

## DESIGNING ENGLISH LEARNING WORKSHEETS FOR READING AND WRITING SKILLS QUALIFYING ON HOTS FOR THE TENTH GRADE STUDENTS

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**Abstract:** *The aims of this study are to find out the learning needs of the tenth grade students and to develop effective English learning worksheets for reading and writing skills qualifying on higher order thinking skills (HOTS) for the tenth grade students. This research and development (R&D) adopted the model research proposed by Dick, Carey, & Carey (2009) and Branch (2009). This study was conducted at SMA Negeri 1 Pakem, Sleman. The effectiveness of the product was obtained through students' English pretest and posttest score. There was the experiment class (XMIA1) and control class (XMIA2) group design. The mean score for pretest of the experimental class was 47.44, while the control class was 43.91. After learning using HOTS worksheets in the experimental class the mean obtain in the posttest was 90.56, while in the control class was 50.31. The improvement of learning outcomes from the mean of N -Gain in experimental class was 0.81 in high category and the control class was 0.10 in low category. In the control class and experiment class had different learning result significantly. The result of the students' agreements toward the product is within the data interval  $\bar{X} \geq 3.28$  in good category. It can be concluded that the product are fairly effective so be applied in English teaching and learning processes.*

**Keywords:** *Needs analysis, higher order thinking skills, designing English learning worksheet*

### INTRODUCTION

The discussion about the relationship between thinking and language has been discussed by some theorists, psychologists, and even linguists for a long time (e.g. Bowerman & Lavinson 2001; Chomsky 1975; Vygotsky 1978; Whorf 1956). The function of language is to provide means to express thought. The language

development is in compliance with cognitive development. As Moore & Stanley state (2010, p. 15) that children start talking at 18 month-old and as their ability to communicate strengthen, they need to figure out how to map their ideas, knowledge and employ all their thinking ability. It means that cognitive or thinking skill is one the most important elements in language acquisition process.

Since language and thinking are closely interrelated, it also becomes important for the teachers to develop students' linguistic ability as well as thinking skill while teaching the target language in the classroom. Although it is true that the students could think spontaneously without being taught, it is not mean that they thought critically and creatively. As Nagappan (2001, p. 3) states that adults who were not thought to think critically and creatively exhibit cognitive ability that are no more advance than their thinking processes they used when they were at sixth grade. Therefore, the students thinking skills have to be developed because the abilities to think critically and creatively do not develop automatically. In teaching and learning English as foreign language, the teachers expect the students to improve their English proficiency started by recognizing certain words and grammatical rules, classifying some grammatical error, applying the grammatical rules in context, comparing and contrasting the target language with their own experience, judging the point of view of the author's writing, and creating their own opinion. It means the teachers

already used cognitive skills in teaching the target language.

However, in learning the target language, it is inadequate if the students just memorize the words, recall the information they have stored in their brain, but it's more than these that they need to think creatively and critically when using the target language in order to achieve high proficiency. Masduqi (2011, p. 186) states that if critical thinking is used restrictively the students in Indonesia will get ineffective way in changing ideas especially in writing activities. When the students involved in reading activity, they are expected to comprehend what they have read and learned, however, to be a critical reader the students not only have to comprehend but also they need to be able to analyze the purpose of the writing, evaluate the point of view of the author and then form their own opinions about the pieces of writing. Therefore, developing thinking skills as specially at higher level thinking may promote higher level of language proficiency and it has become a great interest among the researchers and educators and some research has widely provided evidence for this (e.g.

Nagappan, 2001, Yoshida, 2010, Shirkhani & Fahim, 2011, etc).

To help the students to develop their higher order thinking skills in order to promote their higher level of English proficiency, there are some factors to be considered such as the students themselves, the teachers, the materials, strategies and activities being used in teaching and learning processes.

