CHAPTER IV
RESEARCH FINDING AND DISCUSSION

This chapter deals with the research findings and discussion of the study toward the student teacher designed-task in Microteaching classes. This presents the collected data from the student teachers and the analysis of it. Additionally, the analyzed data is categorized based on the research questions of this study.

A. Research Findings

This data had been collected from 21st May – 9th June 2017. From 7 Microteaching classes; A, B, C, D, E, F, G, there were 48 lesson plans that were designed for Senior High School. Since the researcher used convenience and random sampling in collecting the data, there are 20 lesson plans used the data collection. Since the research question is only one, the findings is presented directly; **(1)** What is the cognitive domain level of student teacher designed-tasks in facilitating higher order thinking skills based on Bloom's taxonomy?

1. Cognitive Domain Level of Student Teacher Designed-Tasks in Facilitating Higher Order Thinking Skills.

In case of finding the cognitive domain level of student teacher designed-tasks that facilitate higher order thinking skills, the researcher did several steps as displayed in the figure 4.1:

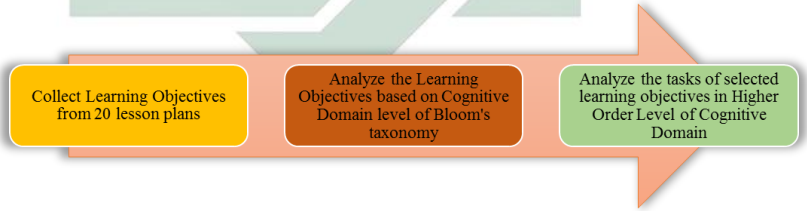


Figure 4. 1 Steps in Analyzing tasks in Facilitating HOTS

Firstly, the researcher identified the learning objectives of twenty lesson plans. It is based on the assessment principle that to assess the learning outcome, it needs to be in line with the learning objective. The learning objectives were listed and

analyzed based on the six levels of cognitive domain of Bloom's taxonomy. Then, based on the findings that show learning objectives in higher order level (*Analyze*, *Evaluate*, and *Create* level), the researcher analyzed the tasks designed in the lesson plan. As a result, chart 4.1 is presented in order to make the reader easily interpret the data:

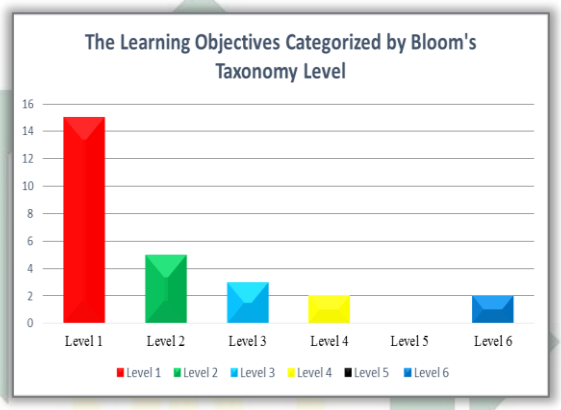


Chart 4. 1 The Learning Objectives Categorized by Bloom's Taxonomy

Based on chart 4.1, there are twenty-seven indicators or learning objectives from twenty lesson plans (*see appendix 1*). Nevertheless, the learning objectives that can support tasks in higher order thinking skills are only four learning objectives; two learning objectives in the *Analyze* level and two learning objectives in the *Create* level (*see appendix 1*). Further, those four learning objectives are in four different lesson plans since some lesson plans provide more than one learning objectives. Therefore, those four lesson plans are analyzed to know whether they can facilitate higher order thinking skills or not.

In the other side, the researcher found other findings that can be concluded in further analyzing: **a)** the task potentially facilitates higher order thinking skills although the learning objective is in a low level of cognitive domain, and **b)** learning objectives for the cognitive domain are put in the psychomotor domain. A lesson plan was found with learning objective in

the *Remember* level, however the task designed was not in the *Remember* level. The task was in the *Analyze* level which was considered as task in higher order thinking skills. Moreover, another lesson plan had two learning objectives in *Kompetensi Inti 4* (psychomotor domain) which were actually designed for cognitive domain. In that lesson plan, there were three learning objectives in different domains: cognitive and psychomotor. Two provided learning objectives in the psychomotor domain were actually in the cognitive domain. The learning objectives were about "Menganalisis contoh teks recount berdasarkan struktur teks dengan benar" and "Menyusun kerangka teks recount dengan urutan yang benar berdasarkan struktur teks". Therefore, the researcher added those three findings to be analyzed within the four learning objectives in higher level of thinking (*see appendix 2*). In total, there are six lesson plans (seven learning objectives) that are analyzed. Then, the researcher presents the result of an analysis on the chart 4.2 below:

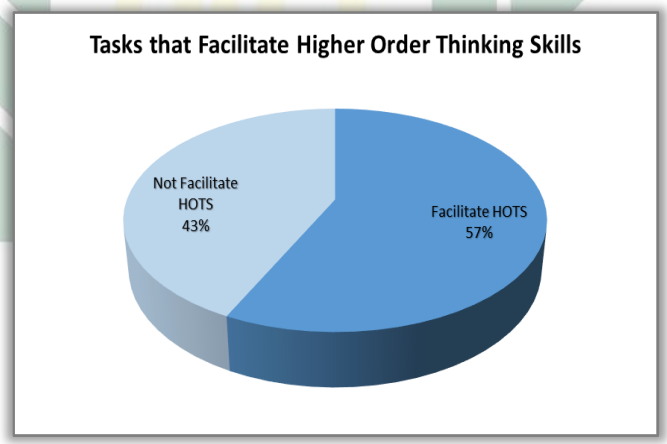


Chart 4. 2 Task that facilitate Higher Order Thinking Skills

According to the chart 4.2, the student teacher designed-tasks can facilitate higher order thinking skills for 57%. Meaning that from seven learning objectives obtained,

there are four tasks that can facilitate higher order thinking skills. Before discussing more about the level of task based on the cognitive domain of Bloom's taxonomy, the researcher needs to explain the found tasks (*see appendix 3*).

