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## THE IMPLEMENTATION OF SCIENTIFIC APPROACH IN ENGLISH LEARNING

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### Abstract

This research has a purposes to find out the problems faced by the teachers in implementing the scientific approach in English learning and how they solved those problems. This is a qualitative research that took setting at three high schools of Ponorogo that have been assigned by the government to implement curriculum 2013 since the first year the curriculum issued. The subject is the English teachers. The data was taken with observation and interview and then analyzed with Huberman and Miles model which has three steps they are selection, display, and data presentation. The result showed that the teacher got problems in observing, questioning, and associating steps and they solved the problems: they skipped the steps or combined with other method.

**Keywords :** Scientific Approach, English Learning

### INTRODUCTION

The changing of curriculum is not uncommon in education, it is a must. Since the changing is needed to improve the quality of education. It often makes the school, the teacher, and the student are not ready yet to implement the new one. It also happens in our country. The new curriculum for primary and secondary education namely curriculum 2013 has caused some problems especially in the implementation level.

The implementation of scientific approach at schools makes the teacher confused, since their understanding about the approach is not yet sufficient. The government decided to use this approach because it is considered as the best and the most scientific in getting the knowledge. Firstly this approach was invented to conduct the learning process and research in natural sciences (exact science) but now it has been used widely in social and humanistic sciences as well. In K 13 the model of scientific approach has following stages: observing, questioning, experimenting, associating, presenting, and creating.

The use of this approach in language learning is not familiar, since language learning itself has its own approaches. The development of these approaches of course pass over years and each approach has its own strengths and weaknesses whenever it is implemented. As it is stated by Koosha and Yakhabi (2013) when communicative language teaching (the latest approach) was implemented in Iran is not yet successful because the past learning was textual while CLT based on real situation. The Iranian students had not used to. This phenomenon also happened in Indonesia when the active learning as the part of KTSP must be implemented, it had been failed to implement in northern Sumatra primary schools since the teacher got difficulty to change their passive students into active (Djulia: 2011).

In Ponorogo year by year many schools have decided to implement 2013 since the first year onle schools were assigned by the government to implement this new curriculum, however there are still many teachers especially English teacher who reluctantly implement the scientific approach. There are many reasons, besides they are not ready yet, the lack of understanding, and others. Based on this phenomenon the writer conducted a study to find out the problems and the solution of the implementation of scientific approach in English class. It is hoped that the result can be a reference for all that are involved in the implementation of K 13, and also the government as the authority of national education.

### LITERATURE REVIEW

Scientific approach is a method used by the scientist to study empirically on the phenomenon of the surrounding of human life. The empirical evidence according to Shuttleworth (2014) is the



use to get the science and knowledge and it must based on observation and measurement, and must involves experiments.

Harard (2001: 2) supports that idea that scientific approach is the way to solve the human problems because as the problem solving the science is not static but dynamic and it always explores this world to find out the truth.

Based on the education ministry rules no 65 year of 2013 that learning process must be based on the steps of scientific approach that includes : observing, questioning, experimenting, associating, presenting, and creating.

When the approach is implemented the learning methodology should be determined then, since a method encompasses the types of learning activities, procedures and techniques that are employed by teachers when they teach and the principles that underlie the design of the activities and exercises in their textbooks and teaching resources. The principles here is related to the theory of language (Richards, 2013: 6). It is very clear that the method or approach in learning depends on the development of the theory of language and language learning.

These are some approaches in language learning that have been developed and implemented world-widely: grammar translation method was the earliest developed which is for textual language learning; natural approach, the opposite of GTM, the method emphasizes on the function of language as the mean to deliver information; this approach then strengthened by direct method that the instructional language must be the target language; audio-lingual method that adopts behavioristic theory that the language competence is based on the habit so that the mistakes in grammar and pronunciation must be prevented; total physical response emphasizes a listening skill by giving responses on oral language by physical activity; community language learning which emphasizes on affective aspect, and the last is communicative language teaching in which the learners must use the target language as the communication means.

#### METHOD

This research used qualitative approach since it investigated the facts to solve the research questions and without relating the cause and effect variables. The data was taken from three high schools that have implemented curriculum 2013 and the subject was three teachers. To collect the data there were two instruments used namely observation and interview.

Analysis data used Miles and Huberman model that consists of three stages, they are reduction, display, and conclusion. In reduction step the data was selected to obtain the needed ones only the data related to the matter are chosen. Narration was used to display the selected data and the conclusion was drawn when the data obtained had been consistent.

