THE ANALYSIS OF COGNITIVE DOMAIN IN READING EXERCISES TEXTBOOK FOR GRADE XI SENIOR HIGH SCHOOL

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ABSTRACT

This study aims to find out kinds of cognitive domain based on Revised Bloom's Taxonomy in reading exercises textbook for grade XI Senior High School and found the distribution of the lower and higher order thinking skill in reading exercises. This study was conducted by using descriptive qualitative method. The data of this research were the reading exercises in the *Pathway to English* textbook for grade XI Senior High School with 2013 Curriculm published by Erlangga in 2017. After analyzed the data, the result of the study was the reading exercises in the textbook covered all of the cognitive domains, they were remembering level was 37,1 %, understanding level was 50 %, applying level was 3,37 %, analyzing level was 1,35 % , evaluating level was 4 %, and creating level was 4%. It was concluded that there was inequality number in the distribution of high and low thinking skill in reading exercises in the *Pathway to English* textbook for grade XI Senior High School and it cannot improve student's critical thinking.

Keywords: *Cognitive domain, Reading exercises, Revised Bloom's Taxonomy*

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INTRODUCTION

The Background of the Study

One component that is needed in order to reach the goal of teaching and learning is materials. Teaching and learning material can be presented in form of textbooks, workbooks, and hand-outs. The teaching material, which is presented in those form, usually contain material combination from some different sources but supporting each other in a unit. Ur (2009:184) claims that a textbook provides a clear framework; teacher and learners know where they are going and what is coming next, so that there is a sense of structure and progress

English teachers have to be selective to find the proper textbooks in order to develop students's competance or skill, particularly in teaching reading. Reading is one of the skill that should be learned well by the students because by having reading skill they will be easy to get information, knowledge, and science. Especially reading comprehension that is one of the basic purpose for reading. Grabe and Stoller (2002: 17) state that reading comprehension is the ability to understand information in a text and interpret it appropriately. Reading comprehension requires very rapid and automatic processing of words, appropriate skills in forming a general meaning, and representation of main ideas. The National Reading Panel (2000) defined comprehension as the intentional thinking during which meaning is constructed between the reader and text. This implies that the reader interacts with the text content, using his or her vocabulary, background knowledge, skills, motivation to read that text, knowledge of text structure, and strategies to construct meaning. As the purpose of reading is to

comprehend the notions in the materials, it means, that without comprehension reading is useless and meaningless.

From *Pathway to English* textbook page 147, which the title of the text is "Floods" and the reading exercises are as follow :

1) What is flooding?
2) When can flooding happen?
3) How deep and fast can flooding happen?
4) What are flash floods? .
5) According to the text, why are flash floods the most dangerous kind of floods?
6) What is the main cause of flash floods?
7) Which places are at high risk of flash floods?
8) What is the purpose of writing the text?
9) How do flash floods occur?
10) Why do flash floods possibly give little or no warning?
11) Why are densely populated areas at high risk of flash floods?
12) Why does the writer inform us about death traps?
13) Read the following extracts from the text and find the meanings of the underlined words.
a) ... they combine the destructive power of a flood…. (Paragraph 2)
_____
b) ... excessive water fills normally dry creeks or river beds…. (Paragraph 2)
_____
c) ... highways, driveways, and parking lots increases runoff…. (Paragraph 3)
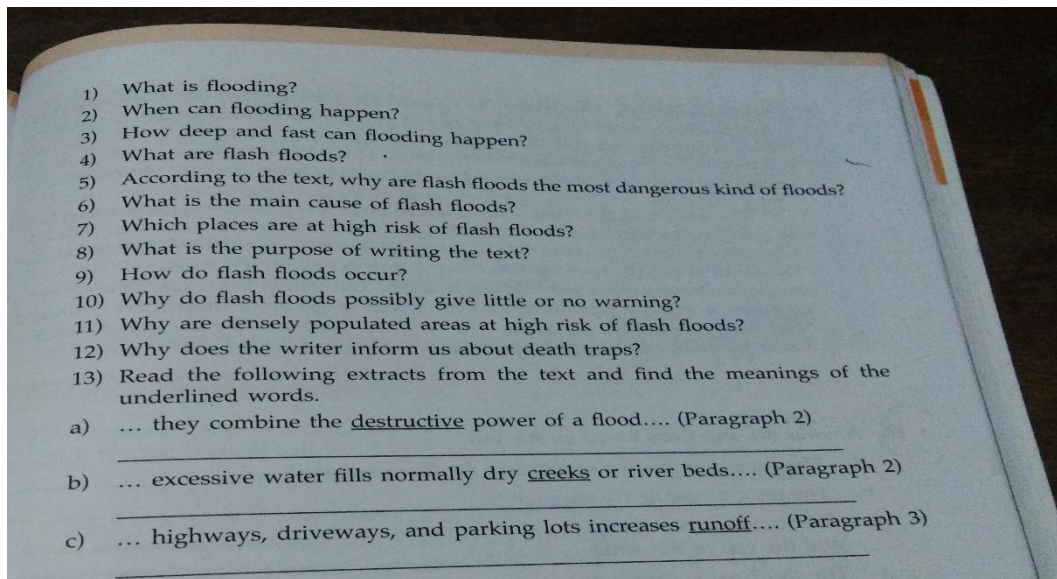_____

