for Learners*. Public Education & Business Coalition. 2004

³³ Clay, B. Is This A Trick Question?: A Short Guide to Writing Effective Test Questions. Kansas Curriculum Center. 2001.

³⁴ Yuliati, Siti & Lestari, Ika. (2018). "Higher-Order Thinking Skills (HOT) Analysis of Students in Solving Hots Question In Higher Education". *Perspektif Ilmu Pendidikan*, Vol. 32, 2018, 181-188.

HOT question for English writing. The result of this research is expected to give new insight for the teacher to find an effective way in implementing HOTS that can assess the students' challenges and based on strategy.

B. Research Questions

In relation to the background of the research previously outlined above, the research will be formulated as these following questions.

- 1. What are students' challenges in answering HOT Question for English writing?
- 2. What are students' strategies in answering HOT Question for English writing?

C. Objectives of the Research

The research is aimed:

- to examine the students' challenges in answering HOT Question for English writing,
- 2. to investigate students' strategies in answering HOT Question for English writing.

D. Significance of the Research

The result of this research has expected to give advantage and contribution for lecturer of English department, pre-service teacher, teacher, and further researcher.

1. Theoretical Significance

This research is focus on students' challenge and strategy in HOT Question for English writing. Some studies and survey indicate that students are still unfamiliar with HOT Questions and encounter difficulties to solve them. Previous studies and theories have proved the importance of HOT Question for students' thinking skill development in learning process. In response to the issue related with students' difficulties in solving HOT Question, several previous studies uncovered the students' challenge and difficulties of HOT Question include HOT Question in English Language Subject. There is a study from Malaysia³⁵ conveyed the challenge of students in answering HOT Question for English speaking made the students cannot think the answer properly. Another supporting theoretical framework stated the disadvantages of HOT Question for English speaking, the students became nervous and feel burden because of the short time of thinking³⁶. And regarding to the teacher's challenge of implementing Higher Order Thinking Question in writing activity also has been revealed³⁷. Those mentioned studies above are being the reason why this study is focus on the students' challenge and strategy in answering HOT Question for English writing. Regarding with the reason for choosing HOT Question for English writing is, it is proved to assess more HOTS than another types of question such as MCQ, true/false, matching, and so on.

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³⁵ Anil, B. "Higher Order Questioning in SL Classroom". *The Buckingham Journal of Language and Linguistics*, Volume 8, 2015, 47-55.

³⁶ Chen, M. H. "Theoretical Framework for Integrating Higher Order Thinking into L2 Speaking". Vol. 6, No. 2, 2016, 217-226.

³⁷ Singh, C.K.S. "Developing a Higher Order Thinking Skills Module for Weak ESL Learners". *English Language Teaching*; Vol. 11, No. 7, 2018.

2. Practical Significance

Since this study integrates some theories related with thinking in writing, HOTS, and strategy in solving essay question for the interview guidelines that has not done by any researches yet. The result of this study trustily can be the teacher's new insight to create the better activity that involving higher order thinking skill without burdening the students. By realizing how students answer the question and the challenges also, the teacher can figure out the strategy for preparing the students to have more HOTs activities. Since this study will use some theories about thinking skill and questioning for language learning as the guidelines.

3. Significance for further research

This research gives a benefit as the academic information and as the previous study for the further research in the field of HOTS in language teaching and learning, particularly related to the teacher's strategy to implement HOT Question for English writing in the learning process or by using classroom action research the further research can be related about HOT Question for English writing to increase students' HOTS. Because this study does not focus on the effect for the students' thinking level after answering those HOT Questions. Additionally, for further research may fulfil this study limitation to focus on the psychological aspect of difficulties in solving HOT Question for writing.

E. Scope and Limitation

This study focuses on the discovering the challenge and strategies in answering higher order English written question among four UINSA students which different thinking level. Some limitations that owned by this research are, firstly in term of students' challenges, guided by several theories, there are three classification linguistic, cognitive, and psychological difficulties. However, this study only focuses on the linguistic and cognitive because psychological aspects is out of English Education scope. Secondly, this research does not emphasize on how those questions affect the development of students HOTS but more focus on how the students with different level of thinking, answer those higher order written question and also the challenges. Because in Indonesia, many researches about strategy or method to develop HOTS have sprung up.

F. Definition of Key Terms

This research uses several terms in order to make it all clear. Thus, those terms will explain in details.

1. Higher Order Thinking Question for English Writing

Linch defines question as a linguistic expression or interrogative expressions utilized to elicit and obtain information or a response or to test knowledge. ³⁸ Furthermore, HOT Question is expressed to elicit information with higher-order thinking skill implementation, containing analysis, synthesis and evaluation that requires students to consolidate

³⁸ Lynch, T. "Questioning Roles in the Classroom. ELT Journal". Vol. 45, No. 3, 1991, 201 -210.

knowledge³⁹. In term of the type of question, HOT Question belongs to divergent or referential question. Present study specifically hooks the focus of the HOT Question for English writing or normally it is wellknown to be called as essay question. HOT Question for English writing is a written question normally consists of small number interrogative or statement sentence that requires students to compose long answer of their own statement, vocabularies, and writing style. HOT Question for English writing also elicits students to not merely recall the information but also process their background knowledge in logical, critical, and integrated answer. Additionally, this sort of question is utilized to evaluate students' higher level of competence such as, analyzing, reasoning. 40,41 The term of HOT Question for English writing in this study is a written English question that assess and elicit students' thinking skill covering ability such as evaluating, problem solving, reasoning in English language subject in the form of written answer as the response to questions.

2. Challenge

Based on Merriam Webster, challenge is a stimulating task or problem⁴². Furthermore, Toynbee defines challenge as an obstacle or

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³⁹Chen, M. H. "Theoretical Framework for Integrating Higher-Order Thinking into L2 Speaking". Vol. 6, No. 2, 2016, 217-226.

⁴⁰ Clay, B. *Is This A Trick Question?: A Short Guide to Writing Effective Test Questions*. Kansas Curriculum Center. 2001

⁴¹ Reiner, C. M., Bothell, T. W., Sudweeks, R. R., Wood, B. *Preparing Effective Essay Questions*. 2002

⁴² Merriam Webster Dictionary, https://www.merriam-webster.com/

something sort of test that need big effort to solve it.⁴³ The definition of challenge based on the context of this research is students' problem or difficulties in solving higher order thinking question for English writing.

3. Strategy

Strategy is a plan or ways of action designed to achieve a long-term or overall aim⁴⁴. For this present study the term strategy means the ways, plans, or methods used by the students to solve HOT Question for English writing.

Arnold J Toynbee, "A study of History" (London: Oxford University Press, 1987), 125
 Oxford Dictionary. https://www.oxfordlearnersdictionaries.com/

CHAPTER II

REVIEW OF RELATED LITERATURE

This chapter consists of two subsections which are review of related literature and review of previous studies. This chapter aims to provide relevant knowledge that is related to present study and explain several theories and previous studies that are involved in this study.

A. Review of Related Literature

1. Higher Order Thinking Question

Higher-Order Thinking Skills (HOTS) is defined as the ability to implement knowledge, skills, and values in reasoning, problem-solving, decision making, innovating and creating something new. 45 Some experts believe that higher-order thinking skills occurs when the student acquires new knowledge and save it in his memory, then this knowledge is connected, organized, or evaluated to accomplish some objectives. HOTS contains several skills, analysis, synthesis, and evaluation, which are the highest levels in Bloom's cognitive taxonomy. 46 Some previous study uncovered one effective and the most used technique to assess students' HOTS is by asking HOT Question. 47 Based on new version of Bloom Taxonomy HOT Question is a question that aims to assess the competence

⁴⁵ Sulaiman, T., Muniyan, V., Madhvan, D., Hasan, R., & Rahim, S. S. A. "Implementation of Higher Order Thinking Skills in Teaching of Science: A Case Study in Malaysia. Selangor: *International Research Journal of Education and Sciences* (IRJES), 1(1), 2017, 1-3.

⁴⁶ Abosalem, Y. "Assessment Techniques and students' higher-order thinking skills. Abu Dhabi". *International Journal of Secondary Education*, 4(1), 2016, 1-11.

⁴⁷ Chen, M. H. "Theoretical Framework for Integrating Higher-Order Thinking into L2 Speaking". Vol. 6, No. 2, 2016, 217-226.

of analyzing, evaluating, and creating. ⁴⁸ A previous study conveyed the ability of analyzing means analysing the obtained knowledge and classifying or organizing the information into smaller specific identification. Secondly, identify and distinguish the causing factor and effect. Furthermore, ability to evaluate is the ability to examine and criticize the method, idea, or solution, and then denying or accepting statement based on the standard criteria. Lastly, the ability of creating includes constructing a solution for particular issue, and generalizing the idea. ⁴⁹ In short HOT question undeniably requires the ability to process the idea not merely recall or re-state the information.

Supporting Bloom's theory, Willen conveyed the sample of HOT Question for measuring each skill in HOTS. ⁵⁰ He classified a question into four types, those are low order convergent, high order convergent, low order divergent, and high order divergent. Reflecting to HOT Question's characteristic by Bloom, High Order Divergent type of question is qualified as HOT Question. Furthermore, according to Brookhart since HOT Question does not merely require a recall memory answer but critical answer, HOT Question must be provided with the background or supporting information of question as the elicitation for the students. ⁵¹ For instance, if

⁴⁸ Bloom, BS. *Taxonomy of Educational Objectives: The Classification of Educational Goals* (New York: McKay). 1956.

⁴⁹ Sagala, P. N. Development of Higher-Order Thinking Skills (HOTS) Questions of Probability Theory Subject Based on Bloom's Taxonomy. 2019

⁵⁰ Wilen, W. W. *Questioning Skills for Teachers: What Research Says to The Teacher? Washington*, DC: National Education Association. 1991.

⁵¹ Brookhart, S. M. *How to Assess Higher-Order Thinking Skills in Your Classroom.* Alexandria, Va. ASCD. 2010.

the question asks about the cause of flooding, then it should be written the information about the current condition of the flooding including, when it happens, and so on. Providing the theory of HOT question, Brookhart's theories adapted the operational verb from Bloom taxonomy as one of the guideline. To measure students analyzing ability, the question can be in the form of compare and contrast or the easier one is analyzing the main idea and the supporting evidence. (Such as what are the differences and the similarities of? what is the main idea of the passage above? Give the evidence!). The form of question that assess evaluating ability can be about identifying the elements of something "what are the advantage and disadvantage / positive and negative side of.....?", explaining reason, and judging the value. Lastly, question for assessing creating ability can be about generating solutions for a problem. (Such as what is the best solution for that issue) and plan or produce something new that for certain level of students may be about story continuation.⁵² To sum up, to be a HOT Question, a question does not always come first with question word why or how but it needs to considered the whole question and the background information before the question itself.

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⁵² Brookhart, S. M. *How to Assess Higher-Order Thinking Skills in Your Classroom.* Alexandria, Va: ASCD. 2010.

2. Students' Challenges in Solving HOT Question for English Writing

Likely a theory believes that HOT Question for English writing requires a long written answer.⁵³ Similarly, within the writing process, students are required to involve HOTS aspects, such as analyzing, synthesizing, and creating.⁵⁴ Students' long written answer can be considered as a productive skill which is writing. Until today, a theory that specifically related with challenge in solving HOTS English question is still very rarely to be found. But, since the long written answer form is closely similar with the students' writing product or can be called as an essay, that lead this present study utilized several theories regarding with writing difficulties. Bryne classified writing difficulties into classified into three categories those are linguistic difficulties, cognitive difficulties, and psychological difficulties.⁵⁵ So present study combines some theories regarding with those three writing difficulty classifications.

