

## **STRATEGIES TO DEVELOP STUDENTS' HIGHER ORDER THINKING SKILLS IN READING CLASS**

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### **Abstract**

This study aims to investigate the strategies used by the teacher to develop students' higher thinking skills in reading class, and to describe the problems faced by the students. This descriptive qualitative study collected the data from various resources, English teaching learning process, English teacher, students, and lesson plan, garnered through field notes, interviews, and documentation. The data were analyzed using data reduction, data display, and conclusion. The empirical evidence showed that the strategies used by the English teachers to promote the students' higher thinking skills were making prediction, activating the students' schemata, drawing inference and encouraging questions. Another finding also indicated that the primary problem encountered by the students was a lack of vocabulary to comprehend the given texts. Recommendation and implication are discussed.

**Keywords:** *Higher Order Thinking Skills, Reading*

## **INTRODUCTION**

English education is important for achieving human's success. Many countries in the world now concern on facilitating students of various levels to develop their English. The students are encouraged to master English skills which one of them is reading. Through reading students can get much useful information around the world for their life. In addition, reading actually influences students' development. Pang et.al, ( in Andini, 2019) consider reading as an important skill that needs to be learnt by students since, it is a phase where students can get information and knowledge, and the ability to read becomes a window to the world and students' knowledge.

Besides it is important, as one of the basic English skills, reading is a difficult skill to learn both for the Indonesian students and the students whose mother tongue is English because it covers many complex skills (Anasy, 2016). Furthermore, reading comprehension needs mental activities covering predicting the meaning of the text, determining the purpose of the text, activating prior knowledge, connecting prior experiences to the text, identifying word and sentence meaning in order to decode the text, summarizing the text in order to create new meanings, visualizing the characters, settings, situation in the text, using strategies to improve understanding of the text, reflecting on the meaning of the text, and applying understanding of the text as needed (Kelly, 2019).

Reading cannot be separated from strategy. Strategy is the way how people read. In order to facilitate reading process, Kelly (2019) states several strategies for reading, those are generating questions, reading aloud and monitoring strategy, promoting cooperative talk, paying attention to text structure, taking note or annotating note, using context clues, using graphic organizer, practicing PQ4R (Preview, Question, Read, Reflect, Recite, and Review), summarizing and monitoring understanding. Each of them is described as follows.

Generating questions strategy is done by pausing on certain parts of the passage being read then creating questioning section about what has just happened or what they think might happen in the future. Reading aloud and monitoring strategy is done by teacher through reading aloud and stopping to check students' understanding. During reading process, the students are exploring their thought. Promoting cooperative talk strategy is done by leading the students to stop periodically to turn and talk in order to discuss what has just been read. Paying attention to text structure strategy leads the students to read through all the headings and subheadings in any chapter that they have been assigned that helps them gain an overview of what they will be learning as they read the chapter. Taking note or annotating note strategy requires the students to read with paper and pen in hand to take notes of their

prediction, questions and vocabulary list. Using context clues means leading the students to use the hints that an author provides in a text such as a word or phrase directly before or after a word they may not know. Using graphic organizer means using webs and concept maps which can greatly enhance reading comprehension since it allows students to identify areas of focus and main ideas in a reading. Practicing PQ4R (Preview, Question, Read, Reflect, Recite, and Review) means have students read the material, reflect on what has just been read, recite the major points to help learn better, and then return to the material and see if you can answer the questions previously asked. Summarizing and monitoring understanding strategy is done by encouraging students to periodically stop their reading and summarize what they have just read and to find out how they read.