From seven learning objectives, there should be seven tasks provided. In fact, one of seven learning objectives did not provide any task to be assessed as stated in the learning objective. In the other words, the student teacher here could not know whether the learning objective was achieved or not. Thus, there were only six tasks that can be analyzed. In analyzing the task, it is analyzed for each task item or question. From those six tasks, five of them were designed as constructing response task with one single task item whereas the other one was designed as constructing response task with five task items (*see appendix 3*). In total, there are ten task items from those six task.

To make the reader easy to understand, the researcher displays the findings in the form of chart 4.3:

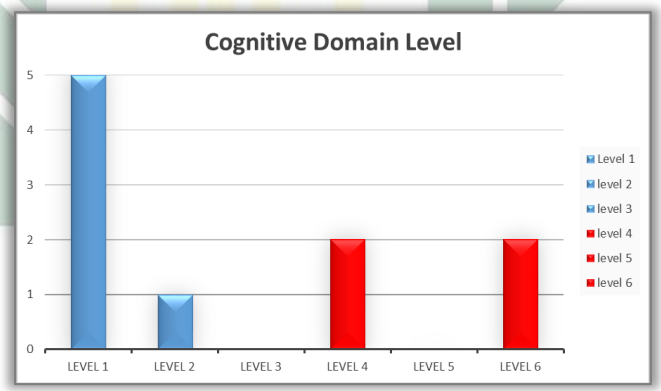


Chart 4. 3 Cognitive Domain Level

Based on the chart above, it can be seen that there are only four task items that facilitate higher order thinking skills. The data shows that two task items are in the *Create* level while another two task items are in the *Analyze* level. However, the rest of task items are in the low level of thinking skills; five

task items in *Remember* level and one task item in *Understand* level. The data shows that from three upper level of cognitive domain, *Evaluate* level is not used by the student teachers while *Create* and *Analyze* level has the same number of level used in the cognitive domain. Then, the finding details are categorized based on the chart 4.2;

a. Facilitate Higher Order Thinking Skills

In cognitive domain of Bloom's taxonomy, higher order thinking skills are showed in the level four, five and six. Yet, the data showed that there is no task item that facilitates higher order thinking skill in the *Evaluate* level (*see chart 4.1*). Again, the researcher, presents the findings based on the cognitive domain level of Bloom's taxonomy.

- **Level 4; Analyze**

In this *Analyze* level, there are two task items that show analyze-thinking skills. As in *Analyze* level, there are three cognitive processes that are included here; *differentiating, organizing,* and *attributing.*

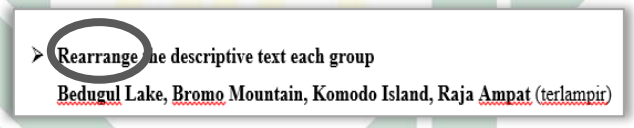
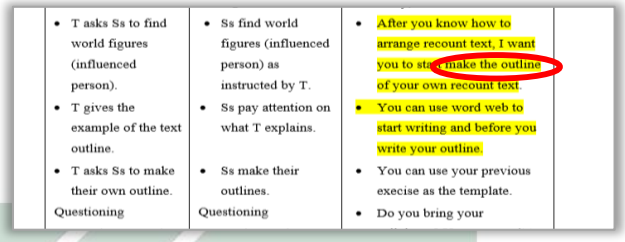


Figure 4. 2 Task Item in *Organizing*

The figure above is the task item that included as *organizing.* That was taken from the lesson plan since there was no proper worksheet for the students in doing it. The instruction to do the task was stated orally by the student teacher. This task asked the students to arrange the jumble paragraph into good descriptive text. The Student F here provided jumble paragraph of descriptive text about Bedugul Lake, Bromo Mountain, Komodo Island, and Raja Ampat in the envelop. Then, the Student F gave blank paper as a place for sticking the jumble paragraph into good arrangement of descriptive text.

The other task in *Analyze* level is also in the *Organizing* cognitive process.



• T asks Ss to find world figures (influenced person). • T gives the example of the text outline. • T asks Ss to make their own outline. Questioning	• Ss find world figures (influenced person) as instructed by T. • Ss pay attention on what T explains. • Ss make their outlines. Questioning	• After you know how to arrange recount text, I want you to start make the outline of your own recount text. • You can use word web to start writing and before you write your outline. • You can use your previous execise as the template. • Do you bring your	

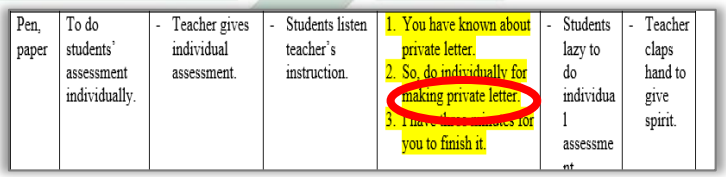
Figure 4. 3 Task Item in *Organizing* (2)

Similar to the previous task, the instruction was not written properly in the students' worksheet. The students were provided worksheet of outline table while the student teacher gave instruction orally. This task item was included as *producing* since the teacher's instruction clearly stated "make (produce) the outline".

