



## SCIENTIFIC APPROACH OF 2013 CURRICULUM IMPLEMENTATION: A CASE STUDY IN A RURAL AND URBAN AREA OF SOUTH SULAWESI

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### ABSTRACT

This study aimed at identifying and explaining the implementation of scientific approach of 2013 curriculum and exploring the teachers' perception on the implementation of scientific approach of 2013 curriculum. This case study used interview and observation to collect data. All data were analyzed through a qualitative approach. The participants of the study were two English secondary school teachers in rural area (School A) located in Polombangkeng District, Takalar Regency, and urban area (School B) located in Tamalate District, Makassar. The study showed that both schools have implemented the scientific approach of 2013 curriculum well and the teachers basically understand the five stages of scientific approach. However, there were still shortcomings in some aspects found on their perceptions. These aspects of scientific approach principle are not fully aligned with the characteristics of the 2013 curriculum. Based on these results, the researcher concluded that the implementation of the scientific method of 2013 curriculum in seventh grade English subjects conducted by English teachers has not been fully functional as appropriate. Therefore, the practice of applying the scientific approach of 2013 curriculum requires an improvement in these aspects in order to achieve the objectives of the implementation of the 2013 curriculum.

**Keywords:** Implementation of 2013 Curriculum, Scientific approach, Rural, Urban

### INTRODUCTION

The 2013 Curriculum is hoped to realize the development of students' potential to create Indonesian citizens who are productive, creative, innovative, skillful, competitive, collaborative and independent through the integrated attitudes (students know "why"), skills (students know "how"), and knowledge (students know "what") (Education and Culture Ministry policy, No. 68 year 2013). The 2013 Curriculum emphasizes more on competences and character buildings because characters have important values to run and form the ethical and individual principles (Howard, 2004). The students attain academic benchmarks to construct and employ their knowledge and skills and need the same time and opportunity to develop and conduct good characters (Stein, 2000). The Ministry of Education (2013) states that the 2013 curriculum can be implemented

successfully by using scientific approach. Scientific approach is a new approach in English Language Teaching because the term "scientific" is more familiar with natural science, social science and management (Suharyadi, 2013, p.1). The learning process adopts the scientist stages in building the knowledge through the science methods and characteristics. Thus, it is a challenge for teachers to understand the stages and basic knowledge about Scientific Approach in 2013 Curriculum to implement the English Language Teaching in the classrooms properly (Ahmad, 2014).

According to Anthony in Richards & Rodgers (1934, p.16) stated that approach refers to theories about the nature of language and language learning that serve as the source of practices and principles in language teaching. He also added that within one approach, there can be many methods. A technique is implementation that which actually takes place in a classroom. Approach is the level at which assumptions and beliefs about language and language learning are specified; method is the level at which theory is put into practice and at which choices are made about the particular skills to be taught, the content to be taught and the order in which the content will be presented; technique is the level at which classroom procedures are described. Kemdikbud (2013) and Hosnan (2014) state that there are five steps of applying scientific approach in teaching learning process, they are observing, questioning, experimenting, associating, and communicating. The activities of each step can be explaining as follows.

a. Observing

There are two main activities that should be done to lead to the observing steps. First, the teachers give students a wide opportunity to do observation. The observation can be done through reading, listening, or seeing the object. Second, the teachers facilitate the students to do observation and train the students to observe the important things from the object. There are seven steps in observing process, (1) determining the object to be observed, (2) determining the purpose, (3) determining the way of observation, (4) limiting the object, (5) doing observation carefully, (6) reporting the result of observation, and (7) comprehending the result.

b. Questioning

Questioning functions to encourage and inspire learners to actively learn and develop questions of and for itself; to raise skills of students in talking, asking questions, and the other can answer logically, systematically using proper and correct grammar; to encourage students' participation in discussing, arguing, developing the ability to think and draw conclusions; and to build an attitude of openness to give and receive opinions or ideas, enrich vocabulary, as well as developing social tolerance in gregarious.

c. Experimenting

In experimenting, the steps are preparation, working, and follow up. There are five activities that can be done in experimenting, (1) Grouping students into several groups, (2) asking students to discuss, (3) recording the finding, (4) supervising the learning process to ensure that all learners are actively involved in the discussion, and (5) directing the group that need help.

