

CHAPTER V

CONCLUSIONS, LIMITATIONS OF THE STUDY, AND RECOMMENDATIONS

This chapter consists of three sections including conclusions, limitations of the study, and recommendations. In the first sections, conclusions of this study based on findings and discussions are presented. In the second section, limitations of this study are exposed and lastly recommendations addressed to several parties including teacher, policy makers, and further studies in the field of teacher-made assessment are provided.

5.1 Conclusions

Based on the results of data analysis from documents in the form of teacher-made assessments and interviews with the teachers, two points can be concluded. Firstly, principles of higher order thinking skills assessments were identified in teacher-made assessments including the use of stimulus, novelty, being contextual, and thinking-based questions although those are not optimized yet which can be indicated from the way teachers perceive those principles. Secondly, three higher order thinking skills in Bloom's taxonomy were found in teacher-made assessments including analyzing skill, evaluating skill, and creating skill. Among those skills, analyzing seemed to be the most dominant test items realized in the form of multiple choices. However, the highest level of higher order thinking skills, creating skills, was rarely identified in the assessments. Conclusion of each point will be elaborated as follow.

Dealing with higher order thinking skills assessment principles, firstly, almost of all test items in the teacher-made assessments provide stimulus consisting of information used to be resource materials for students answering the questions. There are three aspects found in the teacher-made assessments effective to promote students' higher order thinking skills namely the use of multiple intelligences, problem-based material, and comprehensive information. However, the teachers did not recognize the benefit of these aspects well, out of three, only multiple

intelligences through the use of multiple modes used by the teachers as determinant of materials selection for the stimulus.

Secondly, regarding the novelty in their assessments, both teachers claimed that they did not use familiar questions in their assessment meaning that the questions were possible to avoid students from recalling information from their memory. They agreed that the principle of being novel in higher order thinking skills assessment was an effort to provide renewed materials that students never worked with previously. Aside being novel, higher order thinking skills tasks also should be contextual which can be done by the teachers through integrating local culture and current social issues in the test materials. The teachers' approach to this principle is influenced by the students' background in order to provide contextual materials related to students' real life in the assessments since the aim of providing contextual material is to embrace students' prior knowledge and experience in their real life in the process of thinking.

At the last, the use of thinking-based questions were also acknowledged in the teachers-made assessment. The numbers of the questions cover less than a half of the total items in their assessment (30%-40%). However, the number of higher order thinking questions in the teacher-made assessments has achieved the standard portion of higher order thinking questions as instructed by the government (20%). Under this notion, the findings confirmed that higher order thinking questions could be obtained through tasks requiring students to associate information and apply cognitive reasons. To design such questions, teachers applied several strategies including manipulating distractors to be plausible enough and providing cases or problems in the stimulus that students can work with. Besides that, factors contributes to the different numbers of higher order thinking skills questions in both teachers participant are recognized either from teacher internal factor- teachers' belief about higher order thinking assessments and students' achievement and teacher external factor-school regulation about implementation of higher order thinking assessments and the teacher development program in their school.

On the other side, regarding the extent to which test items in the teacher-made assessments meet the characteristics of higher order thinking skills questions, the findings reveal that three higher order thinking skills questions namely

analyzing, evaluating, and creating skill were applied by the teachers in their assessments. Among those skills, analyzing skill was dominantly identified in the teacher-made assessments mostly in the form of multiple choices and few numbers were in the form of constructed question such as essay and short answer question. Mostly analyzing skill was manifested in the questions asking about finding main ideas of texts, providing reasons for certain statements, and making inferences from texts. Meanwhile, evaluating skill and creating skill questions were also recognized in the teacher-made assessments but in a small portion in the form of essay and multiple choices. Evaluating skill questions were applied by the teachers through questions requiring students to judge values of something such as actions, objects, or feelings of the characters in narrative text. On the other hand, creating skill was rarely found in the document because the teachers were confused with the assumption that creating skill task should be followed up by a product in the form of written text. Nevertheless, several creating skill questions were identified through tasks asking them to make a prediction based on certain contexts and clues in the stimulus. Under this section, the findings also highlight that the forms of higher order thinking questions were not limited to explanation questions such as essay and short answers, yet multiple choice questions are still applicable to foster students' higher order thinking skills. In fact, the multiple choice questions are still able to allow students to carefully determine the information appropriately with the contexts, relate it with their prior knowledge or experience, and reinforce them to make a decision as their final result of thinking.