- **Level 6; Create**

In this level, *Create* also has three cognitive processes; *generating, planning,* and *producing.* All the data found as *create* here are *producing* thinking.

Firstly, this task facilitated higher order thinking skills as stated in the lesson plan by stating operational verb "make" in the topic "private letter".



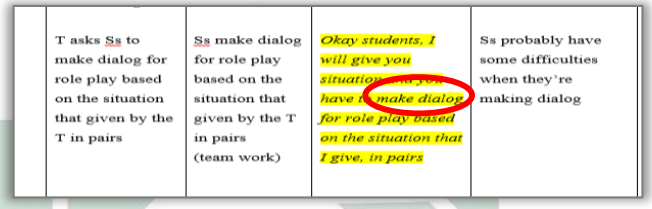
Pen, paper	To do students' assessment individually.	- Teacher gives individual assessment.	- Students listen teacher's instruction.	1. You have known about private letter. 2. So, do individually for making private letter. 3. I have three minutes for you to finish it.	- Students lazy to do individual assessment	- Teacher claps hand to give spirit.

Figure 4. 4 Task Item in *Create* Level (1)

The students were asked to write a private letter freely; the Student E did not provide any specific topic for writing a private letter. Here, the proper worksheet was also not provided by the student teacher. So, the instruction to do the

task was orally stated. The student teacher provided post card as the paper to write the letter.

Secondly, another task item that facilitates higher order thinking in *producing* something was similar to the first one. Here, the students were asked to "make" dialog.



	T asks Ss to make dialog for role play based on the situation that given by the T in pairs	Ss make dialog for role play based on the situation that given by the T in pairs (team work)	*Okay students, I will give you situation and you have to make dialog for role play based on the situation that I give, in pairs*	Ss probably have some difficulties when they're making dialog

Figure 4. 5 Task Item in *Create* Level (2)

Different from the previous task, this task provided some situations for a topic in making a dialog. Yet, the teacher also did not provide proper worksheet with the written instruction. So, the instruction was orally stated.

b. Not Facilitate Higher Order Thinking Skills

Based on chart 4.2, there are 43% tasks that were included in lower order thinking skills; level one, two, and three. Here is the detail of the percentage:

- **Level 1; Remember**

Remember is the lowest level of Bloom's cognitive domain. In this level, there are two cognitive processes; *Recognizing* and *Recalling.* Here is the task designed by Student C:

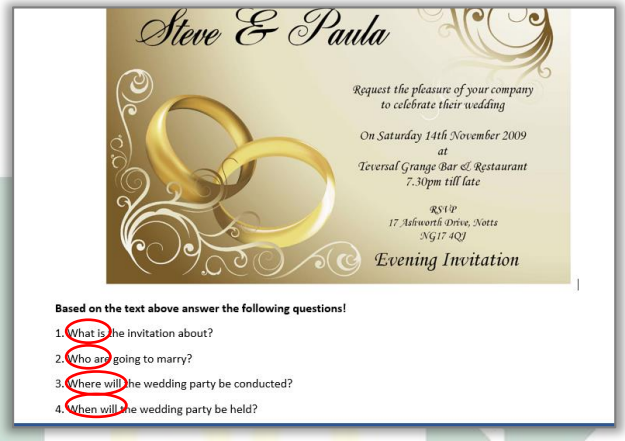
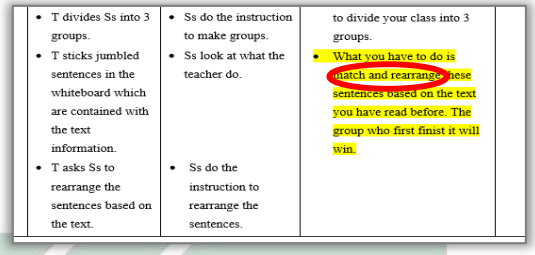


Figure 4. 6 Task Item in *Remember* Level (1)

Those task items are constructing response task (open-ended questions or essay) which the students are asked to construct response. As seen in the figure 4.6, there are four task items provided in that task. Then, to answer the questions, the students would go back to see and read the invitation text given. As analyzed by Bloom's taxonomy, those task items were shown thinking process of *Recognizing* or *Identifying.* The students were asked to identify the information by answering the questions. The answers were stated clearly in the invitation text given. The next task was designed by Student D:



• T divides Ss into 3 groups. • T sticks jumbled sentences in the whiteboard which are contained with the text information. • T asks Ss to rearrange the sentences based on the text.	• Ss do the instruction to make groups. • Ss look at what the teacher do. • Ss do the instruction to rearrange the sentences.	to divide your class into 3 groups. • What you have to do is match and rearrange these sentences based on the text you have read before. The group who first finist it will win.

Figure 4. 7 Task Item in *Remember* Level (2)

This task asked the students to arrange sentences based on the biography text of B. J. Habibie. Here, the Student D did not prepare worksheet with the instruction. The Student D provided handout "cutting jumble sentences" that would be arranged in a blank paper by the students. Again, the instruction to do the task was orally stated. This task was included in *Remember* level since the students only arranged the task based on the text given.