#### **THEORETICAL FRAMEWORK**

Based on the observation, both the students and teachers only give little attention to cognitive skills in learning the target language. The students were not taught at higher level thinking especially the students at grade ten. They only learn the target language by using the materials that restrictively encourage them to think critically and creatively since the teachers do not delegate more time to develop English learning materials that provide higher order thinking skills. Whereas, to be proficient in thinking the students directly exposed to the type of these thinking and only through practicing and the intentional teaching of critical thinking, the teachers can enhance the level of the students' thinking ability (Moore &

Stanley, 2010, p. 13). Hence, the English teachers should understand the type of thinking skills especially at higher level and be confident how to teach their students at these levels of thinking.

Using taxonomy Bloom we can see that higher order thinking skills (*HOTS*) are at the top end triangle of blooms' taxonomy, they are *analyzing, evaluating and creating* levels. While at the bottom of the triangle, they are *remembering, understanding, and applying* levels which are known as the lower order thinking skills (*LOTS*). They are considered higher level thinking because they involve extraneous thinking, or doing something other than just working with knowledge as it was taught, in other words, moving beyond basic knowing, understanding and applying (Moore and Stanley, 2010, p. 32).

Brookhart (2010, p. 3) also defines that higher order thinking skills (*HOTS*) is divided into three categories: (1) Higher order thinking as transfer. "Being able to think" in the term of transfer means students can apply the knowledge and skill they developed during their learning to new contexts. "New" here means

applications that the students have not taught before and not necessarily something universally new. Students are expected to be able to relate their learning to other elements beyond those they were taught to associate with it. (2) Higher order thinking as critical thinking. Critical thinking is reasonable, reflective thinking that is focused on deciding what to believe or do (Norris and Ennis, via Bookhart, 2010, p. 4). In this case being able to think means students can apply wise judgment or produce a reasoned critique, reflect and make sound decision. (3) Higher order thinking as problem solving means students are expected to be able to identify and solve problems in their academic work and life. This includes solving problems that are set for them (the kind of problem solving we usually think of in school) and solving new problems that they define themselves, creating something new as solution or work creatively.

To help the students to develop their thinking ability, the materials being presented in the classroom should deal with high quality thinking with written and spoken materials. As Shirkhani & Fahim (2011, p. 1092)

state that the type of the materials in the foreign language classroom has a significant effect on the way of learning and trying to learn. Although there are a lot of English learning materials for senior high school students provided by private publisher such as textbook, module, worksheets, etc., those are not all of the students can afford to purchase it since the price is quite expensive and the presented materials do not promote all of the activities and exercises that encourage students to think at higher order thinking skills. The book provided by the government which can access easily is insufficient and effective enough if some of the teachers rely heavily on one textbook only in teaching and learning English in the classroom and usually they just prefer to follow the ordered chapters in the textbook without adapting and adopting which materials are suitable to increase students' proficiency in English and promote their higher order thinking skills. Moreover, the materials practically do not present adequate exercises and activities in which engage the students to analyze the ideas, make wise decision, solve the problem or produce something.

Without providing English learning materials that promote students' critical and creative thinking, it becomes not feasible to develop their higher level thinking skills in order to achieve high proficiency in English. Considering this fact, this study is conducted to assist the teacher and the students by designing English learning materials in the form of worksheets using higher order thinking skills for senior high school students especially for the tenth grade students. The worksheets use as supplementary and complementary materials both for the teachers and students in teaching and learning processes in the classroom.

## **RESEARCH METHOD**

### *Research Design*

This study is classified into educational research and development (R & D) category which proposed the procedure of development by by Dick, Carey, & Carey (2009) and Branch (2009). Since the aim of this research was to design a new product of English materials for reading and writing skills in the form of worksheets qualifying on higher order thinking skills.

### *Setting of the Research*

This study was conducted at SMA Negeri 1 Pakem, Sleman, Yogyakarta. The school is located at Jalan Kaliurang Km 17,5, Pakembinangun, Pakem, Sleman, Yogyakarta. It was begun on 4<sup>th</sup> January 2015 to 6<sup>th</sup> June 2015.