Nowadays, it has been a big concern in education namely Higher Order Thinking Skill (HOTS). According to Heong et al (2011) teacher should develop higher order thinking which is used to think broadly to find new challenge. Higher order thinking demands someone to apply new information or knowledge that he has got and manipulates the information to reach possibility of answer in new situation. Brokhart (2010, p. 5) stated that higher-order thinking conceived as the top end of Bloom's cognitive taxonomy. The teaching goal behind any of the cognitive taxonomies is furnishing students to be able to do transfer. Being able to think means students can apply the knowledge and skills they developed during their learning the new topic. Higher-order thinking is conceived as students being able to relate their learning to other elements beyond those, they were taught to associate with it. Kusumastuti et.al (2019) state that higher order thinking skills refer to the ability to solve the problem, creative thinking, argumentation, and making the decision. HOTS is derived from the Bloom's Taxonomy that divides human cognitive domain into six levels those are knowledge, comprehension, application, analysis, evaluation, and creating. Atiullah (2019) states that these levels were revised into remembering, understanding, applying, analyzing, evaluating and creating. The first three are regarded as

Lower Order Thinking Skills (LOTS), while the second three are Higher Order Thinking Skills (HOTS).

HOTS and LOTS are completely different thinking processes if compared in terms of their complexity degree. According to Meier (in Atiullah, Kurnia, 2019) higher order thinking skills refer to reasoning or productive behavior, while lower order thinking skills are categorized as learned behavior or reproductive thinking. It means that higher order thinking skills enable people to work on a problem which is not immediately recognized by their learned behavior.

Reading and HOTS can't be separated each other. Yu-hui to (Atiullah, Kurnia, 2019)states that HOTS and reading are two interconnected skills. In reading, students not merely have to understand the meaning of the words that are written down. Further, they need to be involved in a complicated, actively thinking mental activity which requires the students to experience, predict, verify and acknowledge information based on their background knowledge and experience. In accomplishing reading task, the students need to recall and apply what they have learnt. In the relation to HOTS this process is called transferring. This process enables the students to perform some critical thinking about the reading text they have to deal with to make meaning. So, they will be able to apply problem solving skill when they find difficulties in achieving the objectives of a reading task. In this case they don't have to find main ideas, supporting ideas, detailed information, or implicit information. Linse (in Anasy, 2016) states that reading involves higher order thinking skills. Reading is not merely decoding specific words, but the essential part of reading process is deriving meaning as well as analyzing and synthesizing the reading material which all of them are the parts of HOTS. Accordingly, higher order thinking skills (HOTS) need to be developed as long as the development of students' reading skill. Therefore it is necessary for an English teacher to conduct reading classroom bringing HOTS. One way that can be used is using HOTS-based strategy (-ies).

According to Accosta & Ferri (2010) state that HOTS strategies that can be implemented in reading class involve making predictions, activating students' previous knowledge, completing graphic organizer, and answering questions. Making prediction was a strategy that can be used to develop students' HOTS, especially in reading classroom. In reading activities the use of this strategy enables students to figure out what the topic of the reading is, and to express what they think about it. In addition it helps students to explore the topic before they read in order to provide the idea about the topic of the text.

Activating students' previous knowledge was the second strategy proposed by Accosta & Ferri (2010). In using this strategy the teacher related the students' previous experience to the material being taught. The students were asked about their experience dealing with letter. After that the teacher led the students to recognize the material to be learnt, namely personal letter. According to Rumelhart activating background knowledge for learning involves helping English learners make connections between their own knowledge and experiences and the new information being taught (Munawati & Nursamsu, 2019).

Completing graphic organizer is helpful to prepare them to read and to understand the text better at the moment of reading it. They were able to form ideas and organize them about the topic, to clarify doubts, to develop their thinking and imagination, and to learn more. This strategy is also useful in helping students to associate their predictions with prior knowledge, and to remember and use information in writing.

Answering questions strategy is helpful for students to have clarity about the text, to understand it better after reading, to show their comprehension, to demonstrate that they learned how to predict, identify and make comparisons, to remember information about the topic, to increase their knowledge, to go deeper into the topics, and to facilitate development of the target language.

