CHAPTER II
LITERATURE REVIEW

This chapter discusses some relevant theories and concepts underlying this reseach. The explanation about ELT in Indonesia, the curriculum 2013, the reading theory, scientific approach are presented in this chapter.

A. READING

Reading is one of four main skills taught in the school. It plays significant role to facilitate students learn something. Reading in English lesson is categorized as one of main skills that must be mastered by the students.

1. The Definition of Reading

Reading is difined as decoding and understanding written text (Cline, Johnstone & King, 2006). Decoding requires translating the symbols of writing systems (including braille) into the spoken words they represent. Understanding is determined by the purposes for reading, the context, the nature of the text, and the readers' strategies and knowledge. William (1984), he defines reading as a process whereby one looks at and understands what has been written.

2. The Definition of Reading Comprehension

Snow (2010) defines reading comprehension as "the process of simultaneously constructing and extracting meaning through interaction and engagement with print". The success of a comprehension event depends on a good match of reader skills, text difficulty, and task definition. Pardo (2004) gave a common definition that comprehension is a process in which readers construct meaning by interacting with text through the combination of prior knowledge and previous experience, information in the text, and the stance the reader takes in relationship to the text. Nuttal (1982) as cited in Hidayati, elaborate the aspects that students must master in reading comprehension. He explained that there are

five aspects of reading comprehension which the students should comprehend a text well, such as determining main idea, locating reference, making inference, detail information, and the understanding vocabulary. Unfortunately, most of the students are failed to accomplish these aspects.

The result of the final term examination on December 2019, the writer got unsatisfying data of the examination results. The average scores of English Final Examination in Semester one is only 56,8 from 139 students. Most of them are failed to gain perfect scores for the test. They failed to answer the questions because they could not understand the text. They said that the vocabularies were too difficult to be understood and the options are tricky.

This finding matches with the previous study in the area of reading comprehension. The study concluded that vocabulary is the main barrier for the students to understand reading texts, (Al-Jarah and Salina, 2018) A study conducted by Chawwang (2008) found out that most of the students face difficulties in reading English texts. The difficulties are caused by students' lack of vocabulary knowledge. Many students face difficulties in understanding technical words such as superordinate, synonyms, antonyms, or words with multiple connotations (as has been stated by Nuttall, 2000; Carlisle, 2000; Vilenius-Tuohimaa, Aunola, & Nurmi, 2008).

Another barrier in teaching reading comprehension is teachers' strategy in which most teachers prefer to have a more s teacher centered activities rather than student's centered during the learning activities. Suryanto (2017), concluded from several journals that students' problems are Mostly caused by the limited exposure of English in their community.

3. The Challenge of Reading for Students

Reading is not easy, especially understanding a reading text which is written in English. Students with limited vocabulary mastery will find it hard to get the meaning from complex sentences, cannot get the semantic aspects of the sentences, miss in cultural gap and et cetera. Kasim and Raisha (2017) stated in

their study that the linguistic reading comprehension problems which interfered with the participants are: new vocabulary meanings, word complexity, compound complex sentences, conditional sentences, word derivation, word order, complex sentences, compound sentences, reduced relative clauses, passive voice, and tenses. While the non-linguistic problems are: reading comprehension the most included lack of cultural knowledge, text length, lack of reading strategy knowledge, difficulty to differentiate between the main and the supporting ideas, working memory problems, difficulty to connect ideas and inability to do speed reading.

These problems in reading comprehension, initiated the writer to develop a model called OREO-PLUS. This model is the further development of scientific approach introduced by the government. This model is expected to be able to help the teachers to cope the problems they found in teaching reading through the steps which is built by the following the phases of model development by ADDIE method and fulfilling the elements of a model by Joyce and Weils.

B. SCIENTIFIC APPROACH

1. The Definition of Scientific Approach

Scientific Approach as can be cited in Panduan Pembelajaran SMP of Curriculum 2013 is an approach which applies the steps of gathering information through a sequences of activities. The activities are: observing, questioning, gathering data, associating and communicating. This approach is introduced in the latest curriculum and used as one of the primary foundation activities that must be applied by the teacher. This approach is believed can support the teacher to build the students' 4C skills.

To prepare the world challenges, Indonesian government built a new concept in shaping curriculum to fit in with the need of 21 century skills. Most of the activity, media and materials provided are the reflection of the government agenda to reform Indonesian curriculum. The students are obliged to master the

skill of critical thinking, work collaboratively with their friends, creatively in making or solving something, and deliver their arguments or ideas confidently. These skills are supposed to be integrated in all skills being taught in daily teaching and learning activities, including in teaching reading.

