Abstract

The Implementation of Scientific Approach in Teaching English Based on 2013 Curriculum

Burhanuddin¹, Arifin Syamaun¹, Nira Erdiana¹

Syiah Kuala University, Banda Aceh

Email: burhanuddin966@gmail.com

Abstract

2013 curriculum applies scientific approach in the formal learning process, and the scientific approach offers more chance for students to get more involved in the learning process. The scientific approach stimulates students to think creatively through some steps, and that draw the writer’s attention to conduct such research regarding the scientific approach to prove if implementation of scientific approach can stimulate student to think creatively as result of learning process. This research focuses on the implementation of scientific approach in the classroom at SMA Lab School Unsyiah. This research gather data from two sources; observation during English class to examine the implementation of the method in the class and conducting interview with English teacher to gain deeper data regarding the implementation of scientific approach. Result of this research showed the implementation of scientific approach during learning process still need improvement. That was caused by unequal chance received by students to directly participate in the whole steps of scientific approach. Naturally, the implementation of scientific approach is helpful and should be applied during teaching and learning process in school to stimulate students’ activeness.

Keyword: scientific approach, implementation, learning process

I. INTRODUCTION

Regarding educational programs, Indonesia has developed various curriculums to ensure the purposes of the education are accomplished. However, these curriculums do not remain in permanent forms; it usually changes as government changes Minister of Education. Indonesia’s curriculums have changed several times since 1947 (Gunawan, 2016), each change was proclaimed as improvement of the latest curriculum. Still, each curriculum had specific characteristic which made them different with each other. Even though the curriculum changed many times, main purposes of the educational programs remain the same; to provide proper education for citizens, to adapt modernization,
and to be able to compete with other countries around the globe. Today, Indonesia government applies 2013 curriculum which is the latest curriculum change in the national education system, as it refers to the laws of national education.

The 2013 Curriculum contains four core competences; religious, social, knowledge, and knowledge applications (Subandi, 2014) and has three aspects of assessment; attitude, knowledge, and skills. Teachers assess students’ attitude by observing their behavior in class. To assess knowledge, students are tested verbally and orally and also assessed based on their accomplished assignments. Skills aspects are evaluated by students’ works which demand students to demonstrate their projects or portfolios.

The main feature in this curriculum is the application of scientific approach in learning process. This approach was usually used in science courses, but now it is applied in almost courses in school (Dahlan, 2015). This approach emphasizes students to independently learn their courses; teachers are not the main source of knowledge or information. The implementation of scientific approach in learning process is not teacher oriented, thus students are freely to share ideas based on their knowledge or their experiences since teachers only guide them during learning process. Steps in the implementation of the approach include observing, questioning, experimenting, associating, and communicating. This approach offers student favorable outcome through the process they have done (Hidayati, 2014, p. 26) by gaining new knowledge and experiences.

This approach is originally developed to help students’ improving their ability regarding factual issues around them. So that students see those issues as new knowledge and experiences, this notifies them that knowledge and experiences can be discovered anywhere. The scientific approach establishes students’ mindset to see learning as a need to motivate them to study, helps them to solve problems systematically, and encourage them to express their thought (Ine, 2015, p. 272), and those must be conducted scientifically. Learning process must avoid non-scientific value such as prejudice, intuition, or accidental result (Suhartati, 2016, p. 56).

2. LITERATURE REVIEW

Curriculum 2013 is a concept of education and culture that develop the students’ character. The teacher must stimulate students to observe, make question, associate, experiment, and then communicate. All those steps are called as Scientific Approach (Sofyan, 2016). The main aspect of 2013 curriculum is scientific approach. With this approach, the students are encouraged to have a responsibility to the environment, interpersonal skills, and ability to think critically. It is defined as the process of finding out information in science, which involves testing the ideas by performing experiments and making decisions based on the result of analysis (Longman, 2014 cited in Zaim, 2017).

Originally, the steps in scientific approach was applied in science courses, but later it be applied to all courses. 2013 curriculum applies these steps to almost courses in school to train student to act and behave like scientists. Teachers have significant role in all those steps although scientific approach is not teacher-centered. Those all steps are guided by teachers, so students can avoid irrelevant issues during their learning process.
The following numbers are brief explanation concerning steps in applying the scientific approach as stated by Zaim (2017) and Shofwan (2016).

1. Observing
   In this step, students are gathering information from any sources. The observing can be done through reading, listening, or seeing the object. This observing activity should connect to learning material in the school. There are some steps in observing process; (1) determining object to be observed, (2) determining the way of observation, (3) determining necessary data of the object, (4) limiting the object, (5) comprehending results.
   The teacher facilitate student by presenting video or picture or other media about the learning material to begin the lesson in order to stimulate students' thinking and intelligence. The implementation of this step demand students to respond and discern the key words of the topic. It means that the “observing” step is able to stimulate students' critical thinking and to find new information or knowledge for themselves. Using the media can also draw students' attention.

2. Questioning
   After receiving information from the observing process, students are expected to compose questions regarding result of the observation if they find some information that they are not able to comprehend. They can write their own questions so that serves them to improve their writing skills. This process helps students to be capable to formulate questions systematically and stimulate students’ curiosity.
   This step is purposed to develop students’ competence to respond to their surrounding by asking and clarifying the problem they may face. The “questioning” step might take place during group discussion among them or during presentation. Working in group greatly help them when they do not understand the meaning and are not able to make sentences, they can ask each other, or other group can offer them the words.