In addition, Cox states (2019) ten strategies to develop HOTS those are determining what higher-order thinking is, encouraging questioning, connecting concepts, teaching student to

infer, using graphic organizer, teaching problem-solving strategies, encouraging creative thinking, using mind movies, teaching students to elaborate their answers, and teach QARs.

Determining What Higher-Order Thinking means giving understanding about HOTS to the students. This strategy is to help the students to understand the essential of higher order thinking skill. By understanding the significance of HOTS the students will be helped to understand their own strengths and challenges. Thus they will be able to figure out what they should do in learning.

Encouraging questioning strategy is done through providing the students chance to ask questions as free as possible. Even, the teacher provides the availability of question-answer section during teaching and learning process. Here the students are supported to be creative as far as possible. There is no worry about negative reactions towards the questions.

Connecting concept strategy is done by leading the students to connect one concept to another. This strategy aims at helping students to connect their existing knowledge with what they are learning. This level of thinking will help students learn to make connections whenever it is possible, which will help them gain even more understanding.

Inferring is actually useful to elicit thinking ability. So, in classroom the students should be helped to infer during teaching and learning process. This strategy can be done through giving students' real-world examples, then ask them to make inferences based on the example. In addition they can be asked to create new information that is not stated on the text based on the available information.

Graphic organizer is useful to provide the students with a nice way to frame their thoughts in an organized manner. Furthermore, drawing diagrams or mind maps is helpful for students to be better on connecting concepts and seeing their relationships, which both of them will develop a habit of connecting concepts. Thus, teaching students to use graphic organizer in classroom will give much beneficial for the teacher.

Problem-Solving Strategy is one way that can develop students' critical thinking ability. In this strategy the students are taught how to use their knowledge and skill as far as possible in order to find solution for a specific problem. Teaching students to use a step-by-step method for solving problems will help them solve problems faster and easier. In addition, the teacher may encourage students to use alternative methods to solve problems which offer them different problem-solving methods.

Strategy namely encouraging creative thinking means helping the students invent, imagine, and design what they are thinking. Creative senses are helpful for students in processing and understanding information better. When students utilize creative higher order thinking skills, it indeed increases their understanding. The use of this strategy enables the student to explore and use all their abilities as far as possible.

Using mind movies strategy enables the students to optimize their imagination. This strategy is used when the concepts that are being learned are hard. In this strategy the teacher encourages students to create a movie in their mind and teaches them to close their eyes and picture it like a movie playing. This way of higher order thinking will truly help them understand in a powerful unique way.

Another strategy is teaching students to elaborate their answers. Actually, higher-order thinking requires students to really understand a concept, not repeat it or memorize it. Therefore, the students need encouragement to elaborate their answers and talk about what they are learning. In this case, it is allowed to utilize all possible sources that can be used to help students' understanding. This strategy requires students' parents to play roles to give reinforcement for students' accomplishment at home. It can be done by asking the right questions that make students explain their answers in more detail, or to answer their child's question with a more detailed response.

Teaching Question-Answer-Relationships, or QARs, is strategy to teach students to label the type of question that is being asked, then to use that information to help them formulate an



answer. Students must decipher if the answer can be found in a text or on the Internet, or if they must rely on their own prior knowledge to answer it. This strategy has been found to be effective for higher-order thinking because students become more aware of the relationship between the information in a text and their prior knowledge, which helps decipher which strategy to use when they need to seek an answer.

There were some relevant researches dealing with teacher's strategies to develop HOTS strategies in teaching reading. The first by Indriyana (2019) which focused on teacher's strategies which were used to develop HOTS in reading class of junior high school students. Based on the research, there were found several strategies that were used by the teacher. Those were described as below.

First, informing learning objectives to students. The researcher stated that most teachers introduced the goals or purposes of the text at the beginning of the class. The researcher used procedure text as an example. The teacher informed the learning objectives in the teaching and learning process. The teacher used this step to apply HOTS in teaching the reading skill to develop critical thinking to brainstorm, analyze, and create procedure text in class. The purpose of informing learning objectives is students can appreciate procedure text and appreciate the technique used by the teacher.