d. Associating

Associating is the ability to analyze and associate the information occurred within the group. Associating is the process of analyzing the information to find the relationship between one information to other information and to find the patterns of interrelationship of the information so that one can make conclusion from the patterns found.

e. Communicating

Communicating is the ability to conclude the facts that have been observed and experimented. There are four activities that can be conducted in communicating steps, (1) asking the students to read their work to the class, (2) asking each group to listen well and provide additional input with regard to the work of each group, (3) giving explanation after the group discussion ended, and (5) structuring tasks and providing opportunities to the students to demonstrate attitude, skills, and understanding of the substance of learning given.

There have been many studies about 2013 curriculum implementation conducted to give an account of its significance and influences towards the teaching and learning process. Fauzi (2016) found that the implementation of the 2013 curriculum on learning process was fair (78%) and teachers' perception on the implementation of the 2013 curriculum were divided into four aspects; the lesson plan, the learning process, the assessment and the advantages and weaknesses. These aspects, according to the teachers, help them to run their classes well, reflect their teaching, and assess their understanding and acknowledgement of the 2013 curriculum implementation.

Tresnayani (2013), a student of State Institute for Islamic Studies (IAIN) Syekh Nurjati Cirebon studied about the Implementation of 2013 Curriculum in English Teaching Learning at Junior High Schools in Kuningan. From her research, she found English teachers' view on 2013 Curriculum, the previous curriculum, comparison between previous curriculum and 2013 Curriculum and then teacher's view on the implementation of 2013 Curriculum. Her research was focusing on the teacher's perception aspect of the implementation of 2013 Curriculum. In the end of the research, the writer found a fact that 2013 Curriculum is government penetration that implement scientific approach in teaching learning process which is appropriate with students' standard competency, more systematically in learning stage, and compel teacher's creativity to produce student who have a good competency.

Muh. Imam Sofwan (2016), under the study "The use of scientific approach in teaching English as a foreign language in SMPN 1 Jakarta found that through the scientific approach applied, students are more communicative and expressive during the learning process, and the teaching and learning process centered on the students as the teacher roles as facilitator. In conclusion, the scientific approach is appropriate and gives impact in teaching English.

This study was to find out (1) How the actual implementation of scientific approach of 2013 Curriculum by the EFL teachers in rural and urban areas in South Sulawesi, and (2) What the EFL teachers' perception about the implementation of scientific approach in rural and urban school areas in South Sulawesi.

## **METHOD**

This study applied qualitative approach. Ary & Jacobs (2002) stated that qualitative inquires seek to interpret human actions, institutions, events and customs. It was chosen because it was concerned with subjective assessment of opinion and behavior that occurred in natural condition which is explained through detail description of specific situation using interviews and observations.

This qualitative approach used case study research design. According to Yin (2003, p. 78), case study is the study of an 'instance in action'. It selects an instance from the class of objects and phenomena and investigate the way this instance function in context. Characteristic of a case study as follows; (1) placing the object of study as a case. (2) looking at the case as a contemporary phenomenon, (3) conducted on the real living conditions, (4) using the theory as a research reference.

Therefore, this research used a case study because the research was conducted on specific situation of two schools, which were presented through depth-data collection involving multiple sources of information (Observation, interview, audio, and video recorder).

## **FINDINGS AND DISCUSSION**

This part consists of the results from the classroom observations which have been done by the researcher and interview between the researcher and the participants. The first section describes the implementation of scientific approach of 2013 Curriculum by EFL teachers in rural and urban school area. Meanwhile, the second section describes the EFL teachers' perception of scientific approach of 2013 Curriculum.

### **1. The Actual implementation of scientific approach of 2013 Curriculum by EFL teachers in rural and urban school areas in south Sulawesi**

#### **a. Rural area (School A)**

(The observation was on Tuesday, 10:00 – 11:25 May 3<sup>rd</sup> 2018)

The subject in this observation was English and the topic was narrative short story with the skills emphasized on reading and writing. The English teachers basically have implemented teaching learning procedures well, starting from pre activity, main activity, and close activity. In this meeting, the English teaching implements a logical learning sequence of scientific approach only on observing, questioning, experimenting, and communicating. There was no special method used. The teacher only asked the students to read the text and do the task in pairs. Then the teacher monitored and controlled them and explained the difficult new words or connected the wrong pronunciation of the students.

