Developing Higher Order Thinking Skills (Hots) For Reading Comprehension Enhancement

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Abstract: Higher order thinking skills (HOTS) play an important role in developing learning materials for reading comprehension. The major purpose of this paper is to know the problems rose in reading comprehension and to identify the development of higher order thinking skills for the students' Kuningan University. This paper discussed the phenomenon of Reading comprehension enhancement through Higher Order Thinking Skill (HOTS) strategy in Kuningan University and describes how the HOTS strategy develop the students' skills in comprehending the academic reading text. The data collected by using a classroom observation in mobile and interview between student and the result will be discussed in the class, were analyzed qualitatively by using categories formulated based on theories related HOTS stategy. As a result, the author obtains the strategy Higher order Thinking skills on reading comprehension seen from the C1-C6 phase of HOTS strategy. This indicates that the most of students have higher order thinking skills in comprehending the text.. The findings are expected to be references for English teachers in the implementation of teaching strategy.

1. Introduction
Teaching reading is increasing along with the needs of students to acquire informations during their study. The mutual relationship betwenn students’ academic reading skills and developing higher order thinking skills. These include- reading, writing, critical thinking, oral presentation, and media literacy, which involve receptive and productive skills of students [1]. As receptive skill reading become the most necessary skill to get information for students since the reading courses which are explained by lectur er in classroom is not enough but more effective by utilizing mobile technology. There are benefits of teaching reading that provide good models for English writing [2]. However, to teach this skill lecturers need to develop methods instead of LOTS (Lower Order Thinking Skill) to enhance their thinking skills. [3]
categorized level of reading and cognitive development into six levels, and changes of the terms from LOTS to HOTS which begin with remembering, understanding, applying, analyzing, evaluating, and creating. The implementation of HOTS in classroom would be beneficial for both the students and lecturers as well. This research proposed the description of students’ conceptual variations on reading comprehension through HOTS strategy as well as the improvements of the skills in comprehending the academic reading text using HOTS strategy. This research also deals with critical reading [4], the steps of HOTS strategy [3], and the concepts related to HOTS.

1.1 Critical Reading

As the reading comprehension, applying the critical thinking in reading activity is such very important aspect to develop the students’ capability in catching the sense of the text. Critical reading is not the same as the other kinds of reading like skimming or scanning the text, but rather using the higher thinking skills. This is the useful strategy to the information placement and enhance a general feel of the subject. Anyhow, it usually found in narrower reading material. Critical reading, as [4] stated that “it requires the students to focus their attention much more closely on certain parts of a written text, holding other information in mind”. It is obvious that the students need to pay more attention and focus on what they reading order to get the meaning of the context of the reading passage by holding the information. It is not only rely on the students’ reading capability, but also involves the analysis, reflection, evaluation and making judgements [4]. Meaning that the students are expected to be able to analyze the text, reflect it to their life, evaluate and make a judgement based on their opinion and life experiences which need the higher order thinking skills.

Prerequisite knowledge or prior knowledge would be helpful for someone to get started to read the text; conversely he would get some trouble along the reading activity such as being confused and strange. Conforming to [5], “readers who have early experience of texts allow him to be able to get the meaning of the text effectively”. Their perception is that “the capability to point out the meaning by involving their experience emotionally into the text is one of the characteristic of a good reader” because “in order to get the more influenced by the reading passage the reader need to involve the more of their emotionally experience and their prior knowledge, so that they can fasten eyes on the specific things in the reading passage”. By means of the data needed or information, once we can conclude that we can engage our experience to the reading passage based on our experience, otherwise we can imagine ourselves being on the stories that serve much experience, so that we can feel and grasp the meaning that author’s mean from the text. [6].

The best way to grasp the sense of the text is that perhaps by connecting to the other’s experience and schema or concepts. No doubt that everyone has their own concepts towards their ideas of something, includes the reading passage, but it would help them to get the closest meaning to the text according to their personal experiences. [7] assures that scheme is a mental structure. This becomes abstract because it has nothing to do with a particular experience, even though it all comes from all the special experiences a person has. This is a structure because it is well organized including the relationships between its component parts.

1.2 HOTS Strategy

HOTS strategies usually required for those who want to develop their thinking skills. Therefore, good readers need higher order thinking strategies to think of, and direct their perception before, during and after reading the passages. Beneath all, students need to acquire the HOTS strategy to improve their abilities in thinking process instead of thinking simply of the passage they read. Upon even strategies of HOTS, here is a detail information on how the strategies of HOTS is applied according to [8] as the following:
a. Giving high questions during reading activity
b. Making inference
c. Teachers’ role

Furthermore, [3] developed the Bloom’s taxonomy of cognitive objectives by categorizing it into six phases, starting from C1 to C6 – Remembering, Understanding, Applying, Analysing, Evaluating and Creating-. The names of six major categories were changed from noun to verb forms. As the taxonomy reflects different forms of thinking of every individual regarding the problems they have and besides thinking is an active process verbs is used rather than nouns. This is one of the reason why the change is proposed by Anderson to Bloom’s taxonomy terms. The following draft will describe the change of the Bloom’s taxonomy into Anderson’s:

![Image]

**Figure 1.** The change of the Bloom’s taxonomy into Anderson’s

The C1 phase: remembering, possess recalling information, recognizing, listing, describing, retrieving, naming and finding, which all belong to the input process (receptive skills). The students commit this phase in the first time they get information by listening or reading, meanwhile the information is input their brain process it by remembering and grasp the sense of the information they got.