Edward and Hirata (2011) as cited in Fandino (2013) explained that, the 21st century skills are a blend of content knowledge, specific skills, expertise, and literacies necessary to succeed in work and life. These skills are intended to help students keep up with the lightning-pace of today's modern markets. Each skill is unique in how it helps students, but they all have one quality in common.

Fadel (2008) identified that there are three core skills addresses particular areas people need to acquire and develop. Life and career, for instance, describe the ability to be flexible, adaptable, self-directed, socially aware, accountable and responsible. For their part, learning and innovation include the ability to be creative and innovative, critical, problem-solving, communicative and collaborative. Finally, information, media and technology consist in the ability to access and use information, to create and analyze media products, and to apply technology effectively.

2. The Steps in Scientific Approach

As can be cited in Sarwanti (2016) the procedures of implementing scientific approach in English classroom can be elaborated as follow:

a. Observing

To observe means to read and/or listen to texts in the language learning process. Students are exposed to text templates so they can list items they need to know to understand and/or produce texts or communicate ideas. The things to be mentioned essentially include text, text structure, and grammar and vocabulary social function.

Some activities conducted in this stage are for example, students listen to an audio recording, watch a video, watch the teacher (with or without

other students) demonstrate a monologue or dialogue, watch other students act out a monologue or dialogue, and read texts.

Teachers do have some roles in this phase. The roles include helping students to list items they need to know in order to understand and construct the targeted texts, presenting a list of items from which the students can pick some, and making certain items in the feedback (language model) important.

b. Questioning

In this second step students ask or formulate questions on the basis of the items identified. The questions at least cover all measures of achievement mentioned in the lesson plan. In this earning step, students are encouraged to suggest temporary answers based on their knowledge and/or limited information.

For example, with or without teacher guidance, students ask questions about the social function, generic structure, and linguistic features of the text being read or heard (looked) that they do not understand or want to know more, or with guidance questions, students ask questions about social function, generic structure, and linguistic features in this stage. The students formulate questions about the social function, generic structure and linguistic features of the text being read or heard (observed) that they do not understand or want to know more, or with guided questions.

To facilitate the procedure of questioning the teacher must assist the students ask questions with regards to the objects they need to recognize, offer them with a number of questions the students can begin with, and even offer them with a number of guiding questions – the students can just tick some of them.

c. Collecting data/information (experimenting)

In experimenting, students acquire facts to reply the questions formulated in the 2nd step. They use one or extra strategies which include commentary (e.g., watching films or listening to audio recording),

interviewing aid men and women, and analyzing books. To enable the students to collect facts or records, the teachers need to provide them with worksheets and mastering sources. The activities in this degree are for instance looking more motion pictures, paying attention to extra audio recordings, paying attention to greater sample expressions, reading extra texts, looking up words into the dictionary, interviewing resource humans, studying books on grammar, pronunciation, vocabulary, and so on. They can access internet site hyperlinks, doing physical games, or practicing the grammar, vocabulary, or pronunciation.

d. Associating (analyzing data/information)

Students evaluate knowledge in this phase, in order to answer their questions and draw conclusions. With or without the help of teacher students sort out, define and identify trends for answering their questions. Some tasks may be alternative, for example, to recognize patterns (grammar, vocabulary or pronunciation), to formulate patterns (grammar, vocabulary or pronunciation). Finding answers to the questions posed or drawing conclusions In order to encourage students' study of data / information, teachers can help students see trends for answering questions and help them draw conclusions.

e. Communicating (answers/conclusions)

Within the communicating step students communicate their answers or conclusions to the course in composing and/or orally. Their answers (conclusions) speak to modern information they 'construct' or learn. At the conclusion of this step the students are anticipated to have learned the essential information (particularly around the social work of the content, structure of the content, language structure, and lexicon) in arrange to comprehend and make writings. In this step, students display their answers (conclusions) to the course, to the other bunches, show their answers (conclusions) or trade their discoveries (answers/conclusions) to the other bunches. In this step instructors ought to play a few parts, for

case giving input – redress, and improving the information that the students 'construct'.

f. Creating

Another step, namely creating, is needed to help students achieve the communicative competence. In this step the students are involved in the various activities ranging from guided to free activities, for example doing guided writing or speaking activities, doing semi guided writing or speaking activities, and doing free writing or speaking activities. It is the teachers' job to design guided, semi-guided and free language production tasks and to provide the students with strategy, idea, and language support.