### *Subjects of the research*

There are five classes of the tenth grade which are divided into three science classes they are XMIA1, XMIA2, XMIA3, and two social classes they are XIIS1, XIIS2. The subjects of the needs analysis involved the students with the total of the number of 100 students from five classes as the representative. While in implementing the product there were XMIA 1 as the experiment class and XMIA 2 as the control group with the number of 70 students in which each class has 35 students. The reason underlying the decision in choosing the subjects of the product implementation were the students in this school have the same level of English mastery and the same characteristics.

### *Procedure of the Study*

This study was adapted from Dick, Carey, & Carey (2009, pp. 6-8)

and Branch (2009). There were six steps in designing the worksheets; they are analyzing, designing, developing, implementing, evaluating, and revising and writing the final draft.

The first step of this study was conducting the needs analysis. This step was aimed to obtain the information about the students' learning needs about English learning. The needs analysis was conducted by observation, questionnaire and interview. The observation was conducted during English teaching and learning process in the classroom in order to see the students' characteristics and attitude toward English learning. The interview with English teachers was aimed to identify their opinions about the students' wants, lack, and necessities and their interest related to the materials, activities, and exercises.

The second step was designing the syllabus and its design was also based on core competence and standard competence of Curriculum 2013. Then, it was used as the framework and guidelines in designing the worksheets.

The third step was developing the worksheets in which the syllabus

was used as the guideline which also encompassed adopting and adapting the available materials. The content of exercises, activities, and questions in the worksheets were related to all of the level of higher order thinking skills (analyze, evaluate, and create). Having finished developed the first draft, the product then evaluated or validated by content and graphical design expert in order to get their suggestion, feedback and comment as the improvement of the product.

The fourth step was product implementation. The product implementation was divided into some stage: 1) the first stage was conducted pre-test which is aimed to see the students prior knowledge before the product being tried out, 2) the second was the tried out of the product, 3) the third was conducted the post-test to see the effectiveness of the worksheet whether after product being tried out it affected both the students' English competence and thinking ability.

**Table 1. Pretest-Posttest Design**

Groups	Pretest	Treatment	Posttest
<b>Experiment Class</b>	O <sub>1</sub>	X <sub>1</sub>	O <sub>2</sub>
<b>Control Class</b>	O <sub>1</sub>	X <sub>2</sub>	O <sub>2</sub>

Moreover, interviewing the students and contributing the questionnaire also conducted in order to see the students' response toward the product implementation whether the product are effective and appropriate enough to support their English learning process in the classroom. The result of the questionnaire was used to revise the worksheets.

After all of the implementation stage had been conducted, the result of the tried out were then analyzed and employed for the future revision of the product. Revising and writing the final draft were the last step in this study.

#### *Techniques and Data Collection Instruments*

The techniques to collect the data in this research and development used test and non-test. The type of test items was a multiple choice test items. The non-test included the set of questionnaire, observation, and interview.

There were four instruments used to collect the data, they were test, questionnaire, observation, and interview.

To know the students' achievement and the effectiveness of

the product, there were two types of test items used in this study. The first test item was the pretest which was aimed to get the information about the students' current English mastery. The second test was the posttest which was aimed to know the students' achievement after giving the treatment using higher order thinking worksheets. The type of test item was multiple test items.

The set of questionnaires was distributed in different times, they were: (1) the questionnaire to collect the students' needs which is called the needs analysis questionnaire, (2) the questionnaire to evaluate the product which was given to the expert judgment, (3) the questionnaire to know the students' responses toward the worksheets were distributed after the implementation of the product.

The observation was conducted to obtain some information such as the characteristic of the students, the materials and activities used during English teaching and learning process in the classroom and to identify and analyze what the students' needs, lacks and wants. The result of the observation in the classroom was noted and recorded.

Interview guideline was also used in this research to obtain more specific information. Semi-structure was used by the researcher in interviewing both English teacher and the students and it also aimed gain the data about the effectiveness of all the tasks (exercises, activities, instructions) in the unit worksheet designs.