3. Experimenting
   Relating the received data to other data, by relating the data each other, this manner allows students to gain new and further information. Through experimenting students would gain authentic information and offer them some significant experiences to help them in understanding their study.
   In this step, the students try to express the new knowledge the learned and use their English ability to the real world through the activity like simulation, role play, presentation, or discussion. In this step, students read or listen more about text which is related to the topic.

4. Associating
   After gaining new information, students are guided to conduct experiments which suit their learning topic in the school. This method indicated that students and teachers are active in participating learning process. The associating itself in learning process refers to ability to classify various ideas and associate those ideas into information.
   This is a step where students will do the process of developing the ability to classify and compare ideas and phenomena to be a part of
memories. The students are guided to classify and compare text based on the social function, text structure, and language feature.

5. Communicating

Representing or concluding data that is acquired from experimenting. In this last step, teachers have crucial role to play; clarifying the result, so that the students might understand if their works are conducted in right manner or not. But before that, students systematically present and share their result of study to each other individually or communally.

This step is aimed to develop ability to express or present all the knowledge and skill, spoken or written. In this activity, not only knowledge and skill is presented but also the problems and success during learning process. In this last step, the student present their work in group or in front of the class. In this step other students are also purposed to correct each other and talk about difficulty they have about the topic, so they can overcome and find out the solution together.

3. METHODS

Data of this research is gained through observation and interview with English teacher in SMA Lab School Unsyiah. The first step taken by researcher in collecting data is observing natural phenomenon which occur in research location regarding implementation of scientific approach. The researcher is guided by observational sheet during observation process. The observational sheet helps the researcher to confirm steps in implementation of scientific approach during learning process in the classroom. Observation process includes all relevant events and participants of the research. Relevant events required in this research is English learning process during study-hours from any grade level in the research location, and English teachers in the school are participants of the research.

The second step to gain data in this research is to conduct interview with English teacher and the interview is the primary data in this research. There is one participant for the interview. The interview goes around scientific approach; how the teacher apply scientific approach in English class, problem that the teacher might encounter in the implementation of the scientific approach, the teacher’s personal thought concerning the issue of scientific approach. The interview is conducted to gain data concerning scientific approach which applied by the teacher. The interview which is used in this research is open-ended interview. This kind of interview allows participants to express their thought regarding the topic, it does not require specific respond; instead, the participants are allowed to respond the questions however they like.

4. FINDING AND DISCUSSION

4.1 Findings

Data finding in this research is derived from observation as primary source of data and interview as secondary data. The interview is conducted in Bahasa Indonesia, so that participants are comfortable to talk freely. The conversation then is translated into English and becomes primary data of the research to be analyzed. Result of the research is presented descriptively. The primary data is interpreted by researcher which is supported by the secondary data.
The researcher interprets result of the interview by comparing each conversation with the participants. If they have common though for each question, the researcher can conclude their general idea clearly. But if one of them or each of them provides different idea, the researcher describes the result separately and attempt to figure out what make the differences. The secondary data supports the primary data by relating data during observation to the result of the interview. Through these steps, the researcher might gain factual implementation of the scientific approach and teachers’ thought regarding scientific approach since they might go through many kinds of approaches or methods during their teaching experiences.

4.2 Discussion

Based on the observation and the interview, this study discovered that the using of scientific approach in learning and teaching process is essential to stimulate students’ activeness. The students’ activeness was gained from the steps of scientific approach which demanded students to think systematically. However the method itself was not flawless. The participant who was interviewed in this research believed that although the scientific approach led to students’ activeness, the teacher still had significant role as proved by the observation and the interview.

The observation result indicated that the teacher hold significant role in learning process. While teaching, the teacher offered question to the students without naming them, so the student might thought that they had no responsibility to respond to the question. This led most students seemed like they were not able to answer the question. They might be able to respond or answer the question but the teacher did not stimulate them. During the observation, the researcher found only two students who voluntarily respond or answer the question from the teacher.

This study gained further information regarding the irresponsive manner of the students. Through the interview with the teacher, it was indicated that most students were not confident to respond or answer the question because they worried they could gave incorrect answer. But the learning process went well because somehow the teacher’s question was responded well so the teacher kept up to continue the teaching process.

5. CONCLUSION AND SUGGESTION

Result of the research indicated that the implementation of scientific approach supported the teacher in the teaching learning process. It also acted as stimulant for the students being active in the class and helped them thinking deeply regarding the topic they were studying. However, the teacher should come up with proper topic to ensure the steps of scientific approach are conducted effectively during teaching learning process. Other thing which caught attention in this research was about the last step in the scientific approach; communicating. Although students took all steps of scientific approach and worked in group, it always proved that similar student did the presentation as representative though he or she did the same thing from other groups in the previous meeting. This made teacher could not evenly measure the ability of all student in the class.

The research conclusion is presented based on the data which have been analyzed in the previous chapters. From all the data analysis about the implementation of scientific approach by the English teacher of SMA Lab School Unsyiah, it can be concluded that:
The Implementation of Scientific Approach in Teaching English Based on 2013 Curriculum by Burhanuddin, Arifin Syamaun, Nira Erdiana

1. Scientific approach supports students in their study during learning process in the school. The steps in applying scientific approach allow them to think creatively and systematically.
2. The scientific approach makes students become more active in learning process. Being active during learning process means that the students are not only receiving information or knowledge from their teacher but also sharing information or knowledge among them.
3. The implementation of scientific approach provides comfort for the teacher since the teacher is not the only source of information in the class. Students themselves can sharing their idea and information in the class. So, they are independently can improve themselves.

Teacher still hold significance in teaching learning process. In the scientific approach, teacher directs students and supervise them during the class. The teacher determines topic which be learned by students in the class.

REFERENCES