Before stepping in to those three classifications of writing difficulties, a HOT Question is not merely dealing with the answer processing but also with the question. Typically, HOT Question for English writing is quite lengthy, broad and crucial because it has to provide introductory material.⁵⁶ As it found by Scott students had a difficulty in processing complex

⁵³ Stecher, B. Using Alternative Assessments in Vocational. 1996, 19-23.

⁵⁴ Sopiani, P.S., Said, S., Ratnawati. "Investigating Students' Higher Order Thinking Skills (HOTS) in Writing Skill (A Case Study at the Eleventh Grade of a Senior High School in Banjar"). *Journal of English Education and Teaching* (JEET). Vol. 3, 2019, pp. 328-342.

⁵⁵ Bryne, Donn. Teaching Writing Skill. London: Longman Group Limited. 1988.

⁵⁶ Brookhart, S. M. *How to assess higher-order thinking skills in your classroom*. Alexandria, Va: ASCD. 2010.

sentence, since it contains conjunctions, phrases, etc.⁵⁷ With that condition, students may have difficulty in analysing the question since it is dominated with complex sentences.

Linguistic difficulty is related with the use of language or the English proficiency. The major problem related with linguistic according to Pratiwi are the use of tenses and ordering word into a sentence. Meanwhile, Haider pointed that spelling is a serious linguistic challenge in writing. Additionally, some students also have difficulties in syntax, tenses, grammar (mostly about preposition). Additionally, students stated that due to inadequate English proficiency, they were not able to pour out their bunch of ideas into an English written form. On the other hand, cognitive difficulties relates with how students process and organize their thought while writing. Based on several previous studies and theories, cognitive difficulties that been uncovered are (1) lack of background knowledge.

⁵⁷ Scott C. A Case for the Sentence in Reading Comprehension. Language, Speech, and Hearing Services in Schools. 40: 2009, 184–191.

Fratiwi, K. D. "Students' Difficulties in Writing English (A Study at The Third Semester Students of English Education Program At University of Bengkulu Academic Year 2011-2012)". 2012.

⁵⁹ Haider, G. "An Insight Into Difficulties Faced By Pakistani Student Writers: Implications for Teaching of Writing". *Journal of Educational and Social Research*. Vol. 2, No. 3, 2012. Doi: 10.5901/jesr.2012.v2n3p17.

Fareed, M., Ashraf, A., & Bilal, M. "ESL Learners' Writing Skills: Problems, Factors and Suggestions". *Journal of Education and Social Sciences*. Vol. 4, No. 2, 2016, : 1. https://www.researchgate.net/publication/311669829

⁶¹ Westwood, P. What Teacher Need To Know about Reading and Writing Difficulties. 2008.

⁶² Simpson, A. A Process Approach to Writing, Retrieved from: http://www.developingteachers.com/articles tchtraining/pw2 adam.htm Wednesday, February 08, 2012

⁶³ Fareed, M., Ashraf, A., & Bilal, M. "ESL Learners' Writing Skills: Problems, Factors and Suggestions". *Journal of Education and Social Sciences*. Vol. 4, No. 2, 2016, : 1. https://www.researchgate.net/publication/311669829

Lack of ability to create a complete and logical sequences.⁶⁴ (3) Insufficient detail and support to main idea.⁶⁵ (4) Students cannot organize the idea.⁶⁶ (5) Students cannot generating idea.⁶⁷ Cognitive aspect is required in generating idea process in writing which means the generating, formulating and refining one's ideas or known as brainstorming.⁶⁸ And that is actually the reason why writing is difficult, because it needs a high level of thinking.

Lastly, psychological difficulty is in the scope of internal personal factor for instance related with motivation and confidence. A previous study discovered that students mostly unwilling to produce idea. Looking back to the powerful interrelatedness between writing and HOTS, those previous studies and theories above have not connected both aspects yet. Based on the mentioned theories and previous studies, cognitive aspect extremely reflects how writing and HOTS relate. Fortunately, there has not been any study that emphasize the HOTS aspect in question for writing' difficulties. That leads this study to fulfill that gap.

⁶⁴ Westwood, P. What Teacher Need To Know about Reading and Writing Difficulties. 2008.

⁶⁵ Pratiwi, K. D. "Students' Difficulties in Writing English (A Study at The Third Semester Students of English Education Program At University of Bengkulu Academic Year 2011-2012)". 2012.

⁶⁶ Fareed, M., Ashraf, A., & Bilal, M. "ESL Learners' Writing Skills: Problems, Factors and Suggestions". *Journal of Education and Social Sciences*. Vol. 4, No. 2, 2016, : 1. https://www.researchgate.net/publication/311669829

⁶⁷ Yee, Heong. "Contributing Factors Towards Difficulties In Generating Ideas Among Technical Students". *Journal of Technical Education and Training* (JTET). 5. 2013, 14-27.

⁶⁸ Alves, A. D. *Process Writing*. Centre for English Language Studies. The University of Birmingham. 2008.

3. Students' Strategy in Solving HOT Question for English Writing

As mentioned previously, that HOT Question for English writing requires a long written form of answers which similar with essay type of question, it leads this present study to utilize the combination of theory for solving essay question with strategy of thinking in writing. Some theories conveyed the general strategies in solving essay question. First of all, (1) considering time management before answer all the questions. ⁶⁹ Because essay type of question indeed demands a long and critical answer that may spend more times. The next step is regarding with the question, students may point out some keywords from the question for emphasizing what they supposed to write. Beside point out keywords from a question, students can paraphrase the question for simplifying their thoughts. ⁷⁰ Helen and Arthur conveyed some thinking steps before writing the answer.⁷¹ First, students need to organize their thoughts and idea to form a whole complete answer. Students may collect some knowledge and memories and the scratch their paper with many ideas. They added that students plan their writing based on their background knowledge and what they willing to share. Furthermore, students may do an action when they background knowledge seems inadequate. The source of the ideas can be from their own knowledge, discussion with peers, or figuring out with the browsing machine. From the

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⁶⁹ Mayland Community College. *Mastering Skills In Test-Taking*. Soar program. 2003.

⁷⁰ Clay, B. *Is This A Trick Question?: A Short Guide to Writing Effective Test Questions*. Kansas Curriculum Center. 2001.

⁷¹ Helen K. & Arthur E. *Thinking Strategy for Learners*. Public Education & Business Coalition. 2004.

obtained information through discussion and searching, students may create their own opinion by combining with their own ideas. Meanwhile, weak writers tend to combine their background knowledge when creating easy — to — read text. The further step is, outlining, means jotting down the main points from the obtained ideas. After arrange some main points, students should provide those main points with supporting detail such as giving an example.

Additionally, regarding with the writing process Helen and Arthur also mentioned some thinking process while writing. ⁷² They declared that students may provide only the essential details in their paper and decide the ideas based on the purposes. On top of that, high proficiency of students may ask themselves question about the choices they are making in term of content and structure. Another way, they may invite their peer to examine their work. For the weak writers, students may question themselves whether the select the proper words or not. In term of the linguistic use, weak writers may use what they know about letter and spelling patterns to spell their unknown words. The last process which editing, students re-read their paper so that they can pay attention to the clarity and re-check the spelling grammar, punctuation so they ideas can be clearly understood.

As some theories previously mentioned related with essay question solving strategies and thinking in writing, fortunately those theories are still

⁷² Helen K. & Arthur E. *Thinking Strategy for Learners*. Public Education & Business Coalition. 2004.

inadequate to fulfil the objective of the present study which combining HOTS in thinking in writing, although some points are qualified as HOTS such as paraphrasing the question, combining ideas, giving supporting ideas, etc. It leads this study to combining the mentioned theories with another theory regarding with the strategies that are used in solve HOT Question. Firstly, for the ability of analysing includes categorizing information, comparing objects, tracing process, or explaining cause. Meanwhile evaluating includes explain weak and strong points. However, for the several mentioned theories there has not been any study that focuses on the strategy in solving HOT Question for English writing that can be obtained by integrating the thinking in writing theories and strategy in solving essay question. That leads this study to fulfill that gap.

B. Review of Previous Study

There are some studies that have related topics with this research that conducted by other researchers. Those previous studies mostly take up the issue about the use of questioning technique, the implementation of HOT Question in school, students' difficulties of HOT Question in different school subjects, and students' writing difficulties.

1. The Use of Questioning Technique

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⁷³ VanderMey. M., VanRys, S. *The College Writer: A Guide to Thinking, Writing, and Researching*. 2009.

The first previous study was aimed to discover the role of teacher's questions to enhance students' critical thinking which oblige students to combine and process the acquired knowledge rather than merely recall the information. Here, Shen and Yodkhumlue addressed the issue that teacher questions were dominated with lower cognitive question. Cognitive aspect related theory, the results discovered the excessive implementation of lower-cognitive questions failed to boost students' critical thinking. Other than that, the study also classified the teacher's misappropriate utilization of higher-cognitive questions. Similarly, a previous study by Nappi presented the impact of implementation lower level questioning technique and higher level questioning technique to students. The result strongly indicated that higher level questioning technique successfully engage students' critical thinking.

Another previous study from American Journal of Pharmaceutical Education by Tofade, Elsner, and Haines that has two aims which were exploring empirical effort to promote and encourage students' participation in critical thinking activity investigating the strategies for constructing questions. It revealed the comprehension of question's taxonomy and appropriate strategy may assist pharmacy

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⁷⁴ Shen, P. & Yodkhumlue, B. "Teacher's Questioning and Students' Critical Thinking in College EFL Reading Classroom". *The 8th International Postgraduate Research Colloquium: Interdisciplinary Approach for Enhancing Quality of Life IPRC Proceedings*. 2011, P 44 – 53.

⁷⁵ Nappi, J. S. "The Importance of Questioning in Developing Critical Thinking Skills". *International Journal for Professional Educators*. 2018.

educators to construct a broader scope of questions that capable to assess analytical, evaluation, and creation terms. Extra concern went to metacognition and each students' responses towards effective questioning technique that result in students' deep insights.⁷⁶

The difference between those previous studies with this present study is, although the findings proved that questioning technique was able to boost students' critical thinking but there was none of them that figure out the challenge and strategies while teacher applied questioning technique from student's point of view.

2. The Implementation of HOT Question in School Subjects

The first previous study was actually related with the implementation of HOT Question in Mathematic subject. Conducted by Sagala and Andriani, it aimed to produce assessment of HOT Questions based on Bloom's Taxonomy for Mathematic lesson instrument. There were found more than 50 students who scored higher than 70. With score 70. Means students belong to good level. Tessmer pointed twenty Prototype III HOT questions are ranked as the good ones and chosen as final fix questions without improving revision. Additionally, there was a study about the implementation of HOT Question in Physics subject

⁷⁶ Tofade, T., Elsner, J., & Haines, S. T. "Best Practice Strategies for Effective Use of Questions as a Teaching Tool". *American Journal Of Pharmaceutical Education*, 77(7), 2013, 155.

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⁷⁷ Sagala, P. N., Andriani, A. "Development of Higher-Order Thinking Skills (HOTS) Questions of Probability Theory Subject Based on Bloom's Taxonomy". J. Phys.: Conf. Ser. 1188 012025. 2018.

conducted by Supeno, Astutik, Bektiarso, Lesmono, and Nuraini. The results pointed that students' competence to solve of perfect structured problem showed a satisfaction result but the ability to cope with incomplete structured problem needs to be developed. In term of communication skill, students were still not used to express their ideas in scientific writing. For reasoning skill, although students were able to reason on some aspects, but in general is way still lacking. Lastly, a study regarding with the implementation of HOT Question in English Language subject. Conducted by Damanik, and Zainil, presented to examine reading comprehension type of questions that provided in English textbook with interfere of Higher Order Thinking Skill. To add the study also did analysis and evaluation for the English text book specifically the reading comprehension questions. The result showed analytical question as the most used type of question in the text book.