There was no supported media such as computer and picture. Even the textbook was very limited and only five dictionaries were available. The teacher's role was still dominant during the learning process. The teacher was more often read out the questions than the students. She invites the students to participate in thinking but failed to give the students a stimulant to express their answers. So the teacher read out the answers of the questions too. The situation made the students become the listener only and made the class less interactive.

The score taken by the teacher when students are appointed to answer some question directly or should be written on the board. So, students who got the score were appointed students. The correction of the answer was done by inviting the students in agree or disagree responses. In several times during the lesson, the teacher gave advice and motivation.

#### **b. Urban area (School B)**

(The observation was on Monday, 08:00-09:45, May 7<sup>th</sup> 2018)

In this observation, English as the compulsory subject and the topic was narrative text, about daily life. With the skills emphasized were on reading and speaking. The English teacher basically have implemented teaching procedure well, start from pre- activity, she asked the students to recall the material which have been learned from the last meeting and created a pleased situation in the classroom. In this meeting, the English teacher implemented a logical learning sequence of scientific approach only on observing, questioning, and experimenting, and communicating there was no special method used in this meeting. The teacher asked the students to read the text carefully and answer the questions in a group. Then she walked around to control the students read the text and explained the difficult words.

During the learning process, the situation of the classroom was crowded because all students were reading the text. In this meeting the teacher only used a textbook as a media to teach. The teacher seemed dominant in the learning consolidation. She always gave explanation what the text discussed about and she asked the students' opinion. She tried to stimulate the students to talk, but unfortunately, the students were shy to express their opinion due to lack of vocabularies and confidence.

The teacher asked the students to stand up and answer the following questions to score them. And she mentioned which number should have to be answered, such as who could answer number 3, number 1, etc. and those students who answered the question correctly would get a mark as a point

**Observing** is to develop students' curiosity. Brown (2000), to create meaningful learning process and help students acquire knowledge, the teacher asks the students to observe objects, events, phenomena, concepts and procedures by using all of their senses to see, listen, read and watch, and integrate it with the learning material.

Based on the findings above, it shows that the Ms. Aisyah and Ms. Rossa did the first step by asking them to read it improved the students' curiosity to know more about the material. The following excerpts display about the observation stage:

#### Excerpt 1

Ms. Aisyah : *Anak anak, dibuka halaman 21 yah, tentang "Sekolahku" dan dibaca dengan temannya*  
Well students open page 21 about "My School" and read it carefully with your friends]  
*Classroom Observation, Ms. Aisyah May 3<sup>rd</sup> 2018*

Ms. Rossa : *dibaca teksnya yah lalu dipahami dan diskusikan dengan temannya.*  
[Read the text carefully and discuss it with your friends]  
*Classroom Observation, Ms. Rossa May 10<sup>th</sup> 2018*

Excerpt above showed that both of the teachers asked the students to read the material given. As stated in the law of ministry of national and culture number 103 year 2014" that reading is one way to do observation process." So that both of English teachers applied the first step in scientific approach.

1) **Questioning**- to construct knowledge as a concept. The students are required to have a critical thinking to evoke high level of thinking questions. Furthermore, the students can show their active participation in the learning process. According to law of ministry of national and culture number 103 year 2014 that questioning process that could be conducted by creating and offering the question, asking and answer, and discussing the unclear information. The following excerpts display about the questioning stage:

#### Excerpt 2

Ms. Aisyah : "Jadi anak anak, kalian bisa membuat pertanyaan tentang materinya atau jika ada beberapa kata yang tidak ditau boleh ditanyakan atau buka kamusnya."  
[Well students. You can make several questions related to the material and if you find some unidentified words, open the dictionary]

Student : "ini penjelasan tentang sekolah atau bagaimana buk?"

