

CHAPTER II

THEORITICAL REVIEW

A. Perception

1. Definition of Perception

Perception is the process of human thinking about certain phenomenon. In other definition, perception is start from the sense of organ. This process is related to the acceptance of message or information by human brain. In this process, a person interacts with his/her environments using five senses. Those are sight, hearing, taste, smell and touch. People interact with environment use these senses, then stimuli will be registered by brain and send them to nervous system. Furthermore, this process is called as sensation, and sensation is a part of perception. (Walgito,2004, p.87)

The term of perception is also called as a view, idea, or assumption. It is because in the perception there is someone response about a thing or object. Perception is automatically related to certain nature of human being, which his or her psychological features. Slameto (2010, p.102) explained that perception is a process related to acceptance of information by human brain. During the process, a person continually interacts with his or her environment.

From the definition above, it can be concluded that perception is an action of interpreting something, which is happened in the psychological mindset in the form of response or opinion. In this research, perception means the opinion of senior high school English teachers in English teaching and learning based on scientific approach.

2. Basic Principles of Perception

For teachers, knowing and applying the principles which related to perception is important. Slameto (2010, p.103) explains about the basic principles of perception. Those are:

a. Perception is relative not absolute

Perception of someone or group is different from others. Sometimes, it will be different even though they see about the same thing. In relation with relative perception, the first stimulus will give bigger impact than the next one. For example, teacher can predict the next lesson because she/he known the students' previous perception from the previous lesson.

b. Perception is selective

A person just showed some stimulation of many stimuli around him/her at certain moments. It means that stimuli which arise based on experience or something that has been studied. Based on this principle, in

giving lesson, the teachers have to be able to select the material or part of lesson that to be taught to get more attention from students.

c. Perception has arrangement

People receive the stimulus in the form of relation or groups. Based on this principle, in delivering the learning materials teachers have to arrange it in the same condition.

d. Perception is influenced by hope and readiness

Hope and readiness of the receiver will determine which message will be selected for admission, and how the message will be interpreted. For example, in the lesson, teacher can prepare students for the next lessons by showing the steps of the learning activity that students do.

e. Perception of someone or groups can be different although in the same situation.

The different perception can be reached in individual differences, the different of personality, and different of behavior or motivation. For the teacher, this principle means that the perception could be more or less the same with the perception shared by other classes with the same subject being taught.

3. Process of Perception

Perception is started by accepting the stimulation from an object through the sense of organ, and then continues with register of stimuli to nervous system which is called as sensation. Furthermore, this process is ended by thinking, analyzing, and interpreting in order to achieve the meaning of object. In relation with the process of perception, Walgito (2010, p.102) stated that perception is a complex process. He divided the process of perception into three as follows:

a. Physical Process

Perception arises because of the response to the stimulus. The first step of perception is sensation. All of the sensations enter through humans' sense. Sensation will influence the stimulus.

b. Physiological Process

It is the process of sending stimuli to the brain by sense organ.

c. Interpretation

The process happens when the brain process the stimuli. Then, the individual realized what is receive by his/her brain and gets the meaningful interpretation of stimuli.

4. Factors Affecting Perception

Everyone has different perception in seeing the same thing. The difference can be affected by many factors. According to Gibson et al (1985, p.94), there are four factors influencing someone in drawing a perception, those are:

a. Self-concept

Self-concept is the way how an individual sees and feels about themselves and it affects their perception toward something. In other word, the way you view yourself and your capabilities is called self-concept. Self-concept also comes from someone's experience previously the self-concept may include the perception of one's abilities, motives, attitudes, beliefs, and other personality characteristics

b. Situation

Situation affects someone's perception, since it influences their feeling and habit in their daily life. The situation that people face also influences perceptual accuracy. Related to this research, if the teachers feel that in English teaching and learning process based on scientific approach is complicated and difficult, then, they will perceive a negative perception of it.

c. Needs

Perceptions are significantly influenced by needs and wants. Someone's needs of something that influences his/her perception. A willingness to know something good demands them to have a good perception of it.

d. Emotion

Someone's emotional condition also affects his or her perception on his or her way to see something. For example, if someone has a good emotion, such as happy and cheerful, he or she can give a good perception on something. However, when someone has bad emotion such as anxiety, anger, and regret, they may have a bad or negative perception of something. Therefore, someone's emotion determines their perception of something.