If the mentioned previous study was related with the implementation of HOT English question in for English reading comprehension and others various school subjects, this current study differently focus on the HOT question for English writing.

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Nuraini, L. "What Can Students Show about Higher Order Thinking Skills in Physics Learning?" IOP Conference Series: Earth and Environmental Science. 2019. 243 012127.

⁷⁹ Damanik, S. T., Zainil, Y. "The Analysis of Reading Comprehension Questions in English Textbook by Using Higher Order Thinking Skill at Grade X at SMAN 2 Padang". *Journal of English Language Teaching*, Vol. 8, No. 1, 2019. http://ejournal.unp.ac.id/index.php/jelt.

3. Students' Difficulties of HOT Question

Several previous studies discovered students' difficulties of HOT Question in different school subjects. The first previous study was conducted by Permatasari, Wartono, and Kusairi. This study presented to examine students' HOTS difficulty difficulties on the subject of work and energy. The findings showed analyzing the implementation of mechanical energy conservation law was student's difficulty, evaluating interconnectedness between how to finish the work, building connection between work and energy role for daily life, and develop the theory of work and energy into everyday life. 80 Next previous research was held by Hadi, Wulandari, Reatnawati, Munadi, and Apino, using qualitative method, this study examines students' difficulties in solving Math HOT Question. The result were analyzed with Newman's Error Procedure (NEP) theory. It uncovered the difficulty that mostly owned by students is skill that related with process.⁸¹ Lastly, the previous study was done by Mei Hui Chan in 2016. This paper presents a framework dealing with students' higherorder thinking skill for L2 speaking. The framework pointed one strategy to encourage thinking skill for L2 learners is by higher-order questioning technique. However, according the framework questioning

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⁸⁰ Permatasari, A., Wartono., Kusairi, S. "Identification of Students Difficulties in Terms of The Higher Order Thinking Skills on The Subject of Work and Energy". *AIP Conference Proceedings*, 2014. https://doi.org/10.1063/1.5054456.

⁸¹ Sopiani, P.S., Said, S., Ratnawati. (2019). "Investigating Students' Higher Order Thinking Skills (HOTS) in Writing Skill (A Case Study at the Eleventh Grade of a Senior High School in Banjar)". *Journal of English Education and Teaching (JEET)*. Vol. 3, 2019, 328-342.

technique owned a several negatives input for instructional process.

One finding from this previous study was the difficulties of HOTS oral question is limited time and nervousness.⁸²

What makes current study becomes distinctive is those previous studies investigated about student's challenge of HOTS question in several school subjects and one of them that slightly similar with current study is student's challenge of HOTS question in the form of oral question. Meanwhile, this current study present to fill the gap of the student's challenge in HOT question for English writing which can assess more thinking skill.

4. Students' Writing Difficulties

The first previous study that related with students' writing difficulties was conducted by Haider. His study classified writing difficulties into three aspects, those are linguistic, cognitive, and psychological aspect. This study also examined the appropriate teaching design for teaching writing. Similarly, a research from Indonesia also found students' writing difficulties on those three aspects. In detail, for linguistic difficulty this study discovered students' mostly lack in the language use and vocabulary. Meanwhile for cognitive aspect students were still lack in organization and

⁸² Chen, M. H. "Theoretical Framework for Integrating Higher Order Thinking into L2 Speaking". Vol. 6, No. 2, 2016, 217-226.

⁸³ Haider, G. "An Insight into Difficulties Faced by Pakistani Student Writers: Implications for Teaching of Writing". *Journal of Educational and Social Research*. Vol. 2, No. 3, 2012. Doi: 10.5901/jesr.2012.v2n3p17.

mechanical, and lastly for psychological aspect students are lack of motivation. Additionally, another study from Fared Mohammad conveyed the difficulties of writing that face by the students, those were inadequate linguistic skill (including command over grammar, syntax and vocabulary), writing anxiety, lack of ideas, reliance on L1 and weak structure organization. And those mentioned difficulties were actually can be classify into category linguistic, cognitive and psychological difficulties. 85

What can we distinguish between current study and those previous studies is obviously HOT question for English writing and the writing process itself are two different things since there is one aspect which is the HOT question itself as the writing elicitation that makes the writing exercise turns out different comparing with the full actual writing. Furthermore, current study also emphasized more into the cognitive aspect beside the linguistic one since its major concern is HOTS.

5. Students' Writing Strategy

The last category of previous studies is regarding with the student's writing strategy. Based on Farida thesis the writing strategy that implemented by students were planning, drafting,

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⁸⁴ Pratiwi, K. D. "Students' Difficulties in Writing English (A Study at The Third Semester Students of English Education Program At University of Bengkulu Academic Year 2011-2012)". 2012.

⁸⁵ Fareed, M., Ashraf, A., & Bilal, M. "ESL Learners' Writing Skills: Problems, Factors and Suggestions". *Journal of Education and Social Sciences*. Vol. 4, No. 2, 2016, 1. https://www.researchgate.net/publication/311669829

planning, editing and lastly the actual writing. ⁸⁶ Similarly, another thesis from Batubara pointed the writing strategy that used by students were planning, drafting, editing, and final version. ⁸⁷ What can we distinguish from those two thesis with current study is both of the theses had not emphasized the thinking process strategy in writing or the process how students seize the idea. And the current study presents to fill that gap by revealing the cognitive strategy in HOT question for English writing.

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⁸⁶ Farida, U. *Improving The Eighth Grade Students' Writing Skill Through A Writing Process Method at Smp N 15 Yogyakarta in The Academic Year Of 2012/2013*. [An Undergraduate thesis]. State University of Yogyakarta. 2014

⁸⁷ Batubara, F.A. *Improving Students' Ability in Writing of Announcement through Gallery Walk Technique of Eight Grade at Mts Jam'iyatul Alwashliyah Tembung In Academic Year 2016/2017*. [An Undergraduate Thesis]. State Islamic University Of North Sumatera Medan. 2017.

CHAPTER III

RESEARCH METHOD

This chapter provides the information regarding with the methodology in conducting this study. Some sub-chapters that are described in this chapter are research design, research subjects and its setting, data collection, research instrument, data analysis, research procedures and trustworthiness.

A. Research Design

Research design is the general strategy and plan designed by researcher as the guideline for data collecting and analyzing phase of a study. 88 The appropriate design for this study based on the research questions was descriptive-qualitative-research. A descriptive-qualitative-research aims to examine the situation profoundly and specifically. 89 In addition, the qualitative research also explores the occurrences in the natural settings and implements several methods to interpret, understand, explain and deliver the meaning. 90 Since present research did not examine the implementation of higher order question that can be seen from the surface but it conducted complete in depth examination and understanding about each diverse level of thinking students' challenges and strategies in solving HOT Question for English writing. This research had two main processes that done online which were testing the

⁸⁸ Churchill, Gilbert A. & Dawn Iacobucci.

[&]quot;Marketing Research: Methodological Foundations." 9e, South-Western, Ohio, USA. 2005

⁸⁹ Nazir, M. "Metode Penelitian" (Jakarta: Ghalia Indonesia), 2003, p.55

⁹⁰ Garry Anderson – Nanci Arsenault, Fundamentals of Educational Research, 2th edition. (USA:The Framer Press), 126

students with HOT Questions for determining their thinking level and semistructured interview to fulfill the first and second research question.

B. Research Subject

Due to the uncertain current situation and for the sake of time efficiency researcher decided English Education Students of UINSA Surabaya as the research subject. Specifically, the subject of this research for testing process was 15 of seventh semester English Education Students of UINSA Surabaya that was selected randomly. The reason for the contribution of seventh semester students to the current study was they have been through a lot of writing related lectures such as academic writing, written English, and others lectures that involved HOTS. Those fifteen English Education students have various GPA or achievement score. So that from those students who have difference GPA, researcher could obtain the different testing result. Furthermore, for the interview step, it was recruited four students from the fifteen students who done the testing. Researcher picked two representative students for both higher and lower order thinking students, so that in the research findings there would be the comparison of s challenge and strategy from the students with the same level of thinking and also students with different level of thinking.

C. Research Setting

1. Place

Present study was supposedly held in UIN Sunan Ampel Surabaya, but due to the unexpected current situation the researcher needed to conduct this research by online through online chatting application.

2. Time

The testing step of the research data collection was held on $23^{re} - 26^{th}$ June 2020 and the interview was conducted on 1^{st} - 3July 2020.

D. Data and Source of Data

1. Data

There were two data that were required in this study. The first was the student's score from HOTS question testing. This data did not directly fulfill both of the research questions, but it assisted researcher to determine students' different thinking level. Through the experience from students with different thinking level, the researcher could obtain the various interview results. And then the second data was the students' interview result that directly answered both of the research questions.

2. Source of Data

To answer both first and second research questions the source of data was obtained from the students themselves who participating the interview process. Researcher asked about their experience regarding the challenge

and strategy in answering HOTS question. And as mentioned previously, before conducting the interview, researcher held a test for designating the interviewees.

E. Data Collection Technique

As it conveyed in the source of data, the researcher used the students' experience to answer both of the research questions but for determining the students' representative as the interviewee, researcher needed to conduct a testing. So this research was assisted by HOTS testing and semi-structured interview as the data collection techniques.

1. HOTS Testing

As it stated in the research subject, present study involved four interviewees with the different thinking level. Aiming to determine the interviewees, present research previously applied the HOT Question testing to 15 students through online chatting application. The HOTS testing involved five HOT open-ended question with different topic for each number that measured all HOT skills, such as analyzing, evaluating, and creating. The testing was fully a self-designed testing by the researcher. Technically, researcher sent the HOT questions in the PDF format by personal massage and students had two hours of time allotment. Furthermore, the students were required to answer it individually, and then they were asked to hand in their work through the same application to the researcher. Additionally, in this phase, students also experienced to solve HOT question for English writing. Those students' experiences are the

main data for both research questions. So HOT question testing holds two essential roles in this research, those are determining student's thinking level and facilitating students to experience in solving HOT questions.

2. Interview

Having the student's representative of higher and lower level of thinking elected, the further procedure for this research was conducting semi-structured interview. The interview eased researcher gained profound and detail information for both first and second research question. The questions of the interview was in the scope of what are the challenges that was encountered by students related solving the HOT questions for English writing or in the other name is the strategy throughout the HOTS testing process. Researcher asked several preplanned question while the rest of the interview went with the flow based on each interviewee's response. The interview was conducted through face time / video call. Throughout the on call interview, researcher recorded all of the interviewee's answer and jotted down some essential points, so that it would ease researcher in analyzing the data. For detail questions of interview please refer to appendix 4.

F. Research Instruments

There are three instruments that were used in this study, those are higher order thinking questions and the rubric for the testing process then interview guideline for the interview.

1. Higher Order Thinking Question

HOT Question was implemented for HOT question. This researcher self-created instrument is related with the theory about how to assess HOTS from Susan Brookhart as the guideline in creating the question for the students. Brookhart's HOTS theories appeared as the newer and expanded version of Bloom Taxonomy, since its theory included operational verb from Bloom for the HOT question. HOT Questions contain of 5 HOTS items that measured all of skills in HOTS. Number one assess creating ability, number two and number three assess analyzing ability, number four creating ability, and the last number 5 assess evaluating ability (see the appendix 1).