- **Level 2; Understand**

  This thinking level is the continuing level of *Remember*. There are 7 cognitive processes that can show *Understand*; *Interpreting, Exemplifying, Classifying, Summarizing, Inferring, Comparing,* and *Explaining.*

  The next task item was also open-ended response since it was a continuing question from the previous task of Student C. The teacher asked the students to construct response.

5. Suppose you are invited to the wedding party of your ex boy/girlfriend. Will you attend the wedding party? Why? /Why not?

Figure 4. 8 Task Item in *Understand* Level

Here, the teacher asked the student to imagine that they were invited to the wedding party of their ex- boy/girlfriend. After that, the students were asked to answer by "Yes/No" and given the reason. Asking the students to give more explanation about

why they go or not to that wedding party was depicted the thinking process of *Explaining.*

As mentioned before that there was a lesson plan that did not provide task to be assessed. The Student B explained in the interview that the learning objective "Menganalisis ungkapan pemaparan pendapat dan pikiran orang lain" was assessed in the process of learning. In the learning process, the students were shown a power point which dialog of asking and giving opinion was provided. The students were asked to analyze the dialog. However, the activity "analyzing the dialog" here could not be included as task in this study. The researcher defined task here as exercise or task item. Thus, the activity in the learning process could not be further analyzed.

Those are the details of findings that are well represented by char 4.3. In the next part, the researcher discussed more about the cognitive domain level of Bloom's and related it to the principles of Brookhart's.

B. Discussion

In case of having the same interpretation between the reader and the researcher toward the findings, this session discusses those findings by reflecting on some theories related to each following problems. The theories are already stated in the chapter 2 of this study. Thus, the discussion is based the research questions; **(1)** What is the cognitive domain level of student teacher designed-tasks in facilitating higher order thinking skills based on Bloom's taxonomy?

1. Classified Student Teacher Designed-Tasks of Cognitive Domain Level in Facilitating Higher Order Thinking Skills.

As stated by Brown, that the assessment task needs to be in line with the learning objectives.[146] It is used to check whether the students can achieve the learning objectives or not. After conducting the assessment task, the teacher will check and interpret the students' work in order to continue or repeat the material. Therefore, it can be concluded that the task designed should be based on the learning objectives.

When the tasks are in higher order thinking level, the learning objectives also need to be in higher level. Collecting twenty lesson plans, there were twenty-seven learning objectives

[146] H. Doughlas Brown. *Language Assessment.* (USA: Longman, 2004), 30.

obtained (*see appendix 1*). From those twenty-seven learning objectives, the learning objectives that were included as higher order thinking level were only four learning objectives. In the other words, it was only 15% learning objectives that were potential in facilitating task in higher order thinking skills.

However, other facts were found. There were three additional learning objectives that included in the data analysis (*see appendix 2*). Firstly, Student F designed her learning objectives in the *Remember* level, but her task was in the *Analyze* level. This fact actually could not be said that was a good fact. This fact means that the student F could not design task in line with the learning objectives. Susan M. Brookhart stated that in constructing task, it needs to tap the right intended knowledge and thinking skills.[147] Meaning that, when the learning objective is in the lower order thinking level such as *Identifying* (*Remember*), the task should be in *Identifying* level as well. It will not be relevant when the learning objective wants to assess *Identifying* skills but the task is designed to assess *Analyze* skill. The result of the task cannot be used to know whether the learning objective is achieved or not.

Next, student D was also potential in facilitating task in higher order thinking skills since her task was in the upper level of Bloom's cognitive domain. Yet, she stated the cognitive learning objectives in the psychomotor learning objectives. In 2013 curriculum, the learning objectives of cognitive and psychomotor domain are written separately. *Kompetensi Inti 3* is for cognitive domain while *Kompetensi Inti 4* is for psychomotor domain. Student D stated two learning objectives *"Menganalisis contoh teks recount berdasarkan struktur teks dengan benar"* and "*Menyusun kerangka teks recount dengan urutan yang benar berdasarkan struktur teks"*. This learning objective wanted the students to analyze and make an outline of recount text. Here, the student teacher still needed to assess students' thinking skill in the way of analyzing and organizing ideas since those asked the students to think, identify and relate several given information. Anderson and Kratwohl also explained that

[147] Susan M Brookhart. *How to Assess Higher-order thinking skills in your classroom.* (United States of America: ASCD Publication, 2010), 19.

outlining is another term for *organizing.*[148] Those cognitive processes are included in *Analyze* level of cognitive domain. Then, the researcher discusses it more detail in two categories below:

a. Facilitate Higher Order Thinking Skills

The finding shows that there are 57% tasks that can facilitate higher order thinking skills. In the other words, there are four tasks that can facilitate higher order thinking skills from seven learning objectives. Those tasks can facilitate higher order thinking skills in the *Analyze* and *Create* level only since there is no student teacher who designed the learning objectives or tasks in the *Evaluate level.*

In *Analyze* level, Student D and F could facilitate tasks on this level even though Student F's learning objective is actually in the *Remember* level; lower order thinking skills. Her task was asking the students to arrange the paragraph into good descriptive text. Arranging the sentences or paragraph is included as *organizing.* In these cognitive processes, one of the alternative terms is *finding coherence*.[149] In process of arranging, the students were asked to match and find coherence to construct good descriptive text. The students will identify the sentences (elements) of the paragraph and recognize how the sentences or paragraph fit together.[150]

Fortunately, the given texts were new, meaning that those texts had not been introduced or discussed in the learning process. Thus, the *Analyze* thinking process could be achieved, hopefully. Further, this task could be more challenging if each long paragraph for each descriptive text was divided or cut into two or three pieces. In the other words, a paragraph with four to five sentences was better to be more than one cutting paper. So, it would lead the students to think more on how those sentences are related.