B. English Teaching and Learning Process

In Indonesia, English is one of important school subject and it is necessary for students to pass an examination. Therefore, English is still regarded as an important subject. In teaching English, there is teaching and learning process. Teaching and learning process is a process of transferring and gaining knowledge. Good teaching-learning process, there is should be an interaction between teacher and students and also students and students.

Besides that, teachers have to utilize the interaction to make students active in learning.

C. Perception on English teaching and learning process

Teaching and learning cannot be separated each other. It is because learning indicates on what students should do as a subject who received a lesson, and teaching indicates on what teachers should do as a teacher. (Sudjana. 2010, p.28). Teaching can be defined as an activity to give someone knowledge, guide someone, provide someone with knowledge, cause someone to know or understand in the learning process. Then, learning is a step of behavior change that relatively permanent as a result of experience and interaction with their environment that involves a cognitive process. The core of teaching and learning process is the interaction between teacher and students or students and students. The purpose of the interaction is to reach the learning objective. There are some points for the teachers to reach the learning objective in English teaching and learning, as follows:

a. Learning models

Learning model is a conceptual framework that describes a systematic procedure in organizing learning experiences to reach the learning objective and help teachers to teach the students in learning process. According to Materi Pelatihan Implementasi Kurikulum 2013, there are three types of learning

model that can be implemented by the teacher in learning process, those are Project Based Learning (PJBL), Problem Based Learning (PBL) and Discovery Learning.

Project Based Learning (PJBL) is a learning model that involves students in a project which produce a product. The involvement of students started from planning, making a design, doing, and reporting the result activity in the form of product. Project based learning will enable the students-centered learning and encourage students to develop their skill and knowledge. Students gain knowledge and skills by investigating and responding. It is supported by Mulyasa (2014, p.145), who states that project based learning is an instructional model that the aim is to focus learners on complex issues which needs to investigate and comprehend the subject matter through investigation. The teacher roles as fasilitator, coach, counselor, mediator, to help students get the result optimally.

Problem Based Learning (PBL) is a learning model that presents a problem for students. Then, the teacher guides the students to solve the problem in a group. Problem Based Learning is expected to improve the students' skills in achieving the learning material. It is supported by Tan (2003) as cited in Rusman (2010), states that problem based learning is an innovation in learning. it is because, problem based learning can develop students' thinking ability through group or team work systematically, so that

the students can empower, train, examine and develop their thinking ability continuously.

Discovery Learning is the same as inquiry and problem solving. Discovery learning more emphasizes in finding the concept that haven't known before. Inquiry learning is emphasized of the finding through research process. Moreover, problem solving is emphasized on the ability to solve the problem. According to Syah (2004), in applying discovery in the class, there are some steps that should do in teaching and learning process. As follows:

1. Stimulation

Teachers give stimulation in form of question or asked students to read a book, etc.

2. Problem Statement

After teachers give stimulation, they have to give opportunity for students to identify the problem as much as possible which relevant to the material. Then, choose one of them and formulate in form of hypothesis.

3. Data collection

Teachers give opportunity for students to collect information as much as possible which is appropriate to prove the hypothesis. The data can be gotten from observing an object, interview, experiment, etc.

4. Processing Data

Processing data is an activity of processing data and information that got from previous activity.

5. Verification

In this step, students check the data carefully to prove whether the hypothesis that is decided is right or not, then it is related to the processing data result.

6. Generalization

In this step, students draw a conclusion based on verification result.

b. Learning media

In English teaching and learning process, the teachers usually use media to support the learning process. According to Sadiman,(2011, p.7) who states that media is all the things which can be used to deliver messages from sender to the receiver. In the learning process, the sender is the teachers and the receivers are the students itself. The types of media that can be used by the teachers in English teaching and learning process such as video, picture, song, magazine, newspaper and etc. The uses of media in teaching and learning process are to develop both critical understanding and active participation (Buckingham, 2001). In this research, media is an agent or mediator to give the

source of information. Media is suitable to be used in teaching and learning process, it is because by using media in English teaching and learning process make students interested and fun in learning.