5.2 Limitations of the Study

In this study, it has been acknowledged that there are several limitations noticed due to several factors. Firstly, this study only involved two English teachers that are classified as eligible to be participants of the study since several criteria related to their experience about higher order thinking skills implementation necessary belong to the teachers. Therefore, the findings of the study cannot be generalized as the portrayal representing English teachers in larger context.

Secondly, in this study the teacher-made assessments being discussed is limited to summative assessments and written assessment which are used by the

teachers at the end of learning process. This kind of assessment mostly measures students' ability within a short period of time that hinders to track their thinking process in a more progressive way during teaching and learning process. Besides, in this study almost all of teacher-made assessments are found in the form of multiple choice-testing that encourage students to choose pre-determined options rather than to construct an answer or produce a product. Considering this situation, models of higher order thinking questions and tasks revealed from this study are inadequate whereas there are numerous assessment types that are more eligible and effective to assess students' higher order thinking skills such as through constructed tasks and performance tasks.

Thirdly, due to limited access to the teachers, this study did not include observation in collecting the data of how the teachers constructed the test items in their assessments. The ways the teachers constructed the test items were only identified by document analysis and interview. Hence, it was limited to capture a comprehensive process of the test construction conducted by the teachers.

1.1 Recommendations

Considering the conclusions and limitations of this study, there were several recommendations suggested to different parties including teachers, policy makers, and further studies. Firstly, this case study as a retrospective case study suggests follow-up done by teachers and schools to conduct partnership with universities or other institutions that have more competent experts in higher order thinking skills. The partnership program can be realized in the form of In-House Training, Focus Group Discussions, and Workshops. This follow-up program is necessary in order to improve teachers' understanding about principles of higher order thinking assessments so that they were able to integrate higher order thinking skills in any type of assessments not only multiple choices.

Such programs also benefit teachers to improve the degree of complexity in higher order thinking questions applied in their assessments not only in analyzing skill but also creating skill as the highest level of higher order thinking skills. To do this, teachers may concern on the process of constructing distractors and case-based stimulus so that students' higher order thinking skills can be excessively stimulated. Secondly, regarding the use of multiple choice in higher order thinking assessment,

the teacher may expand the questions with another version of multiple choice which provide a space for students to deliver their reasons for their choices. By doing so, the teachers may unveil students' assumptions behind their choices showing their ability to process the information and to perform thinking skills more accurately.

For further studies, since this study only involved several English teachers in one selected city in Indonesia, involving more participants in a larger scope would be worthwhile to conduct so that a portrayal about Indonesian teachers' competency in constructing higher order thinking assessments can be obtained. In addition, this study has been a case in which school accessibility (rural and urban area) and teachers' background contributed to teachers' competence in designing higher order thinking questions in their assessments. Thus, it is suggested that further studies consider other aspects behind teachers' competence in designing higher order thinking assessments. Besides that, regarding difficulties faced by the teachers in process of higher order thinking questions, deeper studies focusing on how to overcome the difficulties will be beneficial in order to improve the teachers' ability in constructing higher order thinking assessment.

Meanwhile for the government as the policy maker in education, it would be beneficial to conduct more teacher development programs such as trainings or workshops to improve teachers' understanding and ability in designing higher order thinking test constructions. To conduct this, the government also should give more attentions toward either rural or urban schools accessibility to socialization of the new content in the Curriculum so that all teachers are facilitated to get better understanding in implementing it in practice. In fact, providing a guideline or book does not enough to equip teachers' ability in designing higher order thinking skills assessments, yet it needs instructors to explain about the principles and guide them how to apply it in the assessments. It is due to the findings recognizing that the teachers' readiness to construct higher order thinking assessments were still limited. Furthermore, designing a model of higher order thinking assessments in various forms for English subject is also recommended to do since so far in the guidance book, the examples of higher order thinking questions are mostly in the form of multiple choice and simple essay.