After they have been exceeded the C1 phase, they go through the next phase, C2: Understanding. This phase present the process of explaining ideas or concepts, interpreting. Summarising, paraphrasing, classifying and explaining the content of the information.

C3: Applying represent the using of information in another familiar situation, implementing, carrying out, using, and executing the information the students got in any other particular situation and conditions in appropriate ways.
C4: Analysing is going to break the information into Varts to explore the students understandings and the relationships of the information they received, comparing, organizing, deconstructing, interrogating and finding.

C5: Evaluating, also review the justification of decision or course of an action, checking, hypothesising, critiquing, experimenting and judging every information they received from any sources.

Meanwhile C6: Creating, the students is expected to be able in generating new ideas, products, or ways of view things, designing, constructing, planning, producing and inventing. the phase C1 to C3 belong to Lower Order Thinking Skills, meanwhile the rest, C4 to C6 is Higher Order Thinking Skills. In short, the main purpose of HOTS is that the students are able to collect the information, categorize it and generating new ideas to be implemented in any other situations they have, beyond the classroom or any other occasions.

2. Methods
The research was intended to reveal the conceptual variation of the students and to describe the improvements of students’ skills in reading comprehension through HOTS strategy in critical reading. This research is largely qualitative descriptive research meaning that this research is fully describing the phenomenon that happened in the classroom. This research was conducted in the critical reading class in the University of Kuningan 2017-2018 academic year, with the students’ of fourth semester as the participant of this research. There were 28 students in class A, consists of 8 male students and 20 female students, that they are in range of 18-25 years old. Meanwhile class B there are 27 students, consists of 9 male students and 18 female students, that also in range of 18-25 years old.

In assessing student’s capability in Higher Order Thinking, the researcher using the indicator of assessment adapted from [13], with the description bellow:

| Student's mark | Level of students’ higher order thinking |
|----------------|----------------------------------------|
| 100 - 76       | Excellent                               |
| 75 - 51        | Good                                   |
| 50 - 26        | Enough                                  |
| 25-1           | Poor                                    |

(adapted from [13])

The level of students’ higher order thinking is categorized by the result of the test that conducted by the lecturer during the mid term and final exam. From the table above the categories was about four levels, based on the students’ mark of the test. The researcher has got the permission from the lecturer to take the result of the test to be the standards of determining students’ HOTS level. Beside that, the researcher also categorizes the questions’ of the test into several kinds which adaptable with the purpose of the students’ achievements and the cognitive dimension and knowledge from [3].

3. Result and Discussion
According to the result of observation and interview which were done to the students, it can be known that the lecturer has already implemented the HOTS strategy in the critical reading class and made the students
have the conceptual variation on reading comprehension. There are two kinds of major cases of the students along the learning activities in the classroom, they are the steps related to the critical reading and the concepts related to the HOTs. These two major cases involve the HOTs implemenation in order to create the good atmosphere and to reach the learning goal effectively.

3.1. Students’ conceptual variation of reading comprehension through critical reading in academic setting in developing Higher Order Thinking Skills (HOTS) strategy.

According to the result of observation and interview which was done to the the students, it can be shown that students were able to apply the HOTs strategy in their critical reading activities in the classroom by the tendencies they made in critical reading class.

3.2. The critical reading

The implementation of HOTs strategy can be proved since the lecturer conducted some prominent characteristics of the critical reading inside her teaching activities:

1) The student can predict that the text what was about and also gave the logical reason although the prediction was not the same as the content of the text and reconnect it with their prior knowledge and previous experiences which help them in making prediction.

2) The students used their skills in construct meaning from instructional messages, including oral, written, and graphic communication (C2-phase 2) and apply a procedure to a familiar task (C3- phase 3) by summarizing the text and retell it to their friends in the classroom in two or three sentences.

3) The students tend to generate the question by asking themselves about 5W1H related to the text they have.

   “Student 8: yes, of course. For example, what was the text talking about. The 5W1H question must be questioned, because the question was all about the 5W1H. What is the content of the text, we should be able to explain it, we have to know where the case is happened.”

4) The students use quotation and evidence based on the paragraph of the text to answer their generating questions. The students clarify their answer of generating question by giving the proof based on the text, where the statement were supported by the evidence in the text and quotations.

Students’ conceptual variation also can be seen from their ways of thinking and ideas to respond the text. The LOTS and HOTs phase could be seen clearly.

1) Procedural knowledge
2) Comprehension
3) Creativity and intelligence

4. Conclusion

Based on the result and discussion about developing higher order thinking skills on reading comprehension enhancement in critical reading in Kuningan university, the researcher can draw the conclusions as follows. There were two main kinds of conceptual variation in reading comprehension through HOTs strategy in critical reading class, which involved the steps of HOTs strategy they were on the way of remembering, understanding, applying, analyzing, evaluating and creating (C1-C6 phase of HOTs) and critical reading they are predicting, summarizing, generating question and clarifying. The students tend to begin to involve their prior knowledge, experience, and logical reason after they had known about the steps of critical reading and HOTs strategy delivered by the lecturer during the classroom activities. In this case, the students were classified as the LOTS and HOTs students based on the consideration of how much the students involved their critical thinking in responding the text that given by the lecturer.
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