c. Students activity

In the teaching and learning activity, the students are not learners only in the classroom. 2013 Curriculum requires the teachers to think creatively in gathering new ideas for teaching and learning activity in the classroom. According to Mulyasa(2014, p.45) argues that the teachers have to be able to teach in order to encourage and develop the student activity. The student activity can be categorizes such as visual activities, oral activities, listening activities, writing activities, drawing activities, motor activities, mental activities, and emotional activities. Those activities cannot be separated each other. (Rohani, 2012, p.10-p11)

D. Scientific Approach in 2013 Curriculum

1. The Nature of Scientific Approach

Scientific approach is an approach which is applied in the 2013 curriculum, especially in senior high school. Scientific approach is a one way or mechanism to get knowledge with procedure that is based on scientific method. Scientific approach or method has the characteristic of “doing

science”. This approach allows teachers to improve the process of learning by breaking down the process into several steps which is contained of detailed instruction for conducting students learning (Tang et al. 2009).

The aims of applying scientific approach in teaching-learning process are to increase students critical thinking, give chance for the students to state their ideas or arguments, build students' ability in problem solving, develop aptitude, potential and skill that students have, create the condition of learning process as a fun learning for students, and develop students' characters. (Materi Pelatihan Guru Dalam Implentasi Kurikulum 2013)

Scientific approach is believed as a good approach to make the students take a part in the learning process. The learning process using scientific approach in 2013 curriculum is students-centered learning. The teachers' have role as a facilitator for students and monitoring the learning activity. Bernard in Keyes (2010, p.21) states that “A scientific method based on three assumptions: (a) that reality is ‘out there’ to be discovered; (b) that direct observation is the way to discover it; and (c) that material explanations for observable phenomena are always sufficient, and that metaphysical explanations are never needed”. Basically, scientific method makes students doing a variety of learning experiences through observation and explains the result of observation. In the learning process, the teacher should be creative in providing and presenting the material. The learning activities have to provide

opportunities for students to try to observe, analyze, and communicate in order to develop their thinking ability. It is done to make the students active in learning process in the classroom.

2. The Criteria of Scientific Approach

Scientific approach has some criteria to apply in teaching and learning process. Materi Pelatihan Guru Implementasi Kurikulum 2013 explained that learning process should be carried out based on scientific criteria, as follows:

- a. The learning materials are based on fact, real thing, or phenomenon.
- b. The teacher's explanation, students' response, and educational interaction between teacher and students are logic.
- c. Encouraging and inspiring students to think critically, analytical, and students are able to identify, understand, solve the problem, and apply the learning material.
- d. Encouraging and inspiring students to be able to think hypothetical in seeing the difference, similarity, and relation one to another from the learning material.
- e. Encouraging and inspiring students to be able to understand, apply, and develop the rational and objective mindset in responding learning materials.
- f. Based on concept, theory, and empirical fact that can be responsible.

- g. The learning objective is formulated simply and clearly, but interesting to students.

The criteria above can help teacher to understand about scientific approach and they can apply this approach in the teaching and learning process.

3. The Domains of Scientific Approach

In accordance with the competency standard of graduates (*Standar Kompetensi Lulusan*) of the 2013 curriculum, includes the development of three domains in scientific approach; those are attitude, knowledge and skill which is elaborated for every educational system.

Those domains have different psychological. The domains can be achieved by implementing scientific approach. In the attitude domain, the students know 'why' they have to learn. Attitude is achieved from some activities such as receiving, operating, appreciating, inspiring and applying. On the knowledge domain, the students know 'what' they are learning. It is achieved from remembering activity, understanding, applying, analyzing, assessing, and creating. And the last domain is skill. In this domain the students know 'how' they gain their knowledge. The activities start from observing, questioning, practicing, thinking, supplying, and creating. As the result, the students increase and balance their ability in soft skills and hard

skills to build up students' productivity and creativity. In 2013 curriculum, students invited