Figure 1.1 reading exercises from Pathway to English textbook page 147

From the reading exercises above question number 1 until number 10 do not indicate to higher order thinking. It was found that those questions from reading exercises above indicate low order thinking. Thus, it makes the students feel bored because the question in reading exercises is too easy to answer. The teacher also said that reading exercises in this textbook do not stimulate the students's critical thinking. It means that the students need reading exercises which is attract to think more to answer the question. So, it can improve their reading comprehension skill.

Thus, it is important to analysis about the reading exercises that student or teacher used, such as the different level of instruction, the content compatibility,

or language feasibility. Ur (2009:186) highlights that is important to check the existence of the exercises in the textbook because one of the characteristics of a good textbook is practicing the four basic language skills properly. Teacher should know the reading exercises having written accurately to their social function. And one aspect that should be analyzed in the reading exercises is compatibility of the student's development level in cognitive domain of Revised Bloom's Taxonomy.

REVIEW OF LITERATURE

Revised Bloom's Taxonomy

In 1990's, Bloom's Taxonomy had been revised by Lorin Anderson, one of the Bloom's student. The result of the revised was published at 2001 by the name of Revised Bloom's Taxonomy. The revised taxonomy improves the original by adding a two dimensional framework. The two dimensions are Cognitive Process Dimension and knowledge Dimension.

Cognitive Dimension is much like the original Bloom's Taxonomy. It includes *remembering, understanding, applying, analyzing, evaluating, and creating*. The terminology used in Cognitive Dimesion of Revised Bloom's Taxonomy had been changed into verb from noun. The used of verb in the terminology seems more suitable because it shows the thinking process which is the active process rather than the use of noun. The term *"knowledge"* had been revised into *"remember"* because the *"knowledge"* shows the product of thnking rather than the tinking process. The use terminology *"synthesis"* and *"evaluation"* had also been changed into into *"evaluate"* and *"create"*. This is in