*Techniques of Data Analysis*

There were two types of data collected in this study. They were qualitative and quantitative data. The quantitative data were qualitatively analyzed and the qualitative data were qualitatively analyzed. In analyzing the qualitative data, the researcher noted the observation result and recorded the interview result with English teachers and students then transcribed the results.

The quantitative data that gathered from the set of questionnaire was analyzed using descriptive statistics. Scaling technique or *Likert Scale* used to analyze and find the expert judgment, the try out questionnaire or the agreement toward the effectiveness of the worksheets using higher order thinking skills. The four-point score scale used to find out

the how the expert judgment and the students response toward the effectiveness of the worksheets design. The scoring for the four –point scales was: 1 for strongly disagree, 2 for agree, 3 for fairly agree, 4 for disagree. The data then were analyzed by measuring the central tendency. In order to make the data easier to read, those data were converted into the interval of mean values which is proposed by Suharto (2006, pp. 52-53) as follows.

$$R = \frac{Xh - Xl}{4}$$

- R = range
- Xh = highest score
- Xl = lowest score
- 4 = Likert scale (the amount)

Based on the data obtained from this research, the highest score was 4 and the lowest score was 1. The calculation is as follows:

$$R = \frac{Xh - Xl}{4}$$

$$R = \frac{4 - 1}{4} = 0,75$$

Therefore, based on the calculation, the class interval is presented below.



**Table 2. Quantitative Data**

**Conversion**

Value	Criteria
$g > 0,7$	High
$0,3 < g \leq 0,7$	Medium
$g \leq 0,3$	Low

Adapted from: Suharto (2006, p. 61)

Moreover, the other quantitative data were pre-test and post-test. Since the 2<sup>nd</sup> try-out involved two classes as the subjects, they were control and experiment group, the result of the pre-test and post-test data were then analyzed by using t-test for two independent sample. T-test is one of the statistics parametric. The type of t-test used in this research was sample test. This analysis was aimed to know whether there is a significant mean score from the experiment class and control class. The *N-Gain* analysis was also used to measure how significant the students' achievement after they had been tried out using the worksheets. To know whether each student obtained lower or upper achievement, Hake (2003, p. 3) divides the criteria of *N-Gain* test result as explained at the following table.

**Table 3. Criteria of N-Gain Score**

Scale	Interval of the mean values	The other form of the interval	Category
1	1.00 – 1.75	1.00 – 1.75	Bad
2	1.76 – 2.51	1.76 – 2.51	Fair
3	2.52 – 3.27	2.52 – 3.27	Good
4	3.28 – 4.00	3.28 – 4.00	Very Good

Since t-test is one of statistics parametric, it needs to pay attention to some requirements. As Sugiono (2015, p. 296) states that the use of statistics parametric works with the assumption that the data being analyzed should has normal distribution. So that, test of normality should be conducted to meet the requirements of statistics parametric. The test of normality was done by using *Kolmogorof-Sminorv* with help of *SPSS Program 20.0 for Windows*. Moreover, test of homogeneity was also needed to find out whether the subject derived from the same population or not. The process of homogeneity test used *Levene statistic* with also help of *SPSS Program 20.0 for Windows*.

After knowing the result of pre-test and post-test and to reveal the

assumption of the study whether the worksheets could promote and improve the students' both their English mastery and thinking ability, the researcher proposed the following hypothesis.

- a.  $H_0$  : The students' English test score of experiment and control classes are NOT significantly different.
- b.  $H_a$  : The students' English test score of experiment and control classes are SIGNIFICANTLY different.
- c.  $H_0 : \mu_1 = \mu_2$   
 $H_0 : \mu_1 \neq \mu_2$
- d. The values of significance : 0.05
- e. The outlying critical district:  
If the significance values or Sig.(2-tailed)  $> 0.05$ , then  $H_0$  are accepted and  $H_a$  are rejected, while if the significance values or Sig.(2-tailed)  $< 0.05$ , then  $H_0$  are rejected and  $H_a$  are accepted.