4. The Steps of Scientific Approach Implementation

Curriculum 2013 emphasizes on modern pedagogic dimension in learning using scientific approach. Scientific approach is developed from Dyer's theory about components of innovative skill combined in the learning process, According to Permendikbud no 81 A/2013 appendix IV and Hosnan (2014) state that scientific approach has five basic steps of learning process for all subjects include English subject, as follows:

a. Observing

Observing is the first step in scientific approach. Observing is also a kind of meaningful learning. In this step, the teacher can provide object or media that will be observed by students. The observation can be done through seeing, listening or reading the media or object that provide by the teachers. The aim of this step is to build students curiosity about the learning material that will be learned. The teachers let the students do observation and train the students to observe the important things from the media or certain object. By conducting this process, the students are able

to connect the object that is observed and the material that is going to be discussed in the classroom.

b. Questioning

Questioning is the second step in implementing scientific approach. The aim of this step is to increase students' curiosity and critical thinking, so that they will ask some questions related to the topic or object that had been observed. The students can use WH questions to start constructing the questions. Questioning process can be done by class discussion or group discussion. Discussion let the students express their ideas on their own language. The teacher should guides students to make questions related to the object and guide them to correct the mispronunciation, diction, and grammar.

c. Associating

Associating step is a step where the students cluster the information or ideas that have been got and associate them into good memory. The students have to use the information that they got from the previous step. The aims of this step are to find out the relation between the one information to other information and find out how they related each other. Then, make the conclusion from the information. The specific purpose of associating step is to relate the information with the fact in the

daily activity. The activities can be done by students in a group discussion such analyzing data, grouping, categorizing, and concluding. In this step, students have to analyze the information that they get in the previous step and they should draw the conclusion based on their analysis. In other words, students are to make clear conclusion using all information and observation result by combining and relating them into specific information.

d. Experimenting or Collecting information

Experimenting is one way to collect information. Experimenting is defined as a detailed activity that aims to get data. In this step, the students have to develop their knowledge by collecting further information related to the topic. The students can get information from books, media, newspaper, or internet. The data or information collected by students is to answer the questions that have been made in the previous step. The teachers have the role as a facilitator and monitoring the learning process to make sure that all of students involve in the activity. By conducting this step, the students are expected to experience the phenomena directly so that they can answer their questions.

e. Networking or Communicating

In this step, the teachers give the chance for the students to present their result to their friends in front of the class. This step let students to write or tell what that they have found in the experimenting and associating steps based on their analysis. After the students present their result, the teacher and other students may give feedback about their presentation. The teachers' role in this step is to describe or tell the correct information or conclusion from the topic that is discussed. In addition, the teachers should be moderator when the students present their result.

From the explanation about the steps of doing scientific approach in teaching learning process above, it can be seen that by doing scientific approach in teaching and learning activities, the students can be actively involved in class activities by integrating skills, attitude, and knowledge.

E. Previous Study

To stray the concept of this research, there are two research finding which will be presented in this part. Below is the description of each:

1. The Perception of English Senior High School Teachers in Buleleng District on The Scientific Approach in The Implementation of Curriculum 2013

A research covered teachers perception toward scientific approach has already been conducted by Ni Wayan Surya Mahayanti in University of

Pendidikan Ganesha. This research describe the teachers perception towards scientific approach in English teaching. The result shows that almost all of senior high school English teachers in Buleleng district had good perception toward scientific approach in implementation curriculum 2013.

The similarity of this previous research with this research is the subject are English teacher in senior high schools. Both of the researchers also analyzed about teacher perception in implementing scientific approach.

The differentiate of this previous research with this research are the sampling technique of previous research is random sampling, it means that each teacher have opportunity to be sample. then, the technique of collecting data only use questionnaire. It is different from this research because, in this research, researcher use purposive sampling technique and the technique of collecting data use questionnaire as main data and interview as supporting data.

2. Implementing Scientific Approach to Teach English at Senior High Schools in Indonesia

A research covered teachers perception toward scientific approach has already been conducted by Zaim in state university of Padang. This research describe the teachers perception towards scientific approach in reading class..

The result shows that teachers in two differens senior high schools in Padang had good perception toward scientific approach in teaching reading.

The similarity of this previous research with this research is the place of research in senior high schools. Both of the researchers also analyzed about teacher perception in implementing scientific approach.

The differentiate between the previous research with this reasearh are is the technique of collecting data that is used. The previous research used observation sheet and interview, but in this research the researcher will use questionnaire and interview