Second, encouraging divergent questions. Questioning is a process which the readers apply before, during, and after reading. Based on the interview results, most teachers used divergent questions in their teaching strategies. The divergent question can make students analyze and create. The questions made students improve their skill in analyzing the procedure text delivered by the teacher. After analyzing, the students made the procedure text by own self.

Third, implementing Group Discussion. The students can improve and be more active in the learning and teaching process by doing or creating something ordered by the teacher. The teacher instructed students to make procedure text after understanding the given procedure texts by analyzing and evaluating them. Then, if



students finished the job, the teacher-directed the students to make a presentation in front of the class.

Fourth, giving feedback to students. After the teaching and learning process, the teacher used the remaining time to give feedback and assess learning to ask the students to review, refine, and improve understanding of the material. That is showed in the teaching and learning process below. The teacher asked the students to discuss with their group about the similarities and differences in the students' assignment. The teacher required the students to present the results of the discussion in front of the class. At this stage, the findings are in line with Limbach & Waugh's (2010) theory on reviewing, refining, improving understanding, training feedback, and assessing learning for critical thinking.

Fifth, giving motivation to think critically. Motivation is very important for teachers to students. If the teachers can create an encouraging situation in the class, this helps the teacher to leverage the students' motivation.

Another research concerning on teacher's strategies to develop students' HOTS in reading class was conducted by Yulianto (2018) his research entitled 'Teachers' Strategy for Developing Higher Order Thinking Skills in Teaching Reading concerned on finding the strategies for developing HOTS in senior high school level. These strategies found by the researcher were completely in line with that found by Indriana. The strategies were informing learning objectives to the students, asking questions to the students, using discussion, giving feedback to the students, and motivating students to think critically.

Another research was conducted by Thamrin (2019). The result of this research showed that there were HOTS strategies used by the students in critical reading those were predicting, using skills in constructing meaning from instructional messages, generating questions about 5W1H (What, Who, Where, When, Why, How) related to the text they have, and using quotation and evidence based on the paragraph of the text to answer their generating questions.

Considering the phenomenon about HOTS, strategy, and reading skill, this research concerns on finding the strategies used by the teacher to develop students' higher order thinking skills and the problem faced by the students in reading class at the eleventh grade of SMA BK 2 Boyolali.

## **LITERATURE REVIEW**

The concept of higher order thinking strategies has been criticized by many scholars in the field of reading skill. According to Dwi Bagas Yulianto (2018) showed that the strategies used by the teacher to develop higher order thinking skills (HOTS) of the senior high school students in reading class. The result showed that in order to develop HOTS of the students the teacher used specific strategies covering informing learning objectives to the students, asking questions to the students, using discussion, giving feedback to the students, and motivating students to think critically, Bernadeta Siska Indriyana (2019) "Developing Students' Higher Order Thinking Skills (HOTS) in Reading: English Teachers' Strategies in Selected Junior High Schools". The purpose of this research was to find out what kind of strategies applied by English teacher in teaching reading in order to develop HOTS of junior high school students. Based on the result, the strategy which were applied by the teacher involved informing learning objectives to students, encouraging divergent questions, implementing Group Discussion, giving feedback to students, and giving motivation to think critically, Nani Ronsani Thamrin (2019) this study intends to find out students' conceptual variation and to describe the improvements of students' skills in reading comprehension through HOTS strategy in critical reading in college students level. The result showed that there were HOTS strategies used by the students in critical reading those were predicting, using skills in constructing meaning from instructional messages, generating questions about 5W1H (What, Who, Where, When, Why, How) related to the text they have, and using quotation and evidence based on the paragraph of the text to answer their generating questions.

The definition of reading according to Wallace (1996) defines reading as a process of interpreting written text. He also states that reading is a kind of communication activities between the writer and the reader. The reader tries to get the idea of the writer which is delivered on the text.