2. Rubric for Higher Order Thinking Question

To decide the score of each the students' answer and to assigning which level of thinking that student belongs to, researcher used self-created rubric with Brookharts' book as the main reference and trustily validated by the validator. The rubric includes the criteria for organization of the written answer for instance providing adequate supporting detail, giving logical reason, etc. But it did not contain of grammar aspect because according to Brookhart those two things cannot be integrated

simultaneously when assessing student's thinking skill.⁹¹ The maximum score for each number is 3 while the minimum is 1, so overall maximum score is 15 which is determined as HOT student and the minimum score is 5 that is classified the student as LOT student (see the appendix 2).

3. Interview Guideline

Interview guideline was researcher's self-created instrument that applied in this research for doing the interview. Conducting the Interview aimed for obtaining the data of first and second research question which are students' challenge and strategies. For the first research question which about students' challenge in solving HOT Question, present study integrated several theories from related with students' writing difficulties and the cognitive process difficulty. The interview guideline contained the questions about cognitive and linguistic challenge, also the difficulty in managing the time and understanding HOT question. Then for the second research question, present study also integrated some theories regarding with thinking in writing and strategy to solve essay question. The instrument was validated by trusted validator for the sake of validity of the data (see appendix 3 for validation sheet).

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⁹¹ Brookhart, S. M. *How to Assess Higher-Order Thinking Skills in Your Classroom.* Alexandria, Va: ASCD. 2010.

G. Data Analysis Technique

To present broad and in-depth result, researcher applied document analysis and interview analysis as the data analysis techniques.

1. Document Analysis

The document that has been analyzed in this present study is the fifteen students' paperwork answers of HOTS question. Researcher did scoring for each paperwork using scoring rubric guided by Susan Brookhart theory as the main reference with slightly modification from the researcher. In this technique, researcher categorized the students' thinking level based on the students' HOTS testing score. There were two different students thinking level categories, those are higher order thinking students and lower order thinking students. From the HOTS testing result, two students who got the highest score as higher order thinking students and two students who got the lowest score as lower order thinking students were recruited for the further data collection process which was interview.

2. Narrative Analysis for Interview Result

According to Polkinghorne narrative analysis is defined as a technique for understanding person's experience to deepen the understanding about particular phenomena. 92 Narrative analysis was suitably applied, since current study took focus on the student's story and experiences that were seized from the interview. As it conveyed in the data

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⁹² Polkinghorne, D.E. Narrative Knowing and The Human Sciences. Albany: State University of New York Press. 1988.

collection technique that throughout the interview, researcher recorded all the interviewee's answers. The following step, researcher made the transcription of all the interviewee's answers from the recordings. Researcher did not do the coding process since there were too many different categories of difficulty and challenge. To add, in this process also included the reduction where researcher omitted the unnecessary information from the interview. Lastly, researcher conveyed the students' experience narratively from the organized transcription by comparing the strategy and challenge between the same thinking level students also between HOT and LOT students. Synthesizing and comparing the result with some theories were done as well.

H. Research Procedure

This research went through some stages as follow:

- 1. Creating the HOT question for English writing
- 2. Asking the students/participants willingness and permission
- Testing students. The test includes 5 HOT Questions for English writing.
 From students' answer it could be classified which level of thinking those students are in.
- 4. Assessing and scoring the students' answers, then from the scores researcher classified the students' level of thinking and selected the representative of students for each level of thinking

- 5. Interviewing the students. After getting the representatives of students for each level of thinking, the interview was done by the researcher for obtaining detail and deep information related to students' challenges and strategies.
- 6. Making transcription and interpreting the interview's results.

I. Trustworthiness

This research used theory of the teacher HOT Questioning level based on the student's level of thinking to create the HOT Question for English writing itself that has been existed in such a long time and it has been valid to be used for many studies, journal, and book in different countries that related with questioning and thinking skill. The rubric for the students' answers this study used self-guided rubric that validated by trusted validator.

CHAPTER IV

RESEARCH FINDINGS AND DISCUSSION

This chapter presents the research findings and discussion regarding with the students' challenge and strategy in answering HOTS question for English writing. The data for both research questions had been acquired and analysed with the mentioned theories in the review of related literature. The analyzed findings were presented by categorizing based on the research questions.

A. Research Findings

The research data for both research questions were acquired by conducting an interview. To determine the interviewees who are the two HOT undergraduate students and two LOT undergraduate students, researcher previously held a HOT question for English writing testing for fifteen students. Because of that HOT testing only aims for determining the interviewee and as a students' chance to experience HOT question for English writing, researcher did not include it in this chapter. The complete version of students testing results can be found in appendix section. In this chapter, the result of the interview was conveyed narratively by comparing the challenge and strategy between each the students with the same thinking level and students with different thinking levels.

1. Students' Challenge in Answering HOT Question for English Writing

The results of the interview from four students with diverse thinking level revealed that the difference of thinking level was not an entire guarantee for students to also encounter the different challenges, they even

coped with the several same challenges. From the analyzed interview result, researcher figured out twelve challenges in answering HOT questions for English writing that were had by all students. The data is displayed in the table 1.1 below:

Table 1.1 Classification Students' Challenge In Answering HOT Question Based On Different Levels Of Thinking.

| NO | Students Challenge | НОТ | НОТ | LOT | LOT |
|-------------------------|-----------------------|-----------|---------|---------|-----------|
| NO | | | | | |
| | in Solving HOT | Student | Student | Student | Student |
| | Question | 1 | 2 | 1 | 2 |
| 1. | Understanding The | 6 | | V | $\sqrt{}$ |
| | Question | | | | |
| 2. | Managing Time | | | V | |
| | 0 0 | | A A | V | V |
| Linguistic Difficulties | | _ | | | |
| 3. | Tenses | | | V | $\sqrt{}$ |
| 4. | Lack of Vocabulary | | | | $\sqrt{}$ |
| 5. | Preposition | | | | V |
| 6. | Word choice | √ | | | |
| 7. | Arti <mark>cle</mark> | √ | | | / |
| Cognitive Difficulties | | | | 3/ | |
| 8. | Lack of background | | | | $\sqrt{}$ |
| | knowledge | | | | |
| 9. | Organizing Idea | $\sqrt{}$ | V | | $\sqrt{}$ |
| 10. | Generating Idea | | | V | V |
| 11. | Expanding Idea | 1 | 1 | V | V |
| 12. | Getting Started to | | 1/ | | $\sqrt{}$ |
| | write | | | | |
| 13. | Linking the sentences | 1 | | | |

This table depicts the classification of various challenges in solving HOT Question for English writing based on students' level of thinking. The table shows that lower order thinking students encountered more challenges than higher order thinking students and it is dominated with cognitive challenge. The further and in depth explanation is described below.

a. Understanding The Meaning and The Purpose of HOT Question

Based on the interview, only the LOT students faced question's this challenge of understanding the purpose of the HOT question. When researcher asked what their main challenge in tackling the question, the two lower order thinking students immediately stated that their overall challenge is understanding the question.

"......The difficulty that I experienced the most for those five questions is actually understanding the whole question and what kind of answer that the question is required. Since the questions were pretty long and the topic is not easy and simple." (LS 1)

"......Yes, exactly I have. I even did not understand some of the point question number 3. I just did the question based on my limited understanding. I forget how many time it was, but I am sure many times around 4-5 times." (LS 2)

The five questions are long and complex since it complied the principal of HOT Question. It led to the LOT students to translate each word of the question. They also had a difficult time to grab the purpose of the question. Furthermore, from LOT student 1's paperwork we can tell that LOT student contributed really minimal answer with standard vocabulary (refer to appendix 6 for HOT testing result).

b. Managing the Time

Both of the lower order thinking students went through a hard time in managing the time. LOT student 1 even perceived that the HOT question is too complicated and a long time was needed to reread it a couple times.

".....yes absolutely, I had a hard time in manage the time since the questions were so difficult. I read the question several times, that's why I

did' not complete some of the answers because I spent my time to much in understanding the question." (LS 1)

".....Uhmm... for me is not enough. I felt like I was pursued by the time." (LS 2)

The provided time allotment is two hours for five questions and they confessed that two hours is inadequate for them. Nonetheless, both of them handed in the paperwork on time. Understanding the question and re-reading it is the main factor why they're running out of time and even did not complete the answer.

Not only perceived by both of LOT students. The challenge in managing the time also occurred in the side of HOT students.

".....Personally, I think I needed little bit more time, that's why I submitted late because my answer is too long and quite complicated. Since the topic of question is about phenomena that happens currently and I am kind of interested with that so I just wanted to explain all my ideas." (HS 2)

".....And because I thought that the time allotment is pretty long, I was kind of underestimate it. Instead of did the question directly I opened my instagram first...." (HS 2)

HOT student 2 messing up the time allotment was not because having an issue in certain parts but HOT student 2 haphazardly accessed another internet platform first such as Instagram and YouTube instead of immediately finishing the questions. HOT student 2 thought that two hours would be way too much and HOT student 2 ended up submitting the paperwork fifteen minutes late. In addition, since HOT student 2 was really keen into the topic of the question so HOT student 2 enjoyed

expressing their opinion in a very long answer and unconsciously lost the track of time.

c. Linguistic Difficulty

Some issues that contained in linguistic difficulty are tenses, lack of vocabulary, word choice, article, and preposition. LOT students who owned the majority of linguistic difficulties. However, between HOT and LOT students did not cope with the same linguistic challenge.

1) Tenses

The use of tenses is the linguistic issue that only by LOT students.

".....uhmm... For me apparently it is tenses. Like for the answer number 2 until 5, I don't know to use simple pas or simple present. But for number 1 I know exactly it use past tense. "(LS 1)

".....Uhmm... Of course there is. For me it is tenses, I am sure that there's lot of tenses mistakes" (LS 2)

They stated that they were still confused which tenses that is suitable for answering the certain number. Mostly numbers of the HOT questions demand opinion answer and the answer that reflects to the experience. It became the confusion for LOT students to decide simple past tense or simple present tense as the most suitable tenses.

2) Lack of vocabulary

This linguistic difficulty was only had by LOT student 2.

"ohh... For vocabulary mastery I guess I lack of that too because I often open the dictionary to search the word that I want" (LS 2)

LOT student 2 confessed that she knew limited English vocabularies. But she still attempted to solve that issue with the help

of dictionary. On the other hand, LOT student 1 did not explicitly mentioned lack of vocabulary as one of difficulty but from the answers of HOT question testing it can be indicated that LOT student 1 contributed really minimal answer with standard vocabulary.

3) Preposition

Another linguistic difficulty that had by LOT student 2 was preposition, LOT student 2 perceived preposition was the difficulty in solving HOT question for English writing.

"...I use many preposition in my answer but actually I don't know how to use it. ..." (LS 2)

LOT student 2 applied various kinds of preposition in the answer. The preposition that frequently appeared were on, from, and of but the placement of the preposition was still a confusion according the LOT student's 2 opinion.

4) Word Choice

Actually the linguistic difficulty in solving HOT Question was only experienced by HOT student 1. The first difficulty is choosing the suitable word option for certain topic.

".....and for number 3, I think it is also for number one that I found a difficulty in choosing the word options. Because both of them are different context which narrative and politic-related text so absolutely bot need a different optional words..." (HS 1)

Since those five questions have each different topic, so HOT student 1 felt that the option word for answer number 1 which about continuing unfinished narrative story supposed to be different

with the option word for the rest number of the questions which about PSBB policy, online learning, and presidential speech.

5) Article

Other than word choice, HOT student 1's difficulty was also related with the use of article which the trivial thing in language features.

"......I don't think that I found a linguistic difficulty but probably because I am not a detail person and I am so reckless so I was kind of confuse with the article the use of –a, -an, and –the." (HS 1)

However, it is not because HOT student 1 did not know how to use it but it is simply because HOT student 1 perceived that HOT student 1 is so careless for the detail part of writing.

d. Cognitive Difficulty

Generally, the interview result regarding with the challenge in answering HOT question from all students with various thinking level is dominated with the cognitive difficulty.