## RESEARCH FINDING AND DISCUSSION

Findings of the research reveals that the Product Development Result

The needs analysis was conducted in SMA Negeri 1 Pakem, Sleman Yogyakarta by interviewing the English teacher, observing teaching

and learning processes on the classroom and administering needs analysis questionnaire for the tenth grade students.

The first stage of doing the needs analysis, the English teacher was interviewed to identify the ability, characteristics of the students and the materials used in the teaching and learning processes. After interviewing the English teacher, continued by doing an observation of the English teaching and learning processes in the classroom in order to know the students' participation and attitude toward English learning and also to identify the activities being presented by English teacher. Afterward, the needs analysis questionnaire was distributed to the students.

The data of the needs analysis show that most of the students preferred the topics related to the students their daily life (family, school, neighbor, etc), movie, and about teenagers life. They were interested in topics which were related to daily life. It means that the topic being used in worksheets design should be found in their surroundings. The topics about daily life are the topic which is very common and

familiar to the students. As everybody like watching movie, he/she uses it for the topics in daily chatting. That's way movie become their interest as well. In addition, films or movie are extremely popular with students, they are enjoyable (therefore motivating). As Cooker (via Tomlinson, 2008, p. 111) states that the movies allow the students to feel that they are not really involved in serious learning activities.

In the term of the learning input, the students wanted the simple text and text with pictures for reading material with the length of text about  $\pm$  1 page. It implies that the students still have low interest in reading, therefore interesting reading materials are needed to encourage students to read more. Many of the students preferred 5-10 new words should be introduced in every text and the activities they wanted for reading was reading aloud using correct pronunciation.

For the input of writing the students preferred short stories, poem, and legend with the activities they chosen the most for writing was to write about personal experience and based on the pictures.

Related to the teachers' role, they wanted the teacher explain about

the step before accomplishing the task and the students most belong to active learners. The students also agree that the activities being design could encourage them to think critically and creatively.

For the graphic of worksheets design most of the students were agree that the design provides both pictures animation and real pictures.

After obtaining the result of the needs analysis, the data then used to design the syllabus in which it was aimed as the guideline and frameworks in designing the worksheets. The syllabus contained the framework of the learning materials, core competence and basic competence of grade ten to write the first draft of the worksheets.

The first draft of the worksheets was designed by using the syllabus as the guideline. The draft includes of unit title and objectives, *Let's Get Ready* (Lead-in) consists pictures and questions (based on the pictures and the students' experience and knowledge, *Let's Act* (main activities of reading and writing skills), *Reflection* and *Summarize*. When it was completed then it was evaluated by the expert judgment. The feedback,

suggestions, and comments were used to revise obvious mistake and errors as the improvement of worksheets design. After revising and completing the draft, then the worksheets was ready to be implemented in teaching and learning processes in the classroom.

#### *The implementation/Tryout Result*

The implementation of the product divided into three stages. The first stage was the first tryout which called one-to-one evaluation which was done by the English teachers as the target user of the product. The result of the first tryout was categorized into “good category” within interval 2.52 – 3.00 – 3.27. It means the English teachers agreed with the worksheets. However, there were some points that need to be revised. The English teachers commented that there were still lacks of the activities related to the pronunciation; therefore the teachers suggested that it should be added some various and interesting in order to encourage students to pronoun the words correctly. Related to grammar activities, there should be added some activities in order to facilitate students’ comprehension about narrative and

recount text. Moreover, to make the explanation of the generic structure both narrative and recount text clearer, the background of the text should be colored variously. The unit design at least should present the grammar tasks that related to recount text (the simple past tense) and the instructions should be clear and give the model answer of task given.