Urquhart (2013) reading is a process of receiving and interpreting information encoded in language via the medium of print. It means that when reading the reader is trying to get the content of the language which is shown in written form. In addition, Richard (1998) states that reading is the construction of meaning from a printed or written message.

Meanwhile, Ediger (in Marianne, Murcia 2001) states reading as an interactive sociocognitive process involving a text, a reader, and social context within which the activity of reading takes a place.

The strategy in teaching reading according to Hornby (2009) is a plan designed for a particular purposes or the process of planning. They are also specific methods of approaching a problem or task, modes of operation for achieving a particular end, planned designs for controlling and manipulating certain information. Narayana (2015) states strategy as procedures used in learning, thinking, etc., which serve as a way of reaching goal. In the case of teaching, strategy is called means of achieving necessary skills, such as Listening, Speaking, etc.

Kemp (in Hamruni, 2009) states teaching strategy as teaching activities that must be done by the teacher and the student so that the purpose of teaching reached effectively and efficiently. Teaching strategy is also defined by Stone and Morris as generalized plan for a lesson which includes structure, instructional objectives and an outline of planned tactics, necessary to implement the strategies (Issac, 2010).

Adopting a strategy means adopting a guideline for action, and associating it a certain global way of organizational learning and learning conditions, the use of certain methods and means. Teaching strategies suggest a way in which a teaching situation can be approached.

There are several types of strategy that can be used by teacher in reading class. According to Vacca & Vacca (1999) strategies in teaching reading are as follows: a) Scaffolding is as a process whereby a student is helped to solve a particular problem beyond its developmental capacity through the help of a teacher or other person with more ability, b) Think-aloud Think Aloud is a strategy that helps students on learning activities. Aims to recall more significant information from the texts given by the teacher, c) Reciprocal Teaching is a strategy that asks students and teachers to share the role of teacher by allowing both to lead the discussion about a given reading, d) SQ3R is a systematic reading strategy to help you organize the reading process into manageable units. It consists of five steps, they are: Surveying, questioning, reading, reciting, and reviewing, e) QARs is a reading strategy through understanding and analysis of questions.

The definition of higher order thinking skills according to Heong, et al (2011) state that higher order thinking is using the thinking widely to find new challenge. Higher order thinking demands someone to apply new information or knowledge that he has got to manipulate the information to reach possibility of answer in new situation.

In line with Heong, Brookhart (2010) states that higher order thinking conceives as the top end of the Bloom's cognitive taxonomy. The teaching goal behind any of the cognitive taxonomies is equipping students to be able to do transfer. Higher order thinking is conceived as students being able to relate their learning to other elements beyond those they were taught to associate with it. Actually, in this case the learners are encouraged to develop their thought critically. Supporting to Brookhart Limbach & Waugh (2010) state that in order to develop ability to think critically, there are five lessons that can be taken, namely: (1) determine the learning objectives, (2) teach through inquiry, (3) practice, (4) review, refine and improve understanding, and (5) practice feedback and assess learning.

Higher order thinking is defined as scaffolding students' thinking about both the question posed and their responses to it. This approach is different from students' traditional thinking, and answering questions, in which students attempt to guess the teacher's answer to classroom questions (Walsh & Sattes, 2012). This means that the teachers should question students to prompt their thinking, not to guess the teachers "correct" answer.

In addition, Kusumastuti et.al (2019) state that higher order thinking skill refers to the ability to solve the problem, creative thinking, argumentation, and making the decision.

Higher order thinking skill can be defined as the ability of analyzing, evaluating and creating based on Bloom's taxonomy cognitive skill. It is obviously related to the process of reading. In reading the reader is processing to get the content or the meaning of the written language. In this case, the reader is required to convey various cognitive skills in order to obtain the whole reading content well. Linse (2006) states "Reading involves the higher order thinking skill. It is much more complex than merely decoding specific words. Teaching the students to derive meaning as well as analyze and synthesize what they have read is essential part of the reading process."