1) Lack of Background Knowledge

First difficulty is regarding with background knowledge that only experienced by LOT students. Although the topic of the questions are about something that occur currently and familiar for the participant. In fact, both of the lower order thinking students were lacking of idea while solving the questions.

"......I think I have not enough background knowledge for the topic of the question." (LS 1)

"......I thought about the answer on my own but I also asked my mom and friend of mine for helping me because I was not sure about my answer and I think my answer is not enough." (LS 2)

Though, LOT student 2 did not purposely convey that LOT student 2 were lacking background knowledge, but from her statement above and their HOT testing result, it can show that LOT student 2 was lacking of an idea or background knowledge.

2) Organizing Idea

Going on to further cognitive process in writing which is organizing idea. Organizing is cognitive challenge that had by the almost all of interviewees. Here is the response from LOT students about organizing idea.

IN : Ahh really. And how did you combine your own idea and the idea from your friend and your mom? Was it a hard process?

LS 2 : Yes it was.

IN : Okay. Anyway did you search for another sources such as internet?

LS 1 : No I did not

IN : So how you combine your idea or add it with another source?

LS1 : I don't think I did that, I just wrote down the idea in my head.

As can be seen, LOT student 2 mentioned that organizing idea is such a challenge. On the other hand, LOT student 1 stated she did not go through the process of organizing idea which combing and consolidating the ideas. LOT student 1 also did not attempt to look for additional sources and tend to jot down any ideas that came across. Idea organization was considered as the hard one based on LOT student 2 perspective, likewise for both of HOT students.

".....For me it is hard. Because I like the topic so much so there's too many idea and I was confuse which idea should I use and expanding the ideas into a logical sequence order." (HS 2)

"......For organizing my thoughts it took some times but not too long, it depended on the question, let's say for the question number 3 because it needs a lot of requirement. I need to obtain a lot of idea." (HS 1)

The reason for this difficulty based on HOT students statements are. HOT student 2 had overflowed idea and too much information to express. HOT student 2 found organizing idea is hard particularly to decide which the most suitable idea for the answer. Meanwhile, HOT student 1 only owned this difficulty on number 3 that demands more sub-answers than others number of the HOT questions.

3) Generating Idea

Contrast with organizing idea, the challenge in generating idea was only encountered by the two LOT students.

"......It is quite complicated, because I was like frequently erase and rewrite my answer since I was not really sure." (LS 1)

".....yeah it was hard for me, I was like asking myself which one is better, is it this one or that one better about the effectiveness of PSBB policy. And I was just afraid that I chose the wrong one." (LS 2)

In fact, both lower order thinking students considered generating idea as the complicated one. They were unconfident and undecided with their chosen idea. It result in LOT student 1 to erase and rewrote the answer frequently. In addition, LOT student 2 was

also still confused to decide whether the effectiveness PSBB policy on number 3.

4) Expanding the idea

Comparing to others cognitive difficulties, expanding idea is the cognitive aspect that considered as the complicated one by all the interviewees.

"... Yes it is difficult, that's why my answers are pretty short." (LS 1)

"...... Yes it was. I just had no idea moreover about processing my idea into a proper sentence. I did even ask my mom that showed how hard it was for me. Actually I know the answer but I don't know how to deliver it into sentence." (LS 2)

Both of LOT students ran into a hard time in expanding their idea while finishing the HOT question. They affirmed that this kind of difficulty was one factor why they performed such a short minimalist answer for the HOT question. LOT student 2 added lack of ability to expand the idea into a lengthy logical answer hindered her in expressing all the ideas.

Similarly, from both of HOT students' perspectives the process of expanding the idea was also crucial.

".....not really. Sometimes when I got stuck for you know writing the answer it was because I started to get bored and bad mood that's why I opened my instagram to refresh my mind then started to work on my answer." (HS 1)

".......for general difficulty, for me is expanding my idea or my answer. If in term of grammar and so on, thankfully I had no difficulty. Let's say I wanted to write this certain idea but how to express and explain it in a good words or sentence so that my all of my ideas can be delivered and easy to understand. Not just writing the answer but also delivering my idea completely." (HS 2)

HOT student 2 conveyed in the beginning of the interview that HOT student 2 considered that expanding idea is the most challenging part in solving the questions. HOT student 2 added the reason why expanding idea was hard because, though she has already had an idea but to deliver it into a good words and proper order of paragraph was tricky. Not merely to answer the HOT question but she considered the HOT question testing as a chance for her ideas to be explained entirely and understandable. On the other hand HOT student 1 said that expanding the idea and giving the detail is hard only when she was losing the mood for writing.

5) Getting Started To Write and Linking the Sentences

These cognitive difficulties particularly found by LOT student 2

".....uhmm, of course there is. For me it is tenses and getting started to write the answer like making the opening also linking the sentences." (LS 2)

LOT student 2 stated about these two difficulty when researcher asking about her overall challenge in solving HOT Question. Then, LOT student 2 responded getting started to write and linking the one sentence to another as the most challenging part in term of cognitive aspect.

To add, regarding with the difficulty in linking the sentence was not only dealt by LOT student 2 but also HOT student 1.

"....Once more about the overall difficulty is linking the one sentence to another. "(HS 1)

Similar with LOT student 2, HOT student 1 confessed this kind of challenge when researcher asked the overall challenge. Yet, HOT student found it difficult but she still could manage to provide satisfying answer of HOT question.

e. Another Findings

Lastly, to terminate the discussion about challenge on HOT Question, researcher asked about which number is the hardest. Here, aims to figure out whether the students' difficulty is fully matched with the existed list of ability for HOTS from Bloom's theory.

".....For me number three is the hardest because it needs a lot of answer." (LS 1)

"......Absolutely number 3 and 4. For number 3 I found it hard to create another alternative or solution for changing or improve PSBB policy." (LS 2)

Both of lower order thinking students perceived the hardest one is number three which a question to assess analysing ability. The cause for this challenge based on HOT student 1 experience is question number 3 requires more answers than the rest of the number. Meanwhile, from the HOT student 2's perspective, it was difficult to create new solution for certain issue. Supposedly, if relying on Bloom's theory the hardest question should be number 1 or 4 that assess creating ability.

Along with the opinion from LOT students regarding with the hardest question, HOT students also expressed their opinion.

".... As I said before that on number 3 required a lot of answer and also opinion. So it is number 3." (HS 1)

".....uhmmm.... For me the most difficult is number 4 because I just confused what is the best solution for students' scratching the school facility, in fact school staffs have never done anything about that bad habit." (HS 2)

Based on both lower order thinking students, the most difficult HOT Question is number three it is likewise from the perspective HOT student 1. In addition, HOT student 1 shared the same reason with LOT student 1 that stated question number three is hard because its requirement of a lot opinion and answers. On the contrary HOT student 2 consider number 4 is the hardest. So, not same as both LOT students that felt number three is the most challenging, both of HOT students have a different perspective regarding with the hardest question.

2. Students' Strategy in Answering HOT question for English Writing

The interview result regarding with the students' strategy discovered there are nine different strategies that were applied by all various thinking levels students in tackling the HOT question for English writing. The strategies cover the action before reading the question, while reading question, seizing the idea, writing the answer, and finishing. The data of strategies is showed in table 1.2 below:

Table 1.2 Classification Students' Strategies in Answering HOT Question Based On Different Levels of Thinking

| NO | Students | HOT | HOT | LOT | LOT |
|----|-----------------|---------|---------|-----------|---------|
| | Strategy in | Student | Student | Student | Student |
| | Solving HOT | 1 | 2 | 1 | 2 |
| | Question | | | | |
| 1. | Considering the | | | $\sqrt{}$ | |
| | Time | | | | |
| 2. | Rereading the | | | | |
| | HOT Questions | | | | |

| 3. | Translating The | | | V | V |
|----|----------------------|-----------|---|-----------|--------------|
| | HOT Questions | | | | |
| 4. | Paraphrasing the | | | $\sqrt{}$ | \checkmark |
| | HOT question | | | | |
| 5. | Pointing | $\sqrt{}$ | V | V | |
| | important | | | | |
| | keyword | | | | |
| 6. | Source of idea | $\sqrt{}$ | V | | |
| | (semantic and | | | | |
| | periodic | | | | |
| | memory) | | | | |
| 7. | Asking peers for | | | | |
| | help | | | | |
| 8. | Scratching raw | | | | |
| | idea | | | | |
| 9. | Rereading the | | 1 | V | V |
| | whole answer | 7 | | | |
| | and self- | | | | |
| | reflecting | | | | |

This figure highlights the classification of various strategies in solving HOT Question for English writing based on students' level of thinking. The table shows that lower order thinking students applied more strategies than higher order thinking students. Each strategy is described deeply in the explanation below.

a. Considering The Time

Considering the time here means estimating and managing time based on their own need before they tackle all the HOT Questions. The interview uncovered only LOT student 1 who applied this strategy.

".....ohh yes I looked at the time. After I looked at the time and then I just answered the question normally from 1 to 5, but I got stuck a little while in number three that's why I did not give the complete answer." (LS 1)

LOT student 1 estimated the time allotment as the previous action before reading the questions. After that LOT student 1 solved all the question in a common way from number 1 to 5. There was no particular strategy about that. It was also supported by the fact that even though LS 1 messed up with the time while doing the HOT question but she successfully submitted the paperwork on time.

b. Re-reading The HOT Question

This strategy was used by LOT student 2 and HOT student 1. Here is the statement from LOT student 2 when researcher questioned about the way to understand the question.

".....I re-read the question..."(LS 2)

"....I forget how many time it was, but I am sure many times around 4-5 times..." (LS2)

LOT student 2 agreed by reading the question could solve the problem in understanding the question. LOT student 2 read the question approximately 4 times to complete her understanding.

Re reading the HOT question was done by HOT student 1. Here is the statement from HOT student 1.

".....How did I overcome it I just finished it but like if I was confused or mind-blanked to link each sentence or to make another sentence, I simply re-read the question to obtain more idea." (HS 1)

Different from LOT student 2, HOT student 1 re-read the questions not because of failing in understanding the HOT Question but re-reading the question for elicitation. From her point of view re-reading the question is one of effective way, to overcome the issue of linking the sentence.

c. Translating the HOT Question

This strategy particularly occurred in LOT students' process of answering HOT question for English writing.

".... I just translated with online dictionary." (LS 1)

".....and I translated, even I translated every word."(LS 2)

Besides re-reading the question, both of LOT students did translation as another strategy to cope with failing in understanding the question. As EFL students both lower order thinking students did a translation for grabbing the meaning and purpose of the questions. Even LOT student 2 confessed that LOT student 2 translated every words of the question.

d. Paraphrasing the HOTS question

Another way to overcome the issue towards understanding the question is paraphrasing. As same as translating strategy, this strategy also implemented by both of LOT students.

"....I did. I simplify the question based on my understanding as the reminder how supposed to answer." (LS 1)

".....Uhmm I guess no. But I did paraphrase the main point of the question number 2 but no for the rest of questions." (LS 2)

Based on LOT student 1's experience, the paraphrasing process was for simplifying the lengthy HOT question into her understanding. In, addition, LOT student 1 utilized the paraphrased question as the reminder of the purpose and the demands of the question. Meanwhile, according to LOT student 1 2's perspective, LOT student 1

2 only did paraphrase on the question number 2 because it contains of presidential speech and many academic words.

e. Pointing Important Keywords

This is the last strategy that aims to deepen the understanding of HOT question. Different from the strategies of translating and paraphrasing, this strategy was performed by HOT and LOT students.