#### FINDING

##### Observation Data

The description of observation data is only about the main activity of learning process, since the implementation of a learning method generally conducted in this session. The data only presents the significant events. There were some English classes that were observed. Those classes were conducting varied topics such as the invitation card, describing things around us, song, and exposition and those topics exploring the language skill of writing for the first and second topics, listening skill for the third topic and reading for the last topic. Since the limitation of time the data in speaking class was not taken but some classes integrated speaking with all topics.

The data taken from two public junior high schools and one senior high school, the school have been assigned by the government as the first schools conducting curriculum 2013 in Ponorogo. The schools identity and the teacher were not presented since it is to avoid the misunderstanding from the schools and the teachers.



### *Observation 1*

In the first observation the topic of the class was invitation card, it is a writing class. The teacher showed an invitation card, after some minutes observing it the students were given some questions related to the material. In this session the teacher paid attention more on the student's vocabulary mastery, more questions about it were asked. The next he stated the purpose of the class.

The first step was repeated by showing a picture of birthday invitation card and asking the students and they were writing some significant matters about the card. He, once again, emphasized on vocabulary mastery. He asked the students to practice the pronunciation by drilling. The next step was the students grouped into small ones to do the exercises, then the class was closed by summarizing the material.

Since the material was not yet finished the class was continued to the next meeting. In this occasion the students compared some pictures of birthday invitation cards. By comparing some cards the students after being explained by the teacher should understand the social function, the text structures, and the language features of those cards.

They worked collaboratively in making the card and then some of them given a chance to present in front of the class.

### *Observation 2*

It is also a writing class but with different teacher. After the students observed an invitation card the teacher explained about the material that was taken from the textbook but it was presented through a power point. The next step was pronunciation practice session, the students were drilled for the right pronunciation. To do the exercise they were grouped into some. This class was continued to the next meeting.

In the next meeting they were also then compared some cards in order to have some varied cards as the example. This activity was then continued to create their own cards and the last some of them presented in front of the class.

### *Observation 3*

With the topic Things around Us the student must know the presence of animals, plants, things, and buildings around them. By observing the pictures the students identified the things in the pictures and then they were drilled to pronounce them rightly. The next they were given descriptive sentences and in group they discussed them. The teacher read the sentences they must repeated after him. The last they wrote the descriptive sentences based on the pictures.

### *Observation 4*

In the other class of the same topic the teacher used video instead of pictures. The students mentioned the animals showed in the video. Next, they wrote them on the board and read them together. The last activity was making the descriptive sentences based on the video.

### *Observation 5*

This following is listening class with the topic "a song". The main activity was listening to a song. While the teacher was playing a song video the student discussed about the content of the song in order to identify the theme. They were given an exercises of completing missing lyrics. This activity was continued to compare two songs and they must retell the content of both.

### *Observation 6*

In the reading class with the topic "Junk Food" the activity was divided into two. The first was mastering vocabulary and the second was comprehending the text. The teacher implemented a word game but before the game was started the students was observing some pictures of food



and a poster of the junk food danger. They explored their knowledge about the topic related to exposition text. In this activity the teacher asked about exposition generic structures.

The game was begun with grouping the students, it needed rather longer time because the teacher used a specific technique but the class became enthusiast. The task was finding out the synonym of a list of words taken from the text. The students were very enthusiast to do. After they completed the task they were given two texts.

They must compare two kinds of the exposition texts. In doing this activity the students were regrouped by exchanging the members. The task given was answering some questions. After completing the task the answer sheets were exchanged one to the other groups. Then the teacher confirmed the answers by asking the students. Each group must score the other's group answered and the teacher gave the final score.

#### Interview Data

There were three teachers interviewed. These teachers are from two schools.

##### Question 1

Which step of scientific approach do you think the most difficult to conduct?

Teacher 1 : I consider questioning step is the most difficult. As we know that one of our students' characteristics is they tend to be passive in class whenever they are supposed to ask about the difficulty, or giving the opinion of the material. Usually before K13 implemented the questions session was given after the material explanation however they seldom delivered such questions or opinion in order to clarify the unclear explanation. In the scientific approach this phase is in the second step after they observe the examples of the topic material. It can be predicted that they have no idea to ask. The second difficult step is associating, though I usually group them into teamwork I have to explain the material most instead of waiting for their discussion result.

Teacher 2 : According to my opinion the implementation of scientific approach is not simple in English class, it is rather complicated. I never consider whether my method is suitable with it. The most important thing that the basic competence is reached and my students are enjoying and active in the class.

