CLASSROOM PRACTICE: APPLYING THE SCIENTIFIC APPROACH BASED ON THE 2013 CURRICULUM

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ABSTRACT

This study was done to find out about the implementation of the scientific approach based on the 2013 Curriculum. The subjects of this research were two English teachers of second year classes at SMA Negeri 1 Bireuen. The implementation of the scientific approach follows five learning experience called observing, questioning, associating, experimenting, and communicating. The classroom activities must accomodate all 5 items actualized in three dimensions viz: the dimension of teaching plans, the dimension of teaching processes, and the dimension of teaching evaluation. Data was collected through classroom observations and interviews and was analyzed descriptively. Related to the dimension of teaching plans, the teachers did not prepare well before running the teaching processes. Their lesson plans did not match the frame work recommended by the rule of Minister of Education and Culture/*Permendikbud* no.81.A 2013 as required by the 2013 curriculum. Related to the dimension of teaching process: The teachers used the steps of the scientific approach viz: observing, questioning, associating, experimenting, and communicating. But the conduct was not perfect, the teachers missed some aspects, and they did not run the teaching process according to the rules that are in *Permendikbud* no.81.A 2013. In relation to the dimension of evaluation, the evaluations used non-authentic assessments that gave the biggest emphasis to the cognitive domainwhich differred from the mandate for the 2013 curriculum in P*ermendikbud* no. 81A 2013.

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INTRODUCTION

Curriculum studies refers to a very broad field of inquiry that deals with what happens in schools and other educational institutions, the planning of instructions, and the study of how the process of teaching is planned. A curriculum in a school context refers to the whole body of knowledge that children acquire in schools (Rodgers, 1989, p. 26).

In fact, the Government of Indonesia's Ministry of National Education has paid attention to curricula for schools for a long time. This can be seen from the changes in curriculum in order to improve the quality of national education in order to develop more qualified students for a new era of development . Historically, there have been eight new curricula which have been legalized by the Ministry of National Education from 1947 to 2013, which means that they have tried hard to create a better education system through curriculum revisions. Even so, some people have positive perceptions and some negative towards the changes in a curriculum.

The 2013 curriculum is a development from the previous curriculum that was KTSP. The Ministry of Education claims that there are new materials added which were not in the last curriculum, but it still maintains much of the material which was in the last curriculum while removing materials which are less important for the development of the competency of students. It is hoped that this new curriculum can promote the national education of Indonesia to the world. The 2013 curriculum, among other things, is intended to empower teachers to develop competency in learning activities relevant to the learners' needs, based on the actual conditions in the school, and the necessity to link it to the environment. This curriculum is claimed to be different from the previous *KTSP* one in several aspects. One of the differences is that the 2013 curriculum claims to use a Scientific Approach.

With regard to classroom procedures, the scientific approach is materialized in the learning cycle which consists of five learning steps, namely: observing, questioning, experimenting, associating, and communicating. The decision to use a scientific approach for language education was done to make learners curious about the world around them, to improve skills and to help exhibit more positive attitudes toward science and to improve the oral communication and critical

thinking skills of the students (Mulyasa, 2014, p. 67). Thus, with the introduction of the 2013 curriculum, the scientific approach has been implemented for elementary, middle and high schools in Indonesia.

Actually, in the scientific approach,the practice of teaching instruction includes three main dimensions which are called (i) the dimension of teaching plan, (ii) the dimension of teaching process and (iii) the dimension of evaluation (Matsudjah, 2013, p. 18). All of these 3 demensions are very important in the practice of teaching instruction.

Based on the foregoing discussion, about the importance of the three main dimensions related to the implementation of the scientific approach, based on the 2013 curriculum, the writer was curious to see how the teachers at SMA Negeri I Bireuen implemented the scientific approach in their practice of teaching instructions. As SMA Negeri 1 Bireuen is the best school with the highest integrity amongst the other high schools in Bireuen, the writer was interested to conduct this research in that school with the main purpose to find out how the teachers at that school implemented the scientific approach based on the 2013 Curriculum as SMA Negeri I Bireuen is categorized as the best school in Bireuen.