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[148] L. W. Anderson, et.al., *A Taxonomy For Learning, Teaching And Assessing.* (New York: Longman, 2001), 61.
[149] *Ibid*, 68.
[150] *Ibid*, 81.

Furthermore, another task from Student D about making outline, it also indicated *Analyze* level; *Organizing* as well. As stated before that *Outlining* is another term for *Organizing*. In making the outline, the students were asked to find a biography text freely. The students could decide whoever they want. After reading the biography text, the students were asked to make an outline. Here, those activities were depicted *Organizing* since the students identify and relate how the sentences (main idea) of each paragraph can fit together.[151]

Moreover, if those tasks referred to the definition of higher order thinking skills, those facilitated the students to think critically. In arranging the text and making an outline, the students tried to identify the relevance and importance ideas from each sentence and find out the logical connections between ideas in each sentence. Those activities (identify the relevance and understand the logical connections) are critical thinking activities.[152]

The other two tasks facilitated higher order thinking skills in the *Create* level. Those tasks asked the students to produce something such as dialog conversation and a private letter. The product is actually not a matter since the product can be conceptual (such as a list of tentative hypotheses) or physical (painting).[153] The main point here is that the students create something. Discussing about creating something, the reason why "making an outline" task is not included as *Create* level was because the task was not creating or constructing something. The students were asked to determine the coherent element from each paragraph in a biography text. It is similar to the example of Anderson and Kratwohl about students are asked to make an outline of presented report.[154]

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[151] L. W. Anderson, et.al., *A Taxonomy For Learning, Teaching And Assessing.* (New York: Longman, 2001), 61.
[152] Joe Y. F. Lau. *An Introduction to Critical Thinking and Creativity.* (USA: Wiley), 2.
[153] Susan M Brookhart. *How to Assess Higher-order thinking skills in your classroom.* (United States of America: ASCD Publication, 2010), 125.
[154] Susan M Brookhart. *How to Assess Higher-order thinking skills in your classroom.* (United States of America: ASCD Publication, 2010), 61.

Further, the Student A and Student E here used the operational verb "make" as their learning objectives and instruction task. Additionally, the tasks challenge the students to use their imagination.[155] The task "making a private letter" gave students opportunity to use their imagination on the topic since it's free writing. When it dealt with creativity, the student teachers here could facilitate the students to think creatively. As defined that higher order thinking skills include critical, logical, reflective, metacognitive and creative thinking.[156] Further, Student D in *Analyze* level with making an outline task, asked the students to look for the biography from the internet. She also asked the students to make notes for important information before creating the outline. Those activities were one of the ways to support the students in being creative. Brookhart explained that creative students will find "source material" for ideas in several different ways such as media, people and events.[157] To sum up, the tasks in *Analyze* and *Create* level can facilitate the students to think critically and creatively.

Then, dealing with the principles of constructing tasks in higher order thinking skills, the student teacher deigned-tasks also have fulfilled several principles of Brookhart's. There are six principles that are modified from three basic principles. Here are the details for the four tasks that can facilitate higher order thinking skills:

a. The task presents something to think about (Resource material)

From four task that can facilitate higher order thinking, the task that can present resource material are only two tasks by Student A and Student F. The resource provided material by the student teachers were

[155] ACARA Australian Curriculum Assessment and Reporting Authority. (http://www.australiancurriculum.edu.au/GeneralCapabilities/critical-and-creative-thinking/introduction/critical-and-creative-thinking-across-the-curriculum , accessed on 27th February, 2017)

[156] FJ King, Ludwika Goodson - Farank Rohani. *Higher Order Thinking Skills; Definition, Teaching Strategies, Assessment.* 1

[157] FJ King, Ludwika Goodson - Farank Rohani. *Higher Order Thinking Skills; Definition, Teaching Strategies, Assessment,* 128.

descriptive text and situation. Those resource materials are used as stimulus.[158] It was used as the basic in answering the question. It is believed that by presenting stimulus, the task item will promote higher order thinking skills.[159] As stated in chapter 2 of this study, the resource material can be varied such as pictures, tables, diagrams, passages or text such as poem or poetry and short movie or video. In findings, from examples above, the Student A and Student F presented situation and text as the stimulus. As explained in chapter 2, the resource material or introductory material is used as something to think about for students.[160] So, the students wouuld answer the questions based on the text or resource material presented. Resource material in the form of situations which were provided by Student A was also included as text. The text here has a broad meaning, it includes written text, situation, speech, documentary or sort of event.[161]

The other two tasks from Student D (make an outline) and E did not provide resource material. It was because their task is in essay format which asked the students to answer the question based on their interest. The Students D who asked the student to make an outline did not give any biography text since her intention was to make student engage in what they were doing. She explained that it was her intention to not provide any biography text as stimulus. She wanted the students to choose biography of whoever they like. Additionally, Student E also stated about imagination. She further explained that she wanted the students to

[158] Nur Rochmah Laily - Asih Widi Wisudawati. "Analisis Soal Tipe Higher Order Thinking Skill (HOTS) Dalam Soal UN Kimia Rayon B Tahun 2012/2013". *Kaunia.* Vol.11 No.1, April 2015. 29.
[159] *Ibid*, 29.
[160] Nur Rochmah Laily - Asih Widi Wisudawati. "Analisis Soal Tipe Higher Order Thinking Skill (HOTS) Dalam Soal UN Kimia Rayon B Tahun 2012/2013". *Kaunia.* Vol.11 No.1, April 2015. 25.
[161] Susan M Brookhart. *How to Assess Higher-order thinking skills in your classroom.* (United States of America: ASCD Publication, 2010), 43.

write a private letter based on their imagination; she did not want to limit the students' imagination. Here, the researcher could conclude that the Student D (make an outline) and E did not present any introductory material or resource material because of certain purpose; students' interest and imagination.

b. The task asks the students to give response/opinion or to extend their knowledge.