Teacher 3 : Well, as long as I can conduct it I always try to implement the scientific approach. So far the thing that is not easy to do is assessing the learning process. It is not simple activity to conduct the learning and assessing all aspects demanded by curriculum as well. There are a lot of activities for one topic some time the time is not enough to conduct all the activities.

##### Question 2

What is your solution to overcome the problem?

Teacher 1 : I have ever to try implementing the steps strictly it took more time than it should be, when I was waiting for my students proposing the questions. Now I often skip this phase. Since the associating step in SMP level is to discuss the social function, the text structure, and the language features I often implement genre base methods here. It is more efficient and effective in my class. The students do the exercises more smoothly. To manipulate the insufficient time because of a lot of material and also sometimes there are unpredictable events bothering the schedule I usually choose the activity that is able to cover some skills at once. Meanwhile in doing assessing I only make measurement on the certain students usually the active ones.

Teacher 2 : As I said previously It is not a matter for me whether the steps of scientific approach implemented in my class or not. I always use the method adjusted with the



characteristic of the material itself and my students' condition. Since I have parallel classes and I often have different methods for them. According to my opinion we can implement those steps flexibly adjusted with the situation, not all steps sometimes can be implemented orderly and in one time. We possibly can omit certain step or combine with other steps out of the scientific approach.

Teacher 3 : My problem is I have difficulty to focus on two activities at once. I always try to walk on the right path actually but it is not easy. Therefore I always divide the assessment for some meetings so that all students' progress can be measured. For me obeying the curriculum is a must. I must consider the material that can cover each topic carefully to adjust the available time.

### DISCUSSION

The steps of scientific approach based on Curriculum 2013 consist of observing, questioning, experimenting, associating, and communicating, and sometimes they can be continued to creating if it is possible. This following discussion is presented based on the steps of scientific approach.

#### Observing Step

Most classes implemented the observing step. The teacher usually used video or audio media, this media are the easiest to get and the plenty sources and appearances. The teacher as well as the students enjoyed this stage and moreover the use of media was able to make the students interested with the topic. The student's interest is hoped to generate their curiosity about the lesson in this step the teacher should stimulate them by asking. The fact the teacher's stimulation was not always successful. It was right to make them try to answer the teacher's questions but it was not successful to make them raise the questions.

The teacher had given the task in supporting the students' understanding toward the material, and often combined with drilling, especially for pronunciation practice. In listening class generally the teacher ran out of idea to make their students stimulated to curious about the song itself. The song can be the learning material as well as the learning media so that the students can get more interested. Instead of using song as it should be, the teacher only ask them to gather the information from the song by giving them written closed questions.

#### Questioning

This phase actually is not always the separated from observing, while they are observing the thoughts about the object can be formulated in the form of questions. In the other word the curiosity, the things that they want to know more, is the purpose of questioning. The teacher was impatient and less creative to stimulate the questioning students. The teacher often skipped this phase.

Based on English guidance book for the junior high school teacher some characteristics of learning English is example from the teacher even though the teacher had given the questions to lead them doing the same thing it was not easy to move them.

#### Experimenting

Through some exercises usually the students try to apply their knowledge that they acquired through observing. There was no hardship in this phase, since the activity had been usual for them in the past.

#### Associating

In this phase the students are supposed to draw the concept of knowledge they have learned and relate with their background knowledge. It is not easy to let the students do it themselves. For the early level such as the junior high school students the teacher's intervention can not be



avoided. The teacher often explained the material clearly and explicitly before they did themselves. And even there was the order of the steps changed based on genre base approach. After the observing phase the activity was skipped into associating in which the steps were changed as in genre base approach.

The other activity is giving some texts and the students must compare them in order to find out the common characteristics those texts have and also the differences as well.

### Communicating

Communicating is the last phase. In this phase students must communicate their knowledge that they have acquired through previous phase. The students' activity in this step usually is presenting their work in front of the class whether orally or in a written way. For this phase generally all activities can run well.

### CONCLUSIONS

From the previous part in finding and discussion it can be concluded what problems are faced by the teacher in implementing scientific approach in English class and how the teacher overcomes them.

The first problem is the teacher sometimes could not maximize the learning media used in observing step, the teacher did not provide the observing activity with a clear task that can lead to the next step of this approach. The second problem is most teacher got difficulty to arouse the students' curiosity toward the material observed in observing step. The third is the teacher can not let the student do associating step without his assistance most.

To overcome the first problem the teacher usually added the other activity that usually is not part of the step such as drilling the pronunciation, giving vocabulary exercises, and even explaining the material. Meanwhile for the second problem most teacher chose to skip this step with the reason it can reduce the wasted time. And the last is combine the step with other method's step.

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