".....Ahh yes I did pointed some words..."(LS 1)

If LOT student 2 did re-reading strategy while LOT student 1 did not, and for the tem of pointing important keyword LOT student 1 did it while LOT student 2 did not. LOT student 1 prefers to point some important word in the question than re-reading it

At the same time, similar with LOT student 1 both of HOT students implemented this strategy to get to know the HOT questions more.

"..... I think I did not do that. But for me the questions is the keywords I mean the main point that I need to emphasize among the whole questions." (HS 1)

".....yes, I mean like the question number 2 there is some words that I don't know the meaning so I rely on the words that I understand and can tell me the whole meaning of the question." (HS 2)

Both of higher order thinking students did pick out some important words as the emphasis the purpose of the questions when some words of the question are unfamiliar. However, HOT student 1 perceived that the important keyword is the main questions itself, since for HOT Question provides long background information or statements, but the

main purpose of the whole questions might be the question itself that came after the long statement.

f. Source of Idea

Since HOT Questions are required more combined idea and a deep thinking process, so there is must be different sort of background knowledge based on its sources.

- ".....From both my experience and the news that I've read and heard." (LS 1)
- "....I think mostly I got from the news that I've heard and then I just considered it whether it was the perfect answer or not. Moreover for the question that has topic about PSBB..." (LS 2)
- "...Uhhmm. Yes I've been through that but since I was little bit confuse at that time so I prefer to choose the ideas from my friend." (LS 2)

For LOT student 1 since she confessed that she did not make an effort to search additional ideas, she said that her background knowledge came from both of her experience memory and the news that she's been heard and seen. Not to mention, the topic of the question indeed encouraged participant to recall their past experience memory such as number 3 which about online learning, and the memory from news that has been seen and heard such as number 5 which about PSBB policy. Contrarily, LOT student 2 though she had a background knowledge but she preferred used her friend's idea. She said it is because she was unconfident and hesitate with her own ideas.

Moving on to HOT students' opinion towards their sources of their ideas, based on both higher order thinking students' answer, they agreed if their idea is from their both experience and the news that they've been seen or heard.

"....For me both, like I got it from the news or something that I could see from my surroundings. I was kind of comparing the information from the news with my own experience. Because I think we can talk more specific if it comes from own experience. If only from the news for me it is a little bit hard to express it because I did not get through it so it needs to be completed with my experience." (HS 1)

"......For me both, but mostly the source is from what I have read and then from my experience." (HS 2)

However, what we can distinguish from both of them is HOT student 1 opined that the idea from experience would complete the information that HOT student 1's been heard or seen so it results in very detail answer. In short, the answer would not as perfect as the answer with the explanation from experience. Conversely, HOT student 2 dominated the answer with ideas from the information or picture then the idea from HOT student 2' experience had less been used.

g. Asking peers for a help

This is strategy is particularly implemented by LOT student 2.

"..... Yes it was. I just had no idea moreover about processing my idea into a proper sentence. I did even ask my mom that showed how hard it was for me. Actually I know the answer but I don't know how to deliver it into sentence." (LS 2)

As stated previously that LOT student 2 did not use her own idea entirely because she was unconfident. Furthermore, LOT student 2 perceived that she needs more idea to answer question number 2 so she decided to ask friend and her mother to giving a suggestion. Even though LOT

student 2 preferred to use others' idea but LOT student 2 still made an effort to add some opinion for the answer.

h. Scratching Raw Idea

LOT student 2 performed the most strategies comparing to the rest of interviewees. Because similar with strategy of asking peers, LOT student 2 was also the only one who applied this strategy.

".....I write it down first the idea from others than I just kind of thought about it, how I supposed combine it with my own idea. At the end after I understand the whole concept I made a conclusion." (LS 2)

Since LOT student 2 preferred to use mostly her friend's opinion but she still gave her opinion on the answer. By scratching the raw idea, it can assist to write more organized idea.

i. Rereading the whole answer and self-reflecting

These are the only strategy that utilized by all interviewees. These two processes are as similar as editing process in writing. If the previous strategy is re-reading the HOT Question, this process re-reading the whole lengthy answers as the finale step in solving HOT question for English writing. However, since this sort of HOT Question assignment is the simple version or like the pre-writing exercise so it does not really demand a full editing process

IN: Did you ask yourself whether your answer is satisfying enough or not?

LS 1: Yes of course

IN: What about reread the answers?

LS 1: I did but only for some questions.

"....Uhhmm I re-read all the answer and I was like thinking whether the answer is correct or not." (LS 2)

In fact both of lower order thinking students did re-reading their answer and asking their selves whether their answer is good enough or not. But LOT student 1 only re-read the answer from several numbers.

In line with both of LOT students, the HOT students also did these strategy.

- IN : I see. After finishing all the question, was there anything you do before handing it to me?
- HS 1 : After finishing? I re-read it but not detail through all the answers.
- IN : Okay. While you re-read your answer did you ask yourself whether your answer is good or not, satisfying enough or not?
- HS 1 : yes of course I did.

".....I re-read it and revised the several answers...... I did not do that after I finish but while writing the answer like the process. So I only re-read my answer." (HS 2)

Based on the interview, both of higher order thinking students reread and did asked their shelves regarding with the satisfaction of all answer. HOT student 1 did re-read the answer but not thoroughly only at a glance. Meanwhile, HOT student 2 did not the self-reflection in the finishing part but during the writing process not after finishing the whole questions. Additionally, HOT student 2 also did revision if there was some inadequate answers.

B. Research Discussion

The findings of the study regarding with students' challenges and strategy in answering HOT question for English writing have been presented previously. In this section, researcher compared and contrasted those findings with some related theories. The discussion is explained below:

1. Students' Challenge in Solving HOT Question for English Writing

a. Difficulty in Understanding the Question

As explained in the previous chapter that the difference between HOT Question for English writing and others kind of question is quite noticeable. For HOT Question particularly and essay form, it is obliged to provide a background information or statement before the main question. Similarly, Scott and Nuttall discovered the EFL problem regarding with the understanding a complex sentence. 94 Understanding a complex sentence is such a challenge, since it contains of linking conjunctions, phrases, and nominalizations. 95 And those five HOT Questions are dominated with complex sentence. That became the factor that led both of the lower order thinking (LOT) students failed in understanding the HOT Question for English writing. While both of higher order thinking students had no issue with that.

Actually, this kind of challenge possibly belongs to linguistic difficulty since based on both LOT students' confession the main factor of failing is the lack of English vocabulary. They even translated per each word in the question. Peter's statement on his book about

⁹³ Brookhart, S. M. How to Assess Higher-Order Thinking Skills in Your Classroom. Alexandria, Va: ASCD. 2010.

⁹⁴ Scott C. A Case for The Sentence in Reading Comprehension. Language, Speech, and Hearing Services in Schools. 2009; 40:184–191.

⁹⁵ Nuttall, C. Teaching Reading Skills in a Foreign Language. Oxford: Macmillan. 2000.

students' writing problem supports these findings. He believed if students do not have enough vocabulary, their writing process will not run smoothly. As a proof both LOT students did not finish the sub questions number 2 that required students to search the evidence for the mentioned speech message. Also on number three LOT student 1 intentionally did not answer the sub questions that demand student to choose their preferences and the reason between online and offline learning. Thus, failing in understanding the question because of inadequate vocabulary mastery potentially cause insufficient students' answer that also can affect their score.

b. Time management

Based on the interview, both of lower order thinking students perceived that they were pursuing by time while finishing all the answer. Though having a hard time in managing time, but they both still could manage submitting on time. Meanwhile, higher order students 2 handed in the paperwork 15 minutes late because of her carelessness. Instead of answered the question right away, HOT student 2 accessed some entertainment stuff first. So it does not count as time management difficulty. Speaking about time allotment, a previous study also found that giving more time can facilitate student to thinking more analytically. ⁹⁷ Comparing with

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⁹⁶ Westwood, P. What Teacher Need To Know about Reading and Writing Difficulties. 2008.

⁹⁷ Hill, J. B. "Questioning Techniques: A Study of Instructional Practice". *Peabody Journal of Education*, 91(5), 2016, 660–671.

the HOT Question in the spoken form, students also found an issue with the limited wait time. 98 Students normally feel pressured because HOT Question is required in-depth thinking. To conclude, even though written and spoken form are different but they do share one similarity which is difficulty in time management.

c. Linguistic Difficulties

From the perspective of both lower and higher order thinking students, linguistic aspect is not a big concern since they are in university level and familiar with English already so they only encountered little amount of linguistic difficulties. Basically, in the interview each participant conveyed the different linguistic problem. However, one linguistic difficulty that simultaneously owned by both LOT students is tenses. A study by Fareed that related about writing difficulty also included tenses as one of third semester university students' writing difficulties. Additionally, another study revealed that among grammar, syntax, spelling, word order, punctuation difficulty, grammar (tenses) is the major writing challenge for ESL students in Bhutan. Meanwhile, for this present

⁹⁸ Chen, M. H. "Theoretical Framework for Integrating Higher-Order Thinking into L2 Speaking". Vol. 6, No. 2, 2016, pp. 217-226.

⁹⁹ Fareed, M., Ashraf, A., & Bilal, M. "ESL Learners' Writing Skills: Problems, Factors and Suggestions". *Journal of Education and Social Sciences*. Vol. 4(2), 2016: 1. https://www.researchgate.net/publication/311669829

Nima, Lobzang. "Tenses With Esl Writing Tenses: A Case Study Of Bhutanese Secondary Students". *International Journal of Humanities and Social Science*. 2019.https://www.researchgate.net/publication/335569972

study, tenses difficulty was faced by EFL lower order thinking students.

Furthermore, if the challenge of tenses was encountered by both lower order thinking students, lack of English vocabulary is one of the linguistic problem that only faced by the LOT student 2. LOT student 2 explained that the minimum English vocabulary mastery, could hinder LOT student 2 to express the entire idea. On top of that, it can be seen from the answer in the paperwork, comparing to both HOT students the answer of LOT student 2 is way so short. In line with this finding, Nima's study revealed that vocabulary issue is on the third place of writing difficulty among high school students after tenses and word order. 101 In addition, Kristin found that the major writing problem of third semester university students is vocabulary. 102 This supports present study's finding dealing with solving a HOT Question for English writing that also demands a wide range of vocabulary mastery to be able to express the idea completely. Further, for the case of HOT Question for English writing, lack vocabulary issue does not merely result in the insufficient answer but also failing in understanding the question.

Nima, Lobzang. "Tenses With Esl Writing Tenses: A Case Study Of Bhutanese Secondary Students". *International Journal of Humanities and Social Science*. 2019.https://www.researchgate.net/publication/335569972

¹⁰² Pratiwi, K. D. "Students' Difficulties in Writing English (A Study at The Third Semester Students of English Education Program At University of Bengkulu Academic Year 2011-2012)". 2012.

Another linguistic issue that occurred in the answering process of LOT student 2 is lacking of vocabulary, she told that deciding the suitable preposition was the tricky one. On the contrary, LOT student 1 admitted tenses as the only linguistic challenge. It is supported by a research that focused on Malaysian student's preposition error, explained this error happened due to the different concept between the target language and the mother tongue. Thus, the difficulty of deciding the suitable preposition was proven also occurred for Indonesian student specifically LOT students.