In providing and designing task, the assessment format may be varied. It can be in multiple choices, constructed-response or performance assessment.[162] Constructed-response or essay is believed as one of ways to promote higher order thinking skills.[163] This is because by constructing a response, the students can construct their own sentences by their own words. In giving response to a task item, the students may be asked to give comment or opinion by writing one or more sentences or extended essay.[164] Further, from four tasks that can facilitate higher order thinking skills, the three tasks used this assessment format. Meaning that, these are tasks that ask the students to give response. Here, the students were asked to give response in the form of a brief comment in dialog conversation, private letter, and outline. In making dialog conversation, private letter, and outline, the students are given opportunity to apply their knowledge or information rather than recall what they have learnt.[165] In the other words, by providing constructed response task, the students were given opportunities to recall their previous knowledge, related it to the new situation, planned what they will do for the new situation and applied it to the new situation; the students could use their creativity in completing the task. In short, three of

[162] *Ibid,* 25.
[163] J. Michael O' Malley - Lorraine Valdez Pierce. *Authentic Assessment For English Language Learners*. (California: Longman, 1996), 5.
[164] J. Michael O' Malley - Lorraine Valdez Pierce. *Authentic Assessment For English Language Learners*. (California: Longman, 1996), 13.
[165] *Ibid*, 13.

four student teachers here promoted higher order thinking skills by providing opportunity for students to construct responses based on what they have learnt.

In contrary, another task from Student F were not considered in this category since it was arranging jumble sentences into descriptive paragraph (Student F). That task could not be considered as constructing response since the students did not present response in the form of brief comment or opinion; the result of arranging jumble sentences is an arranged text. This was because the response here was defined as giving comment or opinion by writing one or more sentences or extended essay.[166] That task might be included in this characteristic if it was asked the students to give an explanation for what have arranged. It could be added after arranging the text. Out of the task and assessment for instance, the students were asked to present their work and the teachers ask them about "why do you put this sentence before this sentence?" or "why the order should be A-B-C-D? why is it not A-D-B-C?". By having those activities, out of the task, the learning process would facilitate the students to think in higher order thinking skills.

c. The task challenges the learners.

This principle is fulfilled by all four tasks. In the other words, the four tasks can challenge the learners in facilitating higher order thinking skills. As discussed before that the tasks need to challenge the learners to think logically, be open-minded, seek alternative or be innovative, and use imagination.[167] Here, the student teachers could present tasks that ask students to do so. For example, Student E presented tasks that asked the students to use their imagination. Her task was asking the student to make a private letter. This task would

[166] *Ibid*, 13.

[167] ACARA Australian Curriculum Assessment and Reporting Authority. (http://www.australiancurriculum.edu.au/GeneralCapabilities/critical-and-creative-thinking/introduction/critical-and-creative-thinking-across-the-curriculum , accessed on 27th February, 2017)

give an opportunity for students to use their imagination to create private letter since the topic was not limited. It was agreed by the Student E who said that she wanted the student to use their imagination. As discussed above that one of definitions of higher order thinking skills is creative thinking. As stated by FJ King that higher order thinking skills include critical, logical, reflective, metacognitive and creative thinking.[168] That task could be included as task that facilitate students to think creatively. That is one of the ways to promote students to be creative. As Brookhart further explained that the creative students will find ideas from variety of source materials.[169] Student A also did similar thing to her task but she provided situations to help the students. Additionally, the task from Student D which was making an outline could challenge the students to think logically in deciding what information comes first in each outline table. It could be concluded that the student teachers here could present the task to challenge the students to think logically and use their imagination.

d. The task presents something new that students have not learn in the class (New material)

Here, all four tasks that considered facilitate higher order thinking skills are fulfilled this principle. Presenting new material here means the material in the task have not introduced or used in the learning process.[170] This does not mean the task will have different material from the learning objectives but the task presents something new in topic or theme; the context will still the same as the learning objectives. The student A and Student F presented new and different material from the learning process. Student A presented five different situations even two of them are little bit similar as the example in the learning process.

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[168] FJ King, Ludwika Goodson - Farank Rohani. *Higher Order Thinking Skills; Definition, Teaching Strategies, Assessment.* 1

[169] *Ibid*, 128.

[170] Susan M Brookhart. *How to Assess Higher-order thinking skills in your classroom.* (United States of America: ASCD Publication, 2010), 25.