[Is it about a school?]  
 Ms. Aisyah : “iya ini tentang penggambaran sebuah sekolah, seperti sekolah kita ada berapa kelas, ruangan guru dan lapangan.”  
 [Yes. It is about school description, for instance our school, how many classroom, teachers’ room and field]  
 Student : “o iye buk.”  
 [Yes mam.]  
*Classroom Observation, Ms. Aisyah May 3<sup>rd</sup> 2018*

Ms. Rossa : kalian harus baca dan teliti, kira-kira membahas tentang apa, lalu diskusikan dengan temannya apa inti dari bacaan itu.  
 [Read it carefully, what it is talking about and discuss the text with your friends]  
 Student : Yes, mam.  
*Classroom observation, Ms. Rossa, May 10<sup>th</sup> 2018*

Excerpt above shows that, both of English teachers have different way in implementing the questioning stage, Ms. Aisyah asked the students to give a question to the teacher, while Ms. Rossa asked the students to discuss with their friends to answer the questions. As Kaokasih (2013) stated that the characteristics of scientific approach in teaching and learning process, the students forced to always think critically and appropriate in understanding and identifying.

- 2) **Experimenting** - to acquire a meaningful, real and authentic learning, students have to do experiments, especially to the suitable materials (Suharyadi, 2013, p. 4). The students practice to express new things that they have learned and try to utilize the skills to reality inside and outside the class through simulation, role play, presentation, discussion and games. The following excerpts display about the stage:

### Excerpt 3

Ms. Aisyah : Judulnya kan tentang “My School” jadi coba dibuatkan kalimat tentang sekolahnya kita disini.  
 [This is about “My School”, so you can make a sentence about our school]  
 Student : Contohnya buk, my school is Mts Muhammadiyah, begitu buk?  
 [For instance, my schools is MtsMuhammadiya,, is it like that mam?]  
 Ms. Aisyah : iya betul, dijelaskan juga alamatnya, ada berapa kelas dan semua tentang sekolah.  
 [Yes, it is. You may describe the location, how many classes, and all about the school]  
*Classroom observation, May 3<sup>rd</sup> 2018*

Ms. Rossa : dari bacaan teksnya dicari mana jawaban yang tepat dan diskusikan dengan temannya.  
 [From the reading text, find out the appropriate answer and discuss it with your friends]  
*Classroom observation, May 10<sup>th</sup> 2018*

Excerpt above shows that both teachers have different ways in implementing the experimenting stage. Ms. Aisyah asked the students to make a sentence

related to the material given, while Ms. Rossa asked the students to discuss with their friends to find the answer of the questions.

- 3) **Associating** – to attain the conclusion of knowledge by a logical thinking process and systematic empirical factual statement which is observed. Students must be more active and given more opportunities to learn. As stated on the Policy of Indonesia Ministry of Education and Culture No. 81a/2013, associating process must be conducted through: (1) processing information that has been collected from the result of experimenting and observing activity and, (2) processing the information collected to find solutions from variety of sources that have different opinions to the contrary. Thus, students are expected to be able to relate the result of learning or experimenting to the reality.

Based on the findings Ms. Aisyah and Ms. Rossa did not apply this stage due to the allocation of time. As it is stated on [Appendix A] [IT-01 & IT-02] about their perception in implementing the scientific approach. Both of them expressed that the allocation of time in this English subject was not that enough, especially to apply the five stages of scientific approach.

- 4) **Communicating** - to develop students' skills to offer or demonstrate all knowledge and ability that has been mastered verbally or nonverbally. Suharyadi (2013, p. 4) argues that communicating is also called collaborative learning. For teachers, the collaborative learning function is more directive oriented in which the teachers are managers in the students' learning. The students present the communicative and effective written or spoken knowledge based on what they have learned. The following excerpts display about the communicating stage:

Ms. Aisyah : *Masing-masing kelompok harus bacakan hasil diskusinya ya di depan kelas dan yang lain cocokkan jawabannya.*

[Each groups' discussion result must be presented, while the one group is presenting, other groups adjust the answer]

*Classroom observation, May 3<sup>rd</sup> 2018*

Ms. Rossa : *Siapa yang bisa jawab pertanyaannya? dan yang lain siap-siap angkat tangan kalau tidak setuju dengan jawabannya.*

[Who can answer the question of the text? Others who may put your hand's up if you disagree with the answer]

*Classroom observation, May 10<sup>th</sup> 2018*

According to Daryanto (2014), one of the goals of teaching scientific approach is to train the students to communicate or deliver their opinions or ideas, and the excerpt above shows that both teacher have different instruction but had the same goal, they asked the students to deliver and present what they have got from what they learned.