The result of the first tryout was used to revise the product and then it was continued to the next stage of the implementation, there was the second tryout. Since the main goal of the 2<sup>nd</sup> try-out was to find out the quality and the effectiveness of the product, there were the experiment and the control class group design and it used the pretest-posttest class group control design. This design was used to know the students’ performance before and after giving the treatment using higher order thinking worksheets and whether the worksheets designed already give the significant influence in promoting students’ higher level thinking ability to achieve higher proficiency in English. The brief explanation about the pretest, posttest, and N-Gain score are described as follow.

#### *Pretest*

The pre-test was conducted on 27<sup>th</sup> May 2015. There were 64 students participating in the pre-test which divided into experiment and control class with 32 students for each class. The item questions of pretest consist of ten multiple choice questions and five essay questions.

**Table 4. The Pretest Score**

No.	Class	Score			
		N	Max Score	Min Score	Mean
1.	Experiment	32	60	25	47.44
2.	Control	32	55	35	43.91

Based on the data above, it could be seen that the mean value of the pretest of the experiment class was 47.44 and the control class was 43.91. This result then analyzed using SPSS (*Software Statiticial Package for Social Science*) to test its normality and homogeneity. The data shows that, normality test result of pretest for both the experiment and the control class at significance value 5% (0.05), the value of *Asymp. Sig. (2-tailed)* for the experiment class was  $0.07 > 0.05$  and the value of *Asymp. Sig. (2-tailed)* for the control class was  $0.15 > 0.05$ . It can be concluded that the data of the pretest for two classes already had normal distribution.

However, the result of test of homogeneity which was obtain *Based on trimmed mean* value of *Levene test*, the pretest data both experiment and control class came from inhomogeneous variant since the result was  $0.001 > 0.05$ . After knowing that the pretest data was not homogenous, the decision to test comparative hypothesis was *U Mann-Whitney test* which is aimed to test the significance of the data which have inhomogeneous variant. If the value of *sig. (2-tailed)*  $< 0.05$ , it means the data is significantly different. While, if the value of *sig. (2-tailed)*  $> 0.05$ , it means the data is not significantly different. The result of *U Mann-Whitney test* is explained as follow.

**Table 5. U Mann-Whitney Test Result of Pretest**

Data	Sig. (2-tailed)	Decision	Statement
Pretest	0.265	0.05	Ho accepted Normal

The result of the data above shows that the value of *sig. (2-tailed)* for pretest of experiment and control class was 0.265 with the value 5% (0.05). It can be concluded that either the experiment and control class are not significantly different or both

classes have the same current English proficiency.

Once the treatment using HOTS worksheets in teaching and learning processes was completed, the next stage to be conducted was the posttest.

*Post-test*

The posttest was aimed to see whether the worksheets were effective to promote the students' English mastery after the product being implemented during the teaching and learning process. The participations of the posttest were similar as the pretest. The material being tested in the posttest had similar indicators as pretest test items. The result of posttest both the experiment and the control class are explained below.

**Table 6. The Posttest Score**

No.	Class	Score			Mean
		N	Maximum Score	Minimum Score	
1.	Experi ment	3	100	75	90.56
		2			
2.	Contro l	3	65	25	50.31
		2			

Based on the data above, it could be seen that the mean value of the posttest of the experiment class was 90.56 and the control class was 50.31. This result then analyzed using SPSS (*Software Statiticial Package for Social Science*) to test its normality and homogeneity. Normality test result of posttest for both the experiment and

control class at significance value 5% (0.05) was that the value of *Asymp. Sig. (2-tailed)* for the experiment class was  $0.86 > 0.05$  and the value of *Asymp. Sig. (2-tailed)* for the control class was  $0.40 > 0.05$ . It can be concluded that the data of the posttest for two classes already had normal distribution.

Based on the result of test of homogeneity which was obtain *Based on trimmed mean* value of *Levene test*, the posttest data both experiment and control class came from homogenous variant. It could be seen from the result that  $0.144 > 0.05$ . After the posttest data was known that it had normal distribution and homogeneous, it could be determined to conduct T-test Independent Samples. This test was used to find out whether the posttest data of experiment and control class were significantly different or not. The result of T-test are as follow.