Higher order thinking plays an important role in comprehension. Studies have shown that teachers see more growth in their students' reading scores when higher level thinking is stressed to students (Peterson & Taylor, 2012). This means that teachers who encourage their students to utilize higher level thinking strategies do better on tests pertaining to reading.

On the other hand, Rosli and Maarof (2016) emphasize how students' thought is related to higher order thinking skill. In learning activities, after processing low order thinking skill, the students who are learning, go to the next cognitive ability namely higher order thinking skills covering analyzing, evaluating, and creating. In this case the purpose of the process is learning or gaining new knowledge.

The importance of higher order thinking skill is also emphasized by Indonesian education ministry. The revised

Curriculum 2013 mentions that education emphasizes higher order thinking skills, emphasizing Character Education Strengthening (*Penguatan Pendidikan Karakter*/here in after referred to as PPK), literacy and 4C (Critical thinking, Communicative, Collaborative, and Creative).

Conducting reading classroom engaging higher order thinking skill requires specific strategies. Accosta & Ferri (2010) state higher order thinking skill strategies that are appropriate to implement in reading classroom . The strategies involve making predictions, activating students' previous knowledge, completing graphic organizer, and answering questions. As well as Accosta & Ferri, Cox (2019) specifies several strategies for reading classroom bringing higher order thinking skill. Those strategies are determining What Higher-Order Thinking is, encouraging questioning, connecting concept, teaching student to infer, using graphic organizer, teaching problem-solving strategies, encouraging creative thinking, using mind movies, teaching students to elaborate their answers, and teaching QARS.

## **RESEARCH METHOD**

The method used for this research was descriptive qualitative. Bogdan and Taylor in Moleong (2010) define qualitative research as a research procedure that generates descriptive data in the form of written or verbal words and observed behaviors. The subjects of this research were all English teacher and 23 students of XI MIPA 3 of SMA BK 2 Boyolali. The techniques to collect the data were observation, interview, and document analysis. Observation was done toward teaching and learning process in reading class. The observation was done to find the real implementation of strategies for developing HOTS of the students, besides it was also to strengthen teacher's statement interview was done with the English teacher and some students of XI MIPA 3. The interview aimed at finding information about the strategies used by the teacher in developing HOTS in reading class and the problem faced by the students as well. The data of the research

were analyzed with interactive analysis model consisting of data reduction, data presentation, and conclusion.

To ensure the legitimacy and validity of the acquired data, this research used triangulation. Emzir (2010) says that triangulation is the process of strengthening evidence or findings through different individuals. Meanwhile, Olsen (2004) says that triangulation is the mixing of data or method so that the diverse viewpoints or standpoints cast light upon a topic. In this research, the researcher took the triangulation of data sources covering the observation, the English teacher and some students of the Xi MIPA 3, and lesson plan document.

## **FINDINGS**

In the research finding, the researcher presents the data to answer the problem statements displayed in the first chapter. The findings were retrieved from observation of English teaching learning process, interview with the English teacher and students. The researcher presents the strategies used by the teacher and the problems faced by the students in Reading Class at the Eleventh Grade of SMA BK 2 Boyolali.

### **Strategies used by the Teacher in Developing Students' Higher Order Thinking Skills in Reading Class**

Based on the results of the research, it can be concluded that the strategies used by the teacher to develop students' HOTS in reading class were making prediction, activating students' previous knowledge, making inference, and encouraging questioning.

#### **Making prediction**

Making prediction was the first strategy used by the teacher. It is proven by the teacher's statement below:

*Teacher : "Macam-macam ya. Misalnya, saya suka mengajak siswa menebak-nebak atau memprediksi hal-hal terkait teks. Seperti, judul yang pas apa, atau kira-kira topiknya apa ya bacaan ini. Kalau seperti itu kan bisa memicu daya berpikir mereka lebih jauh, beyond which appears gitu."*



(There are many kinds of strategies. For example, asking the students to guess or predict everything related to text, such as the title or the topic of the text. This is such way may improve students' thinking ability further, beyond which appears.)