While the Student F presented all different descriptive text of tourism places from the learning process. In the learning process, the descriptive text used was Borobudor temple. In the assessment task, the new descriptive texts were provided; Bedugul lake, Bromo mountain, Komodo island and Raja Ampat. From those descriptive texts, it could be seen that the materials in the task and learning process were different. Here, the context was still the same about describing tourism places, but what make it difference was the content or the information inside the text; the vocabulary and the tourism places. In the other words, the tasks that were designed with new material provided opportunity to students to think not merely recall information.[171]

Then, the other two tasks from Student D and Student E did not present new material in the form of resource material, but they are asked the student to answer the task item with something new. They are asked the students to write freely.

e. The task has rubric that intends to assess higher order thinking skills.

In contrary with the previous principle, this principle are only fulfilled by two tasks. There are only Student A and Student E who provided the tasks with the rubric of thinking skills. As constructing typical assessment task, rubric is needed to score the students' result and as feedback. Since the task was designed to assess student' thinking skills, the rubric that is specifically assessed thinking skills was also needed. In assessing *Analyze* level, for example, focusing on the main idea, the rubric may be the idea, evidence, and explanation.[172] If the task is focused on the creation of students, the creativity may be added in the rubric.[173] The criteria for rubric can be added or removed based on the teachers' need. Further, Student A and Student E

[171] Susan M Brookhart. *How to Assess Higher-order thinking skills in your classroom.* (United States of America: ASCD Publication, 2010), 45
[172] *Ibid*, 45.
[173] *Ibid*, 56.

provided rubric for thinking skills as they assessed the writing skills. Student A put "Struktur teks" and "organisasi dan isi teks" in her rubric for dialog conversation. Then, Student E put "cover, structure, grammar, vocabulary" as rubric for private letter. As analyzed with examples of Brookhart, the criteria that can be assessed thinking skills are "Organisasi dan isi teks" and "Structure" only. The researcher had seen the specification of Student A. "Struktur teks" was focused on how many students did errors in using expression of congratulating others which was not related to idea of students. It was related to the grammar or writing skills. Then, for Student E, she mostly used criteria for writing skills. As it could be seen by the criterion of grammar and vocabulary. Additionally, she also put "cover" as criteria. The purpose of this task was to make students use their imagination in writing a private letter. Student E also might be want to assess the "creativity" of how her students could make the cover of private letter interestingly. However, Susan M. Brookhart said that it is common misconception done by the teacher that is used "creativity" to mean "interesting".[174] Here, Student E wanted to assess how interesting the cover students made.

Further, those criteria (*organisasi dan isi teks* and Structure) could be included as rubric for thinking skills since it dealt with how the student could organize their ideas. However, those students still needed to specify more the specification of those criteria. Brookhart explained that the criteria of rubric used to assess thinking skill and creativity can be thesis clear, content accuracy, organization, and presentation.[175]

Then, the other tasks that did not provide rubric for thinking skills might have their own reason. Student D who had task in the *Analyze* level agreed that she did

[174] Susan M Brookhart. *How to Assess Higher-order thinking skills in your classroom.* (United States of America: ASCD Publication, 2010), 138.
[175] *Ibid*, 140.

not put criteria for thinking skills as the rubric assessment for making outline was because she only focused on how the students could put the right information in the outline. However, in the way how the students could put the information correctly, needed *Organizing*-thinking skills. She further explained that she wanted assess how the students organize ideas in the next learning objectives when the students were asked to make their own recount text. This example also happened to the task of Student F which she did not provide any rubric for her task.

f. The task is in the 4, 5, or 6 level of Bloom's taxonomy.

In this principle, all of four tasks are in the tree upper cognitive domain levels. By having one of tree upper cognitive domain level of Bloom's, the tasks are hoped to promote higher order thinking skills. As discussed before that those three upper levels are higher order thinking level.[176] The student teacher used operational verb in their tasks; make, make an outline and rearrange. The verb "make" indicated *Create* level since it created something, while make an outline and rearrange task here indicated *Analyze* level. The other two tasks were in the lower level of thinking; *Remember* and *Understand*. In fact, there was no student teacher who designed their learning objectives in the *Evaluate* level. In designing learning objectives, the student teachers were freely to decide their own learning objectives. Thus, each cognitive domain level would not always be shown in the learning objectives.

b. Not Facilitate Higher Order Thinking Skills

Based on the chart 4.3, the tasks that cannot facilitate higher order thinking skills are 43%. In total, there are six task items (two tasks) that cannot be considered as higher order thinking. There are five task items in *Remember* level and one task item in *Understand* level. Those task items

[176] Susan M Brookhart. *How to Assess Higher-order thinking skills in your classroom.* (United States of America: ASCD Publication, 2010), 45.

should be in the *Analyze* level since the learning objectives are "*Menganalisis fungsi sosial, struktur teks, dan unsur kebahasaan dari teks undangan resmi, sesuai dengan konteks penggunaannya*" and "*Menganalisis contoh teks recount berdasarkan struktur teks dengan benar*". In fact, the provided tasks by Student C and Student D could not be in line with the learning objectives.

Student C designed open-ended task or essay by providing an invitation card of a wedding party (*See appendix 2*). The task items provided are five items. Four task items asked the students about information in the invitation such as what the invitation is about, where and when the wedding party was held, and who the spouse was. Those task items were not considered as *Analyze* task items since the answers were perfectly seen in the invitation card. Here, the students could find out the answer easily without doing much thinking activity. In the analyze level, the students need to find information implicitly.[177] In those task items, the answer could be seen easily on the invitation card. Here, the students' activity was considered as *Recognizing* or *Identifying* since the students were only recognize the correct information from the invitation. Anderson and Kratwohl gave an example of *Recognizing* in verification task, the students were presented information and needed to choose whether the information is correct or not.[178] It was similar to this task, the difference was in the assessment format only. The students C used essay or open-ended question task, while the example used verification task or true-false format.