On the other hand, HOT student 1 also had some issue regarding with the linguistic aspect. Those are article and word choice. Contrarily, HOT student 2 was totally facing no issue with the linguistic aspect. HOT student 1 confessed that it does not mean she has no idea or knowledge about the use of article and word choice but genuinely because of the carelessness. Speaking of carelessness while writing, it is indeed considered as a phenomenon of students' writing behaviour that caused writing error. A study figured out that carelessness is the main factor of the basic writing error such as article, spelling, subject-verb agreement, plural form,

Odacioğlu, Mehmet. "Malay ESL Students' Difficulties in Using English Prepositions". International Journal of Languages, Literature and Linguistics. 2017.

verb form, preposition, word choice, capital letter, and so on. 104 However, in this study only found the basic writing error in the use of article, preposition, and word choice. Regarding with word choice, HOT student 1 added that since the question number one about narrative story continuation, the word choice must be different for the answer of question number two and five which need more academic word. And HOT students 1 had a strong willingness to deliver the idea perfectly without the misconception from the reader. However, Paskal found the same result that word choice is one of challenge in writing hortatory exposition text. 105 And for solving HOT question for English writing it must be more challenging since it demands a various kinds of writing such as narrative text for number one and argumentative text for number three and five so automatically choosing the proper word option would be so tricky.

d. Cognitive Difficulty

Cognitive process is the obligatory typical aspect for HOT Question that distinguishes HOT Question with other recall type of question. Since according to Brookhart, the principle of assessing HOTS have to demand student to use targeted thinking and content

¹⁰⁴ Silalahi, R. "Error Analysis on Information and Technology Students' Sentence Writing Assignments". *International Journal of English Education* (IJEE), 1(2), 2014, 152–166. https://doi.org/10.15408/ijee.v1i2.1342

E. Paskal, C. Sada, and S. Husin. "Identification Students' Difficulties in Writing Hortatory Exposition among High Intermediate Level". *Jurnal Pendidikan dan Pembelajaran*, vol. 4(2). 2015

knowledge. 106 On top of that, the interview result shows cognitive difficulty as the major challenge in solving HOT Question. In this present study, there are several branches of students' cognitive difficulties that examined separately. The first challenge is about background knowledge that becomes the basic provision for every sort of writing. The type of HOT Question for English writing is indeed required students to write a long and broad answer. Obviously if students have none of idea, it is impossible for them to write. Though the topic selections for HOT questions are the familiar and the happening cases nowadays, both of LOT students were still lacking of idea. A previous study discovered that lack of ideas in writing can lead to the repetition of ideas. 107 Apart from that, LOT student 2 even attempted to seek a help from others to obtain more ideas even though in the interview LOT student 2 did not explicitly say lacking of idea or background knowledge. That finding is supported by another study that found out particularly about low ability student only contributed brief answer for HOTS question. ¹⁰⁸ Similar finding in this present study, LOT students produced limited answer as the cause of lacking idea.

¹⁰⁶ Brookhart, S. M. How to Assess Higher-Order Thinking Skills in Your Classroom. Alexandria, Va: ASCD. 2010.

¹⁰⁷ Fareed, M., Ashraf, A., & Bilal, M. "ESL Learners' Writing Skills: Problems, Factors and Suggestions". *Journal of Education and Social Sciences*. Vol. 4(2), 2016: 1. https://www.researchgate.net/publication/311669829

Yulianti, SR. Lestari I. "Higher Order Thinking Skill (HOTS) Analysis of Students in Solving HOT Question in Higher Education". *Perspektif Ilmu Pendidikan*, 32(2), 2018. https://doi.org/10.21009/PIP.322.10.

Another cognitive challenge is organizing and generating the idea. Both processes actually have an insignificant difference and it is quite tricky to distinguish them. But some theories presented to emphasize its' difference. White defined organizing idea as the process of thinking which ideas that the most suitable to include in writing. 109 It is proven as a crucial part in solving HOT Question for English writing since all the participants found it difficult moreover they actually lacked of idea. It led organizing idea as one factor to LOT student 2 in producing the answer. Different story from HOTS students 2 point of view that perceived organizing idea was complicated because overflowing ideas related to the topic of the question. It made her confused which idea should be chosen. And HOT student 1 only felt difficult organizing the ideas in number three since it is the hardest one based on HOT student 1 opinion. Fareed, Ashraf, and Bilal also revealed that students mostly did not organize their thought while writing. 110 In addition, another previous research found that even students who master in English grammar and structure, they might still have a problem in organizing idea.¹¹¹

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White, F. D. *The Writer's Art: A Practical Rhetoric and Handbook*. California: Wadsworth Publishing Company. 1986.

Fareed, M., Ashraf, A., & Bilal, M. "ESL Learners' Writing Skills: Problems, Factors and Suggestions". *Journal of Education and Social Sciences*. Vol. 4(2), 2016: 1. https://www.researchgate.net/publication/311669829

Aragón Jiménez, C. A., Baires Mira, D. C., & Rodriguez, G. S. "An Analysis of The Writing Skill Difficulties of the English Composition I Students at the Foreign Language Department of the University of El Salvador". 2013. Undergraduate work, retrieved from http://ri.ues.edu.sv/5519/.

Similarly, in this study HOT students who do not encountered linguistic problem but indeed it was hard for them to organize their idea. Although all participants with different thinking level found it difficult, but the reasons and the difficulty level of organizing idea are different between each LOT and HOT students.

On the other hand, difficulty in generating the idea is only encountered by LOT student 2 since she required to combine the idea that was obtained from her friend and mother. Similarly, A previous study found the biggest technical students' problem in solving individual assignment is generating idea. 112 According to Teo generating idea is a thinking ability to combine, add, or connect obtained idea with the background knowledge. 113 Although generating the idea does not always refer to consolidate the new obtained information with the background knowledge but it can be about combining the idea from experience with something that has been seen or heard. 114 But based on the interview result, LOT student 1 did think she went through the process of generating idea because she only relied on the background knowledge and did not attempt to search additional information. Apart from that, if present research uncovered the difficulty of generating idea specifically

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¹¹² Yee, Heong. "Contributing Factors Towards Difficulties in Generating Ideas among Technical Students". *Journal of Technical Education and Training* (JTET). 5. 2013, 14-27.

¹¹³ Teo, N. *A Handbook for Science Teachers in Primary Schools. Singapore*: Federal Publications. 2003.

¹¹⁴ White, R. & Arndt, V. 1991. Process Writing. London: Longman.

from LOT student point of view, similarly another study found the HOTS question issue but from moderate ability student in concluding the information. Concluding task can be belonged to generating idea since it involve the process of consolidation. So to conclude, generating idea is not merely proven as writing problem but also HOT Question problem. Since HOT Question also involves the ability of analysing, evaluating, and creating that demands more thinking process.

The next three cognitive problems are actually the others form of generating and organizing idea process. The reason it is another form of generating idea because it involves the ability of adding and combining the main idea and the supporting details. All the participants agreed that besides organizing idea, expanding the ideas was also such a challenge. It is supported by a previous research also discovered that Pakistan students still face difficulty in idea expansion. In addition, Rass found one of students' problem in paragraph writing is providing supporting details into main topic such as reasons and example. HOT student 2 completed her opinion by conveying the difficulty in giving the suitable details of

¹¹⁵ Yulianti, SR. Lestari I. "Higher Order Thinking Skill (HOTS) Analysis o Students in Solving HOT Question in Higher Education". *Perspejtif ilmu Pendidikan*, 32(2), 2018. https://doi.org/10.21009/PIP.322.10.

Fareed, M., Ashraf, A., & Bilal, M. "ESL Learners' Writing Skills: Problems, Factors and Suggestions". *Journal of Education and Social Sciences*. Vol. 4(2), 2016: 1. https://www.researchgate.net/publication/311669829

Rass, Ruwaida. "Challenges Face Arab Students in Writing Well-Developed Paragraphs in English. English Language Teaching". 2015. 8. 10.5539/elt.v8n10p49.

the main idea that she had. Also, how to make it those ideas into one good logical paragraph was also challenging because she wanted to deliver the ideas completely and made it understandable for the readers. Particularly for HOT student, though they were contributed the satisfying lengthy answer, likewise a previous research findings that conveyed high ability students were successfully finish the HOT question test with a high score. Yet, they still perceive expanding the idea was such a challenge. Based on the interview answer from HOT student 2, it can be summed up the term of expanding idea means adding the supporting details of the main ideas then constructing it into one paragraph contains of the logical order of a sentences.

Meanwhile, Peter analysed another form of generating idea difficulty which is create a logical order of a paragraph. ¹¹⁹ Similarly, as it said by HOTS student 1 and LOT student 2 they also struggled in connecting the sentences into a proper paragraph. Connecting sentences is still in the circle of generating and expanding idea, since it is regarding with combining each sentences that automatically is expected to be logically ordered. The last cognitive problem of HOT Question is getting started to write. This problem is actually only owned by LOT student 2. However studies and theory are in line

Yulianti, SR. Lestari I. "Higher Order Thinking Skill (HOTS) Analysis o Students in Solving HOT Question in Higher Education". *Perspektif ilmu Pendidikan*, 32(2), 2018. https://doi.org/10.21009/PIP.322.10.

¹¹⁹ Westwood, P. What Teacher Need To Know about Reading and Writing Difficulties. 2008.

with this finding. White and Arndt agreed that getting started to write is the most difficult step in writing. ¹²⁰ Miftah added student wastes more time in getting started because they felt so hard to acquire and generate or organize the ideas. ¹²¹ And again the problem in getting started to write is still associated with generating n=and organizing idea. In short, though the cognitive challenge is dominated with problem in generating and organizing idea but there are several sub-skills of generating and organizing idea that are also essential to be concerned.

e. Another finding

Here, in additional finding the aspect that being discussed is regarding with the hardest HOT Question for English writing based on all participants' perspective. It aims to reveal whether the difficulty level of a question entirely depends on the thinking ability that it assesses. As known that the highest thinking ability according to Bloom taxonomy revised is creating. In the researcher's self-created HOT Question for English writing, questions that assess creating ability is number one (narrative story continuation) and number four (creating solution). Surprisingly, from four different level of thinking students, three of them opined that the most challenging question is number three which about

¹²⁰ White, R. & Arndt, V. Process Writing. London: Longman. 1991.

¹²¹ Miftah, M. Zaini. "Mind Mapping: The Way to Generate and Organize Ideas". *Anterior Jurnal*. 2011, 80-89.

¹²² Krathwohl, David R.. "Revising Bloom's Taxonomy". Theory Into Practice. Autumn, 2002.

analyzing ability. The participant explained that question number three demands more answer which is analyzing the effectiveness and ineffectiveness of PSBB policy than number 4 which is about creating solution for school violation. Additionally, participants mentioned that the topic about PSBB policy is heavier rather than school-related topic. In line with this finding, Brookhart stated that the difficulty easy and hard level of a question and level of thinking (recall and HOT) are totally two different things. To sum up, the difficulty level of a question cannot determined merely by what thinking ability that it aims to assess. Even though a question aims to assess creating ability, it does not always mean the hardest one.

But the factor of topic selection also needs to be considered.

2. Students' Strategy in Solving HOT Question for English Writing

The research finding dealing with strategies for solving HOT Question includes the steps before reading the question, while reading the question, while writing the answer and after finishing all the questions. Since it is the type of question that eliciting students' English writing so there is a few similarity with the writing strategy in general.

a. Considering The Time Before Reading The Question

Providing the time allotment for the test of HOT question for English writing was intended to examine student's strategy towards

¹²³ Brookhart, S. M. *How to Assess Higher-Order Thinking Skills in Your Classroom*. Alexandria, Va: ASCD, 2010.

time management. Since HOT Question also demands more time to think so that student can work maximally. 124 However, only LOT 1 was the one who estimated the time before solving the questions. Meanwhile, others participants stated that they just managed the time by finishing the easiest question to the hardest one. Based on the theory of test taking tips, students supposedly calculate the time before doing the essay questions test so that they have remaining time to revise their work. 125 The outcome for estimating the time before doing the question, result in LOT student 1 submitting the paperwork on time, and HOT student 2 who did not calculate the time even been careless with the time ended up handing in the paperwork late. From those phenomena, it can be concluded estimating the time is one strategy that might be effective in solving HOT Question.

b. Re-Reading the HOT Question.