**(Interview on January 21<sup>st</sup>, 2020)**

### **Activating students' previous knowledge**

Activating students' previous knowledge was the next strategy found in this research. It can be proven by the following interview:

*Teacher: "...Kadang-kadang juga saya menggali pengetahuan mereka yang kira-kira berhubungan dengan materi. Ada yang tahu tentang ini enggak? Pernah pergi ke tempat ini apa belum?"*

(Sometimes, I activate their previous knowledge which is related to the material. Does anyone know this? Have you ever gone there?)

**(Interview on January 21<sup>st</sup>, 2020)**

### **Making inference**

Another strategy found by the researcher was making inference. It can be seen on the following interview:

*Teacher: "Selain itu juga, biasanya saya bimbing mereka untuk membuat kesimpulan dari hal-hal yang ada di teks, seperti itu".*

(I usually also guide them to make inference based on the information stated on the text.)

**(Interview on January 21<sup>st</sup>, 2020)**

### **Encouraging questioning**

Encouraging questioning was the last strategy found by the researcher. It can be seen on the following interview:

*Teacher: "Banyak cara yang bisa digunakan di kelas sih Mbak. Kalau saya memang sengaja memberi ruang untuk banyak-banyak eksplorasi pertanyaan ya, baik secara berkelompok atau tidak, harapannya dengan begitu HOTSnya siswa semakin berkembang."*

(There are many ways to use in classroom. Personally, I provide chance for question exploration

as much as possible, either in group or individually. Therefore the HOTS of the students can be developed).

(Interview on January 21<sup>st</sup>, 2020)

### **Problem Faced by the Students in Reading Class**

Based on the research interview it was found that in reading class the students faced problem related to their vocabulary mastery. Most of them got difficulty in mastering word component especially the meaning and the pronunciation. In order to solve the problem, the teacher used several solutions, those were allowing the students to use dictionary both online and offline, facilitating them to translate the words together, and having them to make group discussion among them.

## **DISCUSSION**

In discussion, the writer discusses about the research finding. The research finding is analyzed with the theories from experts. The researcher analyzed teacher's strategies for developing students' HOTS and the problem faced by the students in reading class.

### **Strategies used by the Teacher in Developing Students' Higher Order Thinking Skills in Reading Class**

Based on the research findings, it can be concluded that the strategies used by the teacher to develop students' HOTS in reading class were making prediction, activating students' previous knowledge, making inference, and encouraging questioning.

Making prediction was the first strategy used by the teacher to find words meaning. The teacher asked the students to predict a word meaning by considering the meaning of the word having similar form. The words were 'Employee' and 'employer'. The students were asked to predict the meaning of 'employer' by considering the meaning of 'employee'. Pesa and Somers (in Munawati & Nursamsu, 2019) state that before reading, prediction can activate prior knowledge, set a purpose for reading, and engage the reader from the outset. This strategy was in accordance with

the strategy which was proposed by Accosta and Ferri (2010). They state that as strategy for developing HOTS, making predictions allows students to figure out what the topic of the reading is, and to express what they think about it. Making predictions is also very useful strategy as it helps students to explore the topic before they read and thus understand it better since they had an idea about the topic of the text. This finding is also in line with the previous research conducted by Thamrin (2019). This previous research stated predicting as one of strategies that can be used to develop students' HOTS in reading skill. It was same to the present research which found making prediction strategy used by the teacher in teaching reading.