The last task item from student C asked the student to imagine "if you are invited to the wedding party of your ex boy/girlfriend" and give their reason of their decision to come or not to the wedding party. This task could be included as creative task by asking them to imagine

[177] Susan M Brookhart. *How to Assess Higher-order thinking skills in your classroom.* (United States of America: ASCD Publication, 2010), 43.
[178] L. W. Anderson, et.al., *A Taxonomy For Learning, Teaching And Assessing.* (New York: Longman, 2001), 69.

something and construct their own answer. However, this still could not be considered as *Analyze* level. This task was included in *Understand* level. As discussed before, that in *Understand* level, there are seven cognitive processes; *Interpreting, Exemplifying, Classifying, Summarizing, Inferring, Comparing,* and *Explaining.*[179] This task wass similar to *Explaining* since the task asked the students to give their reason of presence or absence to the wedding party.

Those task items can be considered as higher order thinking skills in *Analyze* level if the Student C redesign the questions. The Student C could provide two different invitation cards of the same topic, then asked the students to differentiate or find similarity and difference of those two invitations. It is as explained that cognitive processes of *Analyze* are *Differentiating, Organizing* and *Attributing.*[180] Additionally, the students might be asked to organize the jumble invitation card to be a good invitation card. These tasks were more relevant with *Analyze* level since they asked the students to differentiate and organize.

In the other side, the Student C was actually tried to promote higher order thinking skills since the task was open-ended question or essay. The task asked the students to construct responses in one or more sentences. But still, the task was in the lower level of thinking; *Remember* and *Understand* level.

Another task was designed from Student D. It dealt with arranging jumble sentences or information based on B.J Habibie biography (*see appendix 7*). This task actually can be considered as *Organizing* if the jumble sentences or information here is new to the students. Since the jumble sentences here were based on the B.J Habibie text from the previous activity, this task was considered *Remember* level; *Recognizing.* As discussed before that in the *Analyze* level,

[179] L. W. Anderson, et.al., *A Taxonomy For Learning, Teaching And Assessing.* (New York: Longman, 2001), 70-76.
[180] *Ibid*, 79-81.

the students need to find the information implicitly.[181] With the text presented, the students were easily look back to the text when arranging the sentences. Moreover, the biography text about B. J. Habibie was already used in answering comprehension questions. Therefore, if the students only ask to organize the sentences based on the text, it will not lead the students to think more complex; the students will *Remember* only. The researcher gives the same suggestion as in the previous case. This task can facilitate higher order thinking skills if the Student D redesign the task. The Student D may use different biography text and ask the student to differentiate it with previous biography text given.

Dealing with the principles from Brookhart's, it can be concluded that tasks from Student C and Student D (Task 1) can fulfill several principles even the tasks cannot facilitate higher order thinking skills. Then, from six principles here, the tasks from Student C can present resource material, she also can ask the students to construct response and challenge the learners. Further, the other three principles, the task present something new to the learners, the task has rubric for thinking skills and in the upper level of cognitive domain are not fulfilled by her. While Student D (task 1) only can fulfill one of the six principles that is presenting resource material.

For further discussion, as the data found, 81% of twenty student teachers decided their learning objectives in lower level of thinking. This could be a reason why tasks in higher order thinking skills were seldom found. The next reason task in higher order thinking skills was few found because the student teachers did not know what higher thinking skill and Bloom's taxonomy was. This was agreed by six student teachers whom the tasks were analyzed. There were five of six student teachers know what Bloom's taxonomy was and could explain it a little bit with vary definitions. Also, there were only two of six student teachers who knew the term of higher order thinking skills even they had little wrong explanation about it. These facts could be

[181] Susan M Brookhart. *How to Assess Higher-order thinking skills in your classroom.* (United States of America: ASCD Publication, 2010), 43.

used as a conclusion that the student teachers who successfully designed tasks in higher order thinking skills were somehow not aware of the concept of higher order thinking itself. There was Student B who knew Bloom's taxonomy and higher order thinking skills, but unfortunately, could not design her task in line with learning objectives to facilitate higher order thinking skills. This was also happened to Student C who knew Bloom's taxonomy and higher order thinking skills, she could designed task in *Analyze* level as in her learning objectives.

Regarding those facts are that the understanding student teachers about Bloom's taxonomy, thinking skills as well as higher order thinking skills somehow related to how they can design lesson plan. Those understanding would give impact on how they decided learning objectives and assessments. The researcher could say that the student teachers still needed to study more about Bloom's taxonomy and its level since the student teachers still cannot put the thinking process of their tasks in line with the thinking process of learning objectives.

Furthermore, as the six characteristics described, from six students, there was only one student who presented all characteristics (*see appendix 8*). Student A could present the task in line with the learning objective with the characteristics follows. In contrary, in the interview, Student A explained that she did not know about higher order thinking skills. She also explained that she did not understand what Bloom's taxonomy wass; she only knew the term. Here, the finding showed that Student A even did not know about Bloom's and higher order thinking skills, she could design the task in higher order thinking skills by presenting the task with several characteristics described above. In the other words, not only Student A but also all the students need to be more aware about these issues. The student teachers not only need to aware of these issues but also need to know how they apply their understanding in designing the learning objective and tasks.