3. Scientific Approach in Reading Comprehension

In this Industrial Revolution 4.0 era, the education system in has a new paradigm. The teachers are no longer act as the main resource of learning, but they also become the facilitator to guide the students in learning. However, it is not easy to be implemented because many teachers still dominate the learning activities by delivering the materials to their students most of the time.

In the curriculum of 2013, the teachers are required and demanded to guide the students in learning based on scientific teaching phases. They do not directly teach the lesson but ask the students to find the truth of the science by themselves. Scientific approach provides a set of syntax that leads the students to think more logically.

However, the implementation of scientific approach is not yet optimal, because teachers might not understand the scientific learning process comprehensively. The scientific approach is an approach which consists of 5M such as: *mengamati* (observing), *mengumpulkan informasi* (gathering information), *menanya* (asking), *mengkomunikasikan* (communicating), and *mengasosiasi* (associating). Another cause is the teacher has incorrect view about one step of scientific processes, especially in observing step. Teachers assume that the observation can be done only through eye sight. Further, although the

teachers have designed learning, but they tend to use conventional teaching methods that use a lot of lectures. This was the cause of learning that added to the non-orientation of the learner to follow Curriculum 2013 (Gunawan, 2017). In the interview, there were teachers who stated that another difficult step in implementing scientific approach is 'questioning phase'.

Teacher's efforts to provide enough space for the innovation, creativity, and independence of the students are not maximal yet. Again, it relates to the provided method in the lesson plan as explained before. Besides, it cannot be separated from the teacher's role as an ideal facilitator. The role is also not easy because the teacher has some difficulties in providing the right portion to the students' needs of each class. For the last characteristic, that is according to their talents, interests, abilities, and physical and psychological development of students, actually it can be easily achieved.

The explanation above about the teachers' lack of knowledge the scientific approach and its implementation in the classroom becomes the main reasons why generally teachers are failed in applying the scientific approach in the classroom. Similarly, the problems are also become the main barriers for English teachers around the writer Some teachers then just get back to the traditional ways of teaching (teacher centered), especially in teaching reading comprehension.

C. TEACHING MODEL

1. Definition of Model

Joyce & Weil (2014) define A model of teaching is a description of a learning environment, including our behavior as teachers when that model is used. Eggen (1979) defines that Models are prescriptive teaching strategies which help to realize specific instructional goals. They are designed to promote specific learning outcomes related to required standards in the academic disciplines through the use of a specially orchestrated set of activities (Kilbane and Milman, 2014: 18).

2. Characteristics of a Good Teaching Model

According to Eggen & Kauchak (2006) and Burden & Byrd (2010) as cited in Rüütmann and Vanaveski (2009) stated that effective teachers achieve deep student understanding by:

a. Identifying clear learning objectives for students;
b. Selecting teaching strategies that most effectively help students reach the objectives;
c. Providing examples and representations that help students acquire a deep understanding of the topics they study;
d. Guiding students as they construct their understanding of the topic being studies;
e. Continually monitoring students for evidence of learning.
f. the student

3. Elements Of Models Of Teaching

Element of a model of teaching represent its structure, process and teaching aids of the instruction. A model of teaching consists of syntax, social system, principle of reaction and support system Joyce & Weil (2014). The detailed descriptions are as follows.

a. Syntax

It is the steps or phases of the model being presented before the class. It illustrates the logical and sequential order of the teacher student activities of the instruction procedure. It describes the complete program of action of the model.

b. Social system

Social system of a model explains its nature of learning environment. It describes the role and relationship of the teacher and students through the phases as well as designing the lesson. As each and every model is unique, the role of teacher and students in every model may vary

according to the respective learning theory of the model is built. It also varies in phases to phases.

c. Principle of Reaction

This is the extension of social system. It deals with the rules of reaction to the students' responses in the classroom interaction. The reaction of the teacher must be in accordance with the theory of which model has been built. The teacher reaction is desired when the students' responses/ behaviors are untouched with expected level responses and for giving reinforcement. It depends the family of the model is presented.

d. Support system

It includes all instructional aides used in a model of teaching. Eg. Books, Encyclopedia, Video clips, slides, Newspaper, Tab, Expert, Films, Specimen etc.

e. Effect of models of Teaching

Models of teaching have a very positive effect on students' behavior. Bruce Joyce classified the effect as Instructional effect and Nurturant Effect. Instructional effects are the direct effect of an instruction on students' cognitive, affective and psychomotor domain. Nurturant effects are the indirect effect other than the teacher intends to achieve through the model. It is the additional achievement gained by the students through the unique nature classroom interaction. Examples are the development of problem-solving ability, analytical thinking, critical thinking, social skill, tolerance etc.