deference to the popularly increasing complexity, then creative thinking (i.e. creating level of the revised taxonomy) is a more complex form of thinking than critical thinking (i.e. evaluating level of the new taxonomy). These changes are also more appropriate becauase they reflect better sequence of thinking classification.
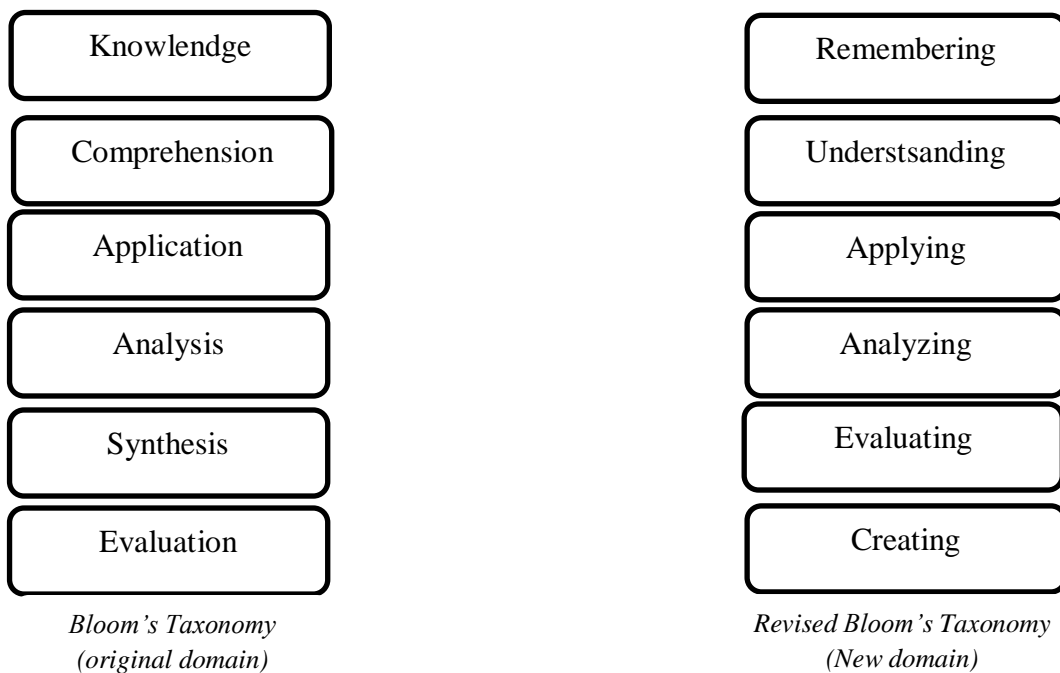
Bloom's Taxonomy (original domain)	Revised Bloom's Taxonomy (New domain)
Knowlendge	Remembering
Comprehension	Understsanding
Application	Applying
Analysis	Analyzing
Synthesis	Evaluating
Evaluation	Creating

Figure 2.2 The Differences of Bloom's Taxonomy and Revised Bloom's

Taxonomy

According to Anderson and Krathwohl (2001: 67-68), the cognitive processes of the Revised Bloom's Taxonomy (RBT) are ordered from simple remembering to higher-order critical and creative thinking processes:

- Remembering: retrieve relevant knowledge from long-term memory.

- Understanding: construct meaning from instructional messages, including oral, written, and graphic communication long-term memory.

- Applying: carry out or use a procedure in a given situation.

- Analyzing: Break materials into parts and determine how the parts relate.

- Evaluating: Make judgments based on criteria and standards.

- Creating: Put elements together to form a coherent or functional whole.

RESEARCH METHOD

The Design

This study conducted by applying descriptive qualitative research design. The data of this study carried out by document or content analysis. In this study, the reading exercises deals with textbook entitled Pathway to English published by Erlangga. The reading exercises will be collected from the textbook and then the researcher employs a very simple statistical calculation to determine the distribution of each level of Revised Bloom's taxonomy.

The Source of Data

The source of the data is the reading exercises in Pathway to English textbook for Senior High School grade eleventh with 2013 Curriculum (K13) published by Erlangga.

The Instrument

The researcher used observation method in this study. The instrument of observation was checklist. The observation checklist contained six components of cognitive domain of Revised Bloom's Taxonomy. The researcher marked (√) in the columns of the checklist if the reading exercise was using the component of cognitive process of Revised Bloom's Taxonomy.

Techniques of Collecting Data

The data in this research collected by the following steps :

1. Reading the texts and their exercises in the textbook.

2. Identifying the reading texts and their exercises in the textbook.

3. Coding the reading texts and their exercises in the textbook to make it easy to copy.

4. Copying the reading texts and their exercises from the textbook to make it easy to analyze.

Technique of Analizing Data

After collecting all the data from the English textbook, the data analyzed by the following steps based on Gass et.al. (2008:103) :

1. Identifying the whole reading exercises from the English textbook for grade eleventh.

2. Classifying the reading exercises into six levels of revised Bloom's Taxonomy: (1) Remembering, (2) Understanding, (3) Applying, (4) Analyzing, (5) Evaluating, and (6) Creating by making a cheklist table consist of 4 columns; number, questions, lever of Revised Bloom's Taxonomy, and the percentage of each cognitive level.