It is mentioned multiple times that providing introductory material or information as one of principle for HOT Question. And that is formed a HOT Question sort of broad and crucial to be understand. Re-reading the question is one of strategy that is done by LOT student 2 to deepen the understanding of the questions. She even did re-read the question for more than four times since as

¹²⁴ Chen, M. H. "Theoretical Framework for Integrating Higher-order Thinking into L2 Speaking". Vol. 6, No. 2, 2016, 217-226.

¹²⁵ "Writing in Exams: Short Answer and Essay Questions ." *Te Wharepūrākau | Learning, Teaching and Library*, ltl.lincoln.ac.nz/.

mentioned in the previous section that she struggled in understanding some number of questions. Based on LOT student 2 explanation, re-reading the question could assist to analyse the purpose of the question. On contrast a study reported that rereading is not as effective as another strategy in analysing the passage. 126 Another thing, for HOT student 1 did re-reading the question to solve the problem of HOT student 1 in expanding the idea and linking the sentences. It is supported by Attiyat who proved reading can boost the idea for writing. 127 But in term of HOT Question for English writing, the reading material is from the HOT Question itself. To conclude, strategy of rereading the question based on this study can overcome the challenge in understanding the question for LOT student and as the stimulation to expand the ideas for HOT student.

c. Translating and Paraphrasing the HOT Question

This strategy is specifically intended for the LOT students. Since both of them faced the same difficulties in understanding the question and lack of English vocabularies. So as EFL students, they did translation for the question to their first language to make it easier to understand. In line with this finding, Al Musawi reported

Weinstein, Y., McDermott, K. B., & Roediger, H. L. "A Comparison of Study Strategies for Passages: Rereading, Answering Questions, and Generating Questions". *Journal of Experimental Psychology*: Applied, 16, 2010., 308–316. doi:10.1037/a0020992.

Attiyat, Nazzem. "The Impact of Pleasure Reading on Enhancing Writing Achievement and Reading Comprehension". *Arab World English Journal*. 10. 2019, 155-165. 10.24093/awej/vol10no1.14.

that EFL students tend to do translation the English vocabularies for writing and reading rather than for English idioms and grammatical rules. 128 Moreover, LOT student 2 even did translation in each words of the questions. On the other hand HOT students did not apply translation as the strategy to tackle HOT Question for English writing.

Next strategy besides translating that was applied by LOT students is paraphrasing the question. They stated that translating was inadequate to make the question more understandable. It is supported by a theory of strategy in solving essay question that agreed students supposedly paraphrase the original question into their own simple version of question. 129 Just exactly like what LOT student 1 did to simplify the question based on her own understanding. Furthermore, Chen also reported that paraphrasing and simplification are indeed ways to clarify the question. 130 Similarly, LOT student 2 paraphrased the question number two with her own word because it contains of so many academic words. So it can be concluded that translating and paraphrasing the question are

Al-Musawi, Numan. "Strategic Use of Translation in Learning English as a Foreign Language (EFL) among Bahrain University Students". 2014. Comprehensive Psychology. 3. 10.2466/10.03.it.3.4.

¹²⁹ Clay, B. *Is This A Trick Question?: A Short Guide to Writing Effective Test Questions.* Kansas Curriculum Centre. 2001.

¹³⁰ Chen, M. H. "Theoretical Framework for Integrating Higher Order Thinking into L2 Speaking". Vol. 6, No. 2, 2016, 217-226.

the strategies of LOT students in analysing or understanding the purpose of the question.

d. Pointing Important Keywords

This is actually the last strategy assist to comprehend the questions. Different from translating and paraphrasing the question that only experienced by LOT student, pointing important keywords of the question was applied by both HOT and LOT students except LOT student 2. HOT student 1 perceived the important keywords is the main question or the instruction itself. Similarly, a statement from Lincoln University for answering essay question, students required to focus on the important keywords. Selecting important keywords is indeed an effective strategy more particularly for HOT Question. Since HOT Question inevitably long there must be few words as emphasis of the whole question. It is proven implemented by both HOT and LOT students.

e. Source of The Ideas (Semantic, Episodic Memory, and Asking Peers for a Help)

According to the statement from Lincoln University, the process after reading the question are thinking and gathering ideas. ¹³² As discussed previously that the major difficulty in solving HOT Question is in the circle of organizing and generating idea. It

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¹³¹ "Writing in Exams: Short Answer and Essay Questions." Te Wharepūrākau | Learning, Teaching and Library, ltl.lincoln.ac.nz/.

[&]quot;Writing in Exams: Short Answer and Essay Questions." Te Wharepūrākau | Learning, Teaching and Library, ltl.lincoln.ac.nz/.

led researcher in this section to examine how they seized and combined the ideas. According to theory from White and Arndt generating idea involves the three sorts of memory, those are episodic memory intended to events and experience, semantic memory intended to information and idea, lastly unconscious memory intended to emotion and feeling. 133 However the result of the interview shows that all of the participants HOT and LOT students, acquired the background knowledge from their memory of experience and information that they read or heard before. For HOT student, though they had a hard time in organizing and expanding the idea they did not attempt to search for additional idea because they perceive using the background knowledge is sufficient. Oppositely, LOT student 2 aside from utilizing the semantic and episodic memory, LOT student 2 attempted to enrich the ideas by seeking the peers' opinion. Likewise the theory from Helen and Arthur stated learner would take an action if the knowledge about certain topic is inadequate for writing.¹³⁴

Furthermore, regarding with the process of combining the idea, they explained learner combines the information that they know about the topic to compose meaningful and understandable

¹³³ White, R. & Arndt, V. Process Writing. London: Longman. 1991.

Helen K. & Arthur E. *Thinking Strategy for Learners*. Public Education & Business Coalition. 2004.

text.¹³⁵ In line with that, both of HOT student consolidated the ideas from the semantic and episodic memory while LOT student 2 preferred to dominate the answer with the opinion from peers and few of her opinion. So it can be distinguished between how LOT and HOT students seizing the background knowledge and combining them. Asking peers or someone to assist is the LOT student's strategy to overcome the problem of limited knowledge.

f. Scratching Raw Ideas

Having the idea gathered, the next step before writing the actual answer is scratching the raw idea. Three out of four participants did nothing before writing the actual answer, they just keep writing-erasing- rewriting the answer. But contrarily, LOT student 2 jotted down the raw opinion from peers in the paper first then combining with her own idea. After that, she directly wrote the actual answer on the paperwork. It is supported by Peter Elbow that believed raw idea writing is the first writing stage to effectively accommodate the overflowing unstructured ideas without worrying about the words selection, grammatical rules, and structured. Additionally, it will assist student to generate more idea and write easier. So basically scratching raw idea in HOT Question is like the mini version of drafting in writing process. However, though

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¹³⁵ Helen K. & Arthur E. *Thinking Strategy for Learners*. Public Education & Business Coalition. 2004

¹³⁶ Elbow, Peter. \Writing With Power: Techniques for Mastering the Writing Process. Oxford University Press Inc. New York. 1981.

HOT student skipped this step but they still could manage to provide a long broad answer.

g. Rereading The Whole Answer and Self-Reflecting

The last strategy in solving HOT Question for English writing is rereading the whole answer and self-reflecting that was actually implemented by all participants both HOT and LOT students. This process is similar with editing or revising step in writing. According to Helen and Arthur student would read and reread their writing so they can be clearer and monitor their writing by asking themselves regarding with their choices of content for the writing. ¹³⁷ Differently, HOT student 2 did this process throughout the writing process not as the finale editing process. However, since this process was done by all the participant, we can conclude that rereading the answers and self-reflecting is one of obligatory finale step in solving HOT Question for English writing.

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¹³⁷ Helen K. & Arthur E. *Thinking Strategy for Learners*. Public Education & Business Coalition. 2004.

CHAPTER V

CONCLUSION AND SUGGESTION

In this chapter researcher provides the conclusion of the research's result regarding with the student's challenge and strategy in answering HOT question for English writing. Several suggestion for teacher and further research is also presented as follows:

A. Conclusion

1. Students' Challenge in Solving HOT Question for English Writing

Overall, the research findings uncovered that the students' challenge in solving HOT question for English writing does not merely depend on the thinking level. In fact students with same level of thinking encountered the some different challenges and students with the different level of thinking actually faced several same challenge. So the challenge in solving HOT Question indeed cannot merely be determined by the level of thinking. The students' challenges in this study are classified into linguistic and cognitive difficulty. Also there are a couple of challenge out of those two categories which are failing in understanding the question and managing the time. Several cognitive challenges that are revealed in this study are, lack of background knowledge, difficulty in organizing and generating idea, difficulty in expanding idea and providing supporting details, linking the sentence, and lastly, getting started to write. And the linguistic challenges includes

difficulty in the use of tenses, preposition, article, word choice, and lack of English vocabulary. Since it is about HOTS the cognitive challenge becomes the major challenge for both LOT and HOT students comparing to linguistic challenge. However, in general LOT student 2 dealt with the most challenges comparing to the others. Apart from that, this study also discovered another finding which regarding the hardest question based on students' perspective. The result conveyed that the hardest HOT Question based on all participants' perspective is question number three that assesses analyzing ability not the question for creating ability as the highest thinking ability in HOTS. It means the difficulty level is not entirely determined by the ability that it aims to assessed, there is also another aspect that necessarily to be concerned.

2. Students' Strategy in Solving HOT Question for English Writing

Generally, as what occurred in the students' challenge result, also happened in the findings related with the students' strategy in solving HOT question for English writing. Students' strategy also cannot be determined totally depend by the thinking level. Based on the research finding related with students' strategies in solving HOT Question for English writing, the lower order thinking students performed more strategies than higher order thinking students. Overall the strategies includes the strategy before reading the HOT Question, while reading the question, while answering, and after answering the question. It is a

bit similar with writing strategy in general but more specific. The strategies before reading the questions is estimating the time Re-reading the question, translating, paraphrasing the question, pointing important keyword are the strategies to analyze the question easier. And strategies while generating idea are acquiring background knowledge from the episodic and semantic memory and asking peers for a help. Then, scratching raw idea as the previous step before writing the answer. Lastly strategy after finishing the whole questions are re-reading the answers and self-reflection whether the answer is satisfying enough or not. Moreover, of that the some of the participants also attempted to overcome their own challenges with the unexpected strategies. Such as LOT students' strategy in doing the translation for the problem of understanding the question and HOTS student strategy in rereading the question as stimulation for seizing the idea. HOTS student did that to solve the problem in organizing and expanding the idea. So actually implementing HOT Question for English writing in the instructional is perfect for pre-writing activity because of the existence of the lengthy HOT Question that can be used as idea elicitation.

B. Suggestion

1. Teacher

The aspect higher order thinking skill (HOTS) is inevitably essential for the instructional process in this era. Designing the activity that involves HOTS activity is not a simple job moreover for the diverse students. It is preferable to know each students' concern and problem towards HOTS and by knowing the students' strategy, it also can be as teacher references so that teacher will be able to overcome those difficulty by designing the suitable learning method. With the contribution of this research in figuring out the student's challenges and strategies specifically based on diverse level of thinking, it is expected to be a teacher's new insight that can assist them to design the best suitable method of HOTS activity based on students' needs and competence, so that students no longer unfamiliar and having difficulty in solving HOT Question.

2. Further Research

As explained in the research limitation that present study did not focus on the psychological challenge of HOT Question. Based on the interview result, it indeed shows some students are unconfident and lack of interest and motivation. However, present study did not went deeply to that sector. So it can be references for further reason to figure out psychological challenge in solving HOT Question and also the effective learning method that involves HOT based on students thinking level.

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