Research Question

The research question was: How do the teachers at SMA Negeri 1 Bireuen implement the scientific approach based on the 2013 Curriculum in their psractices of classroom instruction?

LITERATURE REVIEW

Definition of 2013 Curriculum

The 2013 National Curriculum, better known as *K-13* is a competency and character based curriculum, that was born in response to criticism of the 2006 School Based Curriculum, usually known as the *KTSP*. It was developed based on the needs of the world of work. The 2013 Curriculum is one of the government's efforts to resolve problems in education (*Permendikbud.* no.56: 2014). Mulyasa (2014, p. 78) says that the theme of the 2013 curriculum is to generate young Indonesians to be productive, creative, innovative and affective by refining their attitudes and skills and integrating their knowledge. Based on that theme, the implementation of the 2013 curriculum is expected to produce productive, creative, and innovative young people. While the concepts used in the 2013 Curriculum aims to create a

balance between hard and soft skills that start from the standards for competency on graduation, standards of content, standards of process, and standards of evaluation (Jainuri, p. 2014).

The Implementation of the 2013 Curriculum

"Implementation is a process of applying ideas, concepts, policies, or innovations in the form of practical actions to give effect, in the form of changes in knowledge, skills, values and attitudes" (Saddam, 2003, p. 237). Generally, the writer has pertained based on Madsudjah (2013, p. 18) that the implementation of the 2013 curriculum in the teaching-learning activities in schools encompasses three dimensions, those are (i) the dimension of the teaching plan, (ii) the dimension of the teaching processes and (iii) the dimension of the teaching evaluation. These are described briefly in the points below:

The Dimension of the Teaching Plan

In this dimension, the teacher outlines the vision and mission or learning objectives to be achieved. She attempts to plan what should be done, considering all the things which are needed and can be used in the study in order to achieve the wanted goal. Everything needed is covered in the lesson plan (Malik, 2013, p. 49).

The Dimensions of the Teaching Process

Teaching-learning is a process of interaction between students and students and between students and teachers with learning resources in a learning environment (Malik, 2013, p. 78). At this dimension, the teacher runs the teaching pocess from the pre-teaching activities, through the while teaching activities and finally the post-teaching activity. Pre-teaching activities include greetings, prayers and some aperseptions ie. preparing the students' learning equipment such as books, pens, and also the primary school teacher may even allow her students to have some breakfast eg. two slices of bread and a glass of milk. Then the teacher will introduce the objective of the lesson and relate the learning topic to experiences from the students daily lifes; she may also ask them about their prior knowldge about the material to motivate them while starting the teaching-learning activities.

In the while-teaching activities, the teacher will implement the procedures for the scientific approach by addressing the students and/or by showing them material in the form of text, printed or on a white

board, videos, or pictures. She then asks the students to observe them, while she gives them the scope of observations and asks them to write and record the most important things from their observations. Actually, in the while-teaching activities, the teacher should implement what she has writtene in her lesson plan covering all the procedures from observing, questioning, associating, experimenting, communicating and evaluating.

In the post-teaching activity the teacher gives her students feed-back and informs them about the activities that will be do in the next meeting. The teaching activities are also closed with a prayer as a form of gratitute to God/Allah for the opportunities that have been given to us.

Dimension of Evaluation

Based on the guidelines for teaching-learning evaluation by the teachers, the 2013 Curriculum requires the use of authentic assessments. In the paradigmatic embodiment, authentic assessment requires real authentic instruction and authentic learning. It is believed that authentic assessment is more able to provide information about the students' ability holistically and validly. Authentic assessment that is used in the evaluation processes assesses the students' readiness, the processes and the outcomes of learning as a whole (Kunandar, 2014, p. 12).