The second strategy was activating students' previous knowledge. In using this strategy the teacher related the students' previous experience to the material being taught. The students were asked about their experience dealing with letter. After that the teacher led the students to recognize the material to be learnt, namely personal letter. This strategy was in accordance with the strategy proposed by Accosta and Ferri (2010). According to them, activating students' prior knowledge means exploring students' previous knowledge before reading. This strategy is helpful because when they answer questions, the students can use what they think before reading. This strategy enabled them to think more about the topic, to generate more ideas, and to promote their curiosity. Activation of prior knowledge can develop children's understanding by helping them to see links between what they already know and new information they are encountering. According to Rumelhart activating background knowledge for learning involves helping English learners and makes connections between their own knowledge and experiences and the new information being taught (in Munawati & Nursamsu, 2019).

The third strategy that was used by the teacher is making inference. Here the teacher led the students to draw inference by considering the information stated on the text. In this case the students were encouraged to try to make connection among the content of the text in order to create the appropriate information.

In using this strategy the teacher led the students to state letter type by considering certain words on the text. The students were asked to find the meaning of the words and recognize the possible letter type which was suitable to the characteristics of the words. Crouch (2017) states that in order to develop their HOTS, students have to explore their ability of reading between the lines, which means that they should be able of strengthening the ways in which they use reason to examine evidence and develop hypotheses. This strategy was in accordance with Cox's (2019) statement who states teaching student to infer as a strategy to develop HOTS. Inferring is actually useful to elicit thinking ability. So, in classroom the students should be helped to infer during teaching and learning process. This strategy can be done through giving students' real-world examples, then ask them to make inferences based on the example. In addition they can be asked to create new information that is not stated on the text based on the available information.

The last strategy used by the teacher was encouraging questioning. During the teaching and learning process, the teacher almost always provided the students chance to explore questions as far as possible. The students were always given chance to ask questions dealing with the material. Here the teacher motivated them to be secured in asking questions as well as answering any question. Marzano, Pickering & Pollock state that questioning as a strategy can develop different levels of thinking skills for deeper learning (in Munawati & Nursamsu, 2019). This strategy was appropriate to a kind of strategy proposed by Cox (2019) namely encouraging questioning. Cox states that encouraging questioning strategy is done through providing the students chance to ask questions as free as possible. Even, the teacher provides the availability of question-answer section during teaching and learning process. Here the students are supported to be creative as far as possible. There is no worry about negative reactions towards the questions. A classroom where students feel free to ask questions without any negative reactions from their peers or their teachers is a classroom where students feel free to be creative. In addition, this strategy was also stated by Accosta & Ferri (2010) by the name

answering questions. Answering questions was relevant to encouraging questioning, since it provided asking and answering section during classroom activities.

Encouraging questioning was actually in line with the strategy found on the previous research conducted by Indriyana (2019) namely encouraging divergent questions. Questioning is a process which the readers apply before, during, and after reading. Based on the interview results, most teachers used divergent questions in their teaching strategies. The divergent question can make students analyze and create. The questions made students improve their skill in analyzing the procedure text delivered by the teacher. After analyzing, the students made the procedure text by own self. As found by the researcher, encouraging questioning strategy was also found by Yulianto (2018) in his research. Based on his research there was strategy to develop HOTS in reading activities namely asking questions to the students. Asking questions to the student actually in accordance with encouraging questioning, since within encouraging questioning there was activity of asking question to the students. This strategy was also found by Thamrin (2019) in his research. Thamrin found strategy namely generating questions about 5W1H (What, Who, Where, When, Why, How) related to the text they have. All these findings were actually in line in the case of providing questioning for the students in reading activities.

### **Problems Faced by the Students in Reading Class**

Reading skill is influenced by vocabulary. According to Laufer as cited by García-Madruga et al., (in Ariandika & Kartikawati, 2018) automatic recognition of a large vocabulary is necessary for interpreting the global meaning of the text because if the reader's cognitive effort is directed at deciphering the information at sentence level, she or he should have difficulty in connecting paragraphs. Reading is one of the best ways to get more knowledge of the vocabulary using text media. According to Grabe and Stoller as cited by García-Madruga et al., (in Ariandika & Kartikawati, 2018) reading comprehension increases even more