It is clear that the teaching models as mentioned above demand the teachers to be more involving and engaging students in learning. The learning process must be conducted with the awareness of teachers, students, and the stakeholders to consider the new perspectives in teaching and learning process thus to apply it into the class activity. It is a real challenge for the teachers to set up the new mindset in teaching. Not only to change the teacher's centered learning activities

to students centered, but also how to create more interactive, dynamic, critical, creative and communicative classroom along with the purpose to set the learning which involve collaborative actions.

D. RELEVANT RESEARCHES

There are numerous studies had been carried out related to the scientific approach ELT in general and to teach reading in particular. Pratiwi (2018) stated that most teachers are able to conduct scientific approach in the classroom but they need to vary activities in the classroom. Ratnaningsih (2017) in her study elaborated those English teachers in a junior high school implemented the Scientific Approach in their English Language Teaching. They conducted all the stages involving observing, questioning, experimenting, associating and communicating. To emphasize, the teachers need to consider the time for implementation because the students need much opportunities to dig the stages. Furthermore, the teachers conducted active and meaningful learning but they still lack of critical thinking (HOTS).

Further, Nugraha & Suherdi (2017) presented that scientific approach implemented by the teacher could engage students in active learning and develop various students' contributions. How the teacher led the active learning activities and students' contributions were varied depend on the stages. Scientific approach implemented successfully developed students' critical thinking and fostering high-thinking level of students' learning behavior. The difficulties encountered by the teacher during the implementation of scientific approach are the problem on students, time allotment, and the teaching management.

In relevance with the model developed, this study used Guthrie, et al (2004). They divided the activities in teaching reading into in reading there are some phases that could be done by the teachers using scientific inquiry, they are:

1. **Activating Background Knowledge**

   The strategy of activating background knowledge refers to recalling experiences and knowledge of texts before reading, for the purpose of linking new content to prior understanding.

2. **Questioning.**

   Questioning refers to asking, or writing, a self-initiated question about the content of the text before reading. Questions may be answered by a simple fact, or a yes or no response.

3. **Searching for Information**.

   It refers to seeking and finding a subset of information in the total text by forming specific goals, selecting particular sections of text, extracting accurate information, combining new and old information, and continuing until goals are fulfilled.

4. **Summarizing**

   Summarizing refers to forming an accurate, abstract representation of text after reading all or a substantial portion of material.

5. **Organizing Graphically**.

   Organizing text graphically refers to constructing a spatial representation of text-based knowledge, which may include drawings, concepts maps, and diagrams.

In addition, Pardo (--), suggest that readers with individual differences, teachers can do following activities They teach decoding skills, help students build fluency, build and activate background knowledge, teach vocabulary words, motivate students, and engage them in personal responses to text.

From relevant researches, the writer concludes that there are teachers who are able to construct and apply the scientific approach in their classroom even though some still embrace difficulties especially in implementing HOTS activities in the classroom. The other obstacles are the time allotment to teach English. In Curriculum 2013, the exact time that the teachers get to teach their students only consist of 4 hours of meeting with forty minutes per each hour.

On the further reading of applying scientific approach in teaching reading, the writer found an interesting model developed by Gutherie, Wigfield and Perencevich (2004), in their model, they introducing Concept-Oriented Reading Instruction (CORI) as a framework in teaching reading, especially in reading science materials. The framework consists of: *Activating Background*

Knowledge, Questioning, Searching for Information, Summarizing, Organizing Graphically, and Creating a Motivating Context.

The insights from those previous studies, then the writer intended to develop activities which suits to the curriculum demand and easy to be conducted in Indonesian classroom context. These activities will be a bit different with the approach stated in CORI. The phases of *Searching for Information, Summarizing and Organizing Graphically* will not fully adopted. Instead, the writer will use the other strategies called Experiment and Example, Re-Observation, Re-Oration or Re-Opinion and Plus as the final phase that can be used or eliminated depend on the need of the teacher and the purposes of the teaching.

This model is known as OREO-PLUS. In this model the syntax is designed as following: Opinion and Observation – Reading and Researching – Example and Experiment – Oration and re-Observation. The word PLUS is writer ideas for the activities that possibly applied in the classroom in order to fulfil the global challenge on Industrial Revolution 4.0 and 21st century skills. Further explanation about the model can be found in chapter four.