3. Counting the percentage of each cognitive level of the reading exercises that were used in the textbook. To quantify the amount and percentage of each cognitive level, the researcher use Nurgiyantoro's theory:

$$X = \frac{F}{N} \times 100 \%$$

X =The percentage of the obtained exercises in a certain level

F = Frequency

N = the total number of exercises from all level.

4. Describing the finding of cognitive level of reading exercises in the textbook.

DATA ANALYSIS AND FINDINGS

Data Analysis

There are 113 question contain in the textbook *Pathway to English* which were divided into 4 chapter. The questions are analyzed by using checklist to find out the distribution of cognitive domain in every exercises. There are 6 cognitive domain in Revised Bloom's Taxonomy. Those six cognitive domains are divided into lower order thinking skills (remember, understand, apply) and higher order thinking skills (analyze, evaluate, create).

The exercises dominate to the lower order thinking skill, the lower order thinking skill which consists of remembering, understanding and applying get 99 exercises out of 113 exercises. Based on the data above, there are 40 exercises belong to C1 (remembering), C2 (understanding) gets 55 exercises, and there are 4 exercises belong to C3 (applying). The higher order thinking skill which consists of analyzing, evaluating and creating only get 14 exercises out of 113 exercises in the textbook. There are 1 exercise belong to C4 (analyzing), while the C5 (evaluating) gets 7 exercises and C6 (creating) gets 6 exercises. It was supposed to answer the problem of this research whether the six levels of

cognitive domains of Revised Bloom's Taxonomy have been applied or not. It was found that the exercises were applied to all the cognitive domains.

Findings

After analyzing the data, the researcher stated that there were two findings of this study. The first finding showed that kinds of cognitive domain of Revised Bloom's Taxonomy in reading exercises *Pathway to English* Textbook represented all of the reading exercises, they are remembering, understanding, applying, analyzing, evaluating and creating .

The second finding showed that the exercises in the textbook covered all of the cognitive levels, they are remembering, understanding, applying, analyzing, evaluating and creating but the proportion in each level was unbalance. The highest percentage belonged to the understanding level which obtain 55 out of 113 exercises or 49 %, the remembering level obtains 40 out of 113 exercises or 35,39 %, the applying level obtain 4 out of 113 exercises or 3,53 %, the evaluating level obtain 7 out of 113 exercises or 6,19 %, the creating level obtain 6 out of 113 exercises or 5,30 %, and the lowest percentage belongs to the analyzing level obtain 1 out of 113 exercises or 0,88 % . The distribution of lower order thinking skill which consisted of remembering, understanding, and applying obtained 99 exercises (88%). The distribution of higher order thinking skill which consisted of analyzing, evaluating, and creating obtained 14 exercises (12,3 %). Therefore, this research found that there was inequality number in the distribution of high and low thinking skill. The higher order thinking skill and lower order thinking skill should be balanced or obtains 50% (Zainul and Nasution,2001).

CONCLUSIONS AND SUGGESTIONS

Conclusion

After analyzing the data and elaborate the findings, conclusions were drawn as followings:

1. The kinds of cognitive domain of Revised Bloom's Taxonomy in reading exercises *Pathway to English* Textbook covered all of the reading exercises, they are remembering, understanding, applying, analyzing, evaluating and creating .

2. The proportion of each level in the *Pathway to English* Textbook was unbalance. The highest percentage belonged to the understanding level was 49 %, the remembering level was 35,39 %, %,   the evaluating level obtain 6,19 %, the creating level 5,30 %, the applying level 3,53%, and the lowest percentage belongs to the analyzing   level 0,88 % . The distribution of lower order thinking skill which consisted of remembering, understanding, and applying obtained 99 exercises (88%). The distribution of higher order thinking skill which consisted of analyzing, evaluating, and creating obtained 14 exercises (12,3 %).

Suggestions

The researcher made some suggestions as following:

1. For the English teacher, it will be better to give more attention to the content compatibility of the cognitive domains of the textbook. It is need to be selective in choosing the appropriate textbook that can develop student's competence.

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2. For the students, it will help them improve their knowledge and also help them to choose the best English textbook.

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