**Table 7. Independent Sample T-test Result of Posttest**

Data	Sig.(2-tailed)	Decision	State ment
Post test	0.000	0.05	Ha accepted
			Significantly different

Based on the presented table, it was proven that the *p* value or its

significant was smaller than  $(0.000 < 0.05)$  therefore  $H_0$  was rejected and  $H_a$  was accepted. It means that there were significantly different between the experiment's English test score and the control's English test score. It proved that the implementation of English learning worksheet qualifying on higher order thinking skills could promote the students' English mastery and help the students in gaining higher English test score.

*N-Gain*

After analyzing the pretest and the posttest data, the next analysis was to determine how extant the students' achievement before and after giving the treatment by using *N-gain* analysis. The result of *N-gain* analysis is described below.

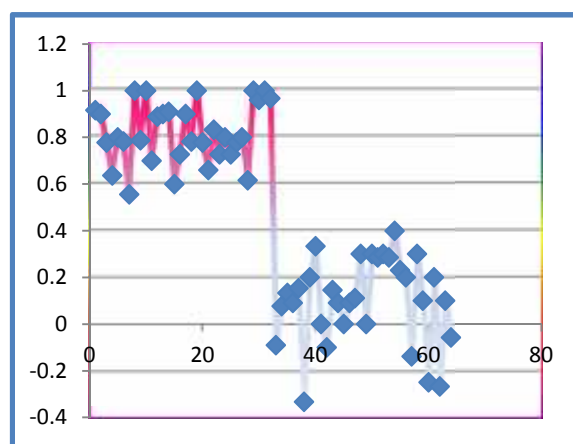
**Table 8. The Result of *N-Gain***

No.	Class	Score			
		N	Maximum Score	Minimum Score	Mean
1.	Experiment	32	1	0.5	0.81
2.	Control	32	0.3	-0.3	0.10

Based on the data above, it can be seen that the minimum and maximum scores and *N-Gain* average score of the experiment class was higher than the control class in which the minimum score of experiment class was 0.5 and the control class was

-0.3 while the maximum score experiment class was 1 and the control class was 0.3. The average score of experiment class was higher than control class 0.81 and 0.10. The result of *N-Gain* analysis also can be read at the following line diagram.

**Figure 1. Diagram of *N-Gain***



**Figure 2. Diagram of *N-Gain***

Experiment Class's *N gain*  
Control Class's *N gain*

The diagram above shows that the score of the experiment class were at the upper line while the score of the control class were at the lower line. It indicated that the achievement of each student in the experiment class after giving the tryout using higher order thinking worksheets during English learning process has increased dramatically than the score of the control class which only used general worksheets or learning materials in the classroom. It had been proven that the

maximum scores of the experiment class were 1 which was belong to “high gain” category ( $1 > 0.7$ ) and the minimum score was 0.5 belongs to “medium gain” category ( $0.3 < 0.5 < 0.7$ ) which both interpretation proposed by Hake (2002:3). While the minimum score of control class was -0.3 which belongs to “low gain” category ( $-0.3 < 0.3$ ) and the maximum score was 0.3 belongs to “medium gain” category. It means that the achievement of the control class had not increased.

#### *Final Product*

The worksheets design qualifying on higher order thinking skills had developed based on the standards of the research and development proposed by some theorists in order to have a better quality in designing English materials for the tenth grade students. The product was expected to be able to promote students’ English proficiency through the activities related to higher level thinking skills. Since language and thinking has close relationship, the product was also expected to make the students think effectively in solving the problems during the processes of learning and in their real life.

Moreover, the product had its own function in which could be used by the teachers to teach English in the classroom and help them to improve students’ achievement in learning English and train the students to think critically and creatively.

Since five steps of product development had been conducted. The final steps product design was writing the final product. The final product was written considering on the result of the implementation product at the 2<sup>nd</sup> tryout, and from both students’ and teachers’ responses toward the product.