## 2. The EFL teachers' perception on the implementation of scientific approach of 2013 Curriculum

- a. The implementation of 2013 Curriculum seemed to be in a rush

First, the implementation of the 2013 Curriculum seemed to be in a rush. Based on Ms. Aisyah's statement, it showed that there was a lack of preparation on the implementation of 2013 Curriculum. There was not enough textbook which was available. So, she had to search for the materials by herself. "But however the 2013 Curriculum seems to be in Rush to be applied at our school because

we are lack of guidance and training” she stated that the lack of preparation was in terms of guidance and textbook. When she implemented 2013 Curriculum, the textbook was limited, neither for the teachers nor the students. Thus, she stated that the implementation of this curriculum seemed to be in a rush. In order to implement 2013 Curriculum, through scientific approach one of the primary needs that the teachers wanted was the textbooks.

- b. The participants had limited time allocation to implement the scientific approach  
 All of the participants of this research admitted that they were limited by time. The participants stated that the limitation of time affected to their teaching-learning process. Ms. Aisyah stated that **“as I stated before that, the time allocation is limited to apply those five stages of scientific approach and the situation of the class is crowded.”** Ms. Rossa also stated that **“But the allocation of time is very limited to reach to reach some aspects and goal of learning with many students in the classroom.”**
- c. The implementation of scientific approach was lack of preparation in terms of textbook and understanding.  
 According to Ms. Aisyah, **“The scientific approach is good to be applied in teaching English, but we are lack of textbook preparation and dictionary to help the students enrich their vocabulary”** the implementation of scientific approach was lack of preparation. In terms of textbook which has to be given to the students. At that school only few books were available and 10 dictionaries, so Ms. Aisyah had to find other sources from the internet related to the appropriate material which could be applied in scientific approach. Otherwise, the training was not given equally to the teachers, teachers at that school weren’t given a good guidance in terms of understanding the implementation of 2013 Curriculum. Contrast with Ms. Rossa, she stated that **“the implementation of scientific approach of 2013 Curriculum has been conducted well because the training and guidance optimally.”** It showed from the way she taught, that she was able to teach the students well.
- d. The situation in the classroom was too crowded  
 Situation affects someone’s perception, since it influences their feeling, expectation, and habit in their daily life. In terms of situation. Related to the situation of the classroom both teachers said **“The time allocation is limited to apply those five stages of scientific approach, and the situation of the classroom was crowded. So here the teacher must be creative, innovative, and communicative on delivering the lesson.”** The situation at the classroom was crowded so sometimes they were not able to apply the scientific approach well. They did not have enough time to make a more challenging material for the students when she implemented 2013 Curriculum. So they were always running out of time. And this situation forced them to work under pressure.

## CONCLUSION

2013 Curriculum aimed to change the learning paradigm by bringing the scientific approach as a breakthrough. Through the scientific approach, the 2013 Curriculum tried to apply the observing, questioning, associating, experimenting and creating/networking as the primary process of the teaching and learning activity. With the scientific method, the students were expected to have the passion to dig out the objective truth. In addition, based on the participants’ opinions, the 2013 Curriculum had a good purpose, in which to change the teaching and learning paradigm. Through the classroom observation, it could be concluded that, both teachers in rural and urban areas, understood the implementation

of scientific approach well, there was no significant difference, and all they need are just the optimally guidance and training. However, the participants had a negative perception on the implementation. There were various opinions from the participants related to the implementation of scientific approach. First, the implementation of 2013 Curriculum seemed to be in a rush. Second, the time allocation was limited. Third, it was lack of preparation such as textbook and dictionary, and forth, the situation at the classroom was too crowded.

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