The final product of worksheets design qualifying on HOTS for the tenth grade students consisted of eight components; (1) usage worksheets instructions both for the students and the teachers, (2) assessments rubric for reading and writing skills, (3) unit title and learning objectives, (4) lead-in or warming up that contains LOTS activities as the beginning exercises of the worksheets, (5) main activities (reading and writing skills), (6) reflection, (7) summary, (8) model of answer key.

There were two units had been designed which contain two topics of



learning. Unit 1 entitled “A Time in a Life” as one of the topics in the first unit that discussed about recount text in the form of personal experience, diary entry, biography, and recount newspaper report. This unit includes five components design of the worksheets there were unit title and learning objectives, lead-in or warming up that contains LOTS activities as the beginning exercises of the worksheets, main activities (reading and writing skills), reflection, and summary. There were 22 tasks had been developed in Unit 1 in which all activities and questions used in the worksheets might encourage students to read and write and enhance their thinking ability especially higher order thinking skills.

Unit 2 entitled “Long Time Ago” which consists discusses about narrative text such as folktales, legend, fairy tales, and fables. This unit also includes five components design of the worksheets as mentioned in Unit 1. There were 18 tasks had been developed in Unit 2 for reading and writing skills in which all the activities and questions enable students to think at higher level thinking such as *analyzing*, *evaluating*, and *creating*.

For example, the students were expected to be able to conclude the story events in *analyzing level*, able to evaluate the moral values while in *evaluating level*, able to map the story events and create their own fairy tales story based on their imagination and creativity in *creating level*.

The learning activities engage the students to work individually, in pairs, and collaboratively both for reading and writing activities. Related to the graphic of the worksheets design, each unit of the worksheets contains attractive pictures and more colorful design for every task both in Unit 1 and Unit 2. Finally, the worksheets were designed to assist English teachers in teaching English at higher level thinking skills and improve students thinking ability in order to achieve high proficiency in English learning.

## **CONCLUSION**

**AND**

## **SUGGESTION**

### *Conclusion*

In teaching and learning English using the worksheets that qualifying on higher order thinking skills for reading and writing skills, the students preferred the topic that related to their daily life (family, school and neighbor,

etc) movie and teenagers' life. This result then used to design the product in which all the questions and activities for reading and writing skill qualify on higher order thinking skills.

The students agreed with the English learning worksheet qualifying on higher order thinking skills that might promote their thinking ability to enhance higher proficiency in English since the activities are various and give them more challenge in accomplishing the task.

The product has proven to be effective since it significantly increased the students' English test score after learning using it and the students' posttest score in the experiment class has revealed that the score was higher than the control class. The result of *N-gain* also showed that the students in the experiment class who learned using the worksheets was belong to "high gain" category since their maximum score was higher than the students in the control class.

#### *Suggestions*

Findings of this research have some implications in terms of practice, understanding, theories, and even policy as follows.

#### *For the English Teachers*

This product give some advantageous for the teachers, such as they may use the worksheets to teach the students both to promote their higher level English proficiency and their thinking ability. At the first page of the products there was an instruction to use the worksheet and explanation about Bloom's taxonomy in order to make those who do not understand the differences between lower and higher order thinking skills can comprehend it easily. This product also may such of an insight for the teachers to develop and design English learning worksheets using higher order thinking skills for their students.

#### *For students*

The worksheet qualifying on higher order thinking skills may expand the students' learning experience and make learning English more meaningful for them. The students could be exposed directly to some activities in which encourage them to think critically and creatively while accomplishing the tasks given.

#### *For schools*

This product gives contributions for the schools for better teaching and learning English. Some schools which

have some programs such as English debate class; daily drama competition can utilize this worksheet as the exercise in breaking information into some parts.

#### *For Policy makers*

This product becomes a review for the policy maker in developing the worksheets that concerned to the thinking skills. The government should have a concern on designing the worksheets using higher order thinking skills to promote both the students higher level English proficiency and their higher level thinking ability.

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