Definition of a Scientific Approach

A Scientific Approach is an approach which demands that the students conduct the activities like an experiment in science. Practically, the students should follow the steps for the scientific method that involve 1) formulating the problem(s), 2) making a hypothesis, 3) collecting the data, 4) analyzing the data, 5) makng conclusions (Yunus, 2014, p. 125). Barringer (2010, p. 45) has said that the scientific approach in instructional processes demands that the students learn to think critically and systematically to solving the problems: In the processes of learning the students are required to solve complex problems through following the steps viz: getting ideas, using critical thinking, doing experiments and building their concepts of knowledge.

The concept of the scientific approach was developed based on the concepts of research, which means that the process of learning should

follow the activities which are done by the students to find new knowledge (Yunus, 2014, p. 126). Wienbaum (2014) has said that the scientific approach as an instructional process borrows the concepts of research and implements them as learning activities. In other words, the scientific approach in a teaching-learning process is oriented to building up the students' ability to solve problems through the processes of inquiry which will require the students to think critically and creatively and communicatively to increase their comprehension of life.

Implementation of the Scientific Approach in the Instructional Processes

The implementation of the scientific approach in the instructional processes of lear-ning experiences is actualized through observing, questioning, associating, experimenting and sharing the information found. Each point is described clearly as follows:

Observing

The function of observing serves to prioritize that the instructional process is meaningful. Observations are done by the students toward the object(s) or phenomenon that will be studied. In fact, observation activities are not always set in the while-teaching activities section, because the teacher can ask her students to watch a video in the opening section to stimulate their thinking and to burn up their adrenaline. In such a case the teacher needs to prepare a short video to motivate her students. Observations are rarely done as part of the last post-teaching learning activity unless they are done as preparation for the next lesson to follow.

Questioning

Questioning is an activity where the students are stimulated to ask questions or to answer questions asked by the teacher. Mulyad (2014, p. 67) has stated that question and answer sessions are an important part of teaching-learning activities. Successful teachers are noted for their ability to stimulate their students to ask questions and/or to answer their questions. According to Angga (2013, p. 77), questioning in the scientific approach means that the students are active in asking questions: Teachers should give their students chances to ask their teacher the reasons why or why not a phenomenon happens. Students need to learn to think rationally and logically.

Questioning is very important, because it builds up the interaction between the students and their teacher during the instructional processes. Josep (2006, p. 88) has listed the functions of questioning as follows:

1) To attract students' attention to the learning topic.
2) To inspire students to be active in developing questions.
3) To diagnose students' difficulties in learning to find solutions.
4) To reconstruct the task and give the students chances to show their character, their skills and their understanding about the materials in question.
5) To improve students' speaking abilities by asking questions or giving logical answers by using good language structurally and systematically.
6) To push students to participate in the discussion activities, join in the arguments and improve their way of thinking, and to train them in making conclusions.
7) To build up habits to speak openly to give and take ideas, to enrich their vocabularies and to improve their social tolerance in life.
8) To prioritize students to think spontaneously and fast in responding to urgent problems.
9) To train students to speak politely and develop empathy for others.

Association

Muyan (2014, p. 88), has said that "association is the process of thinking logically and systematically based on empirical facts or knowledge. Association is defined as the ability to group ideas and associate them with events and then to insert them into the short term memory. During transferring activities to the brain, the experience is kept with other references". The saved experience correlates and interacts with other previous experiences. This process is called association (Muna, 2014, p. 66). "**A**ssociation refers to the connection between conceptions or mental entities; it refers to the result of thinking or approaches about similarities in space and time" (Juan, 2013, p. 88).

Experimenting

To get results from learning authentically, learners should do experiments. According to Josep (2006, p. 77), experimenting is the activity where any number of students work singularly or in groups on

a carefully designed question of inquiry. Experimenting is proposed in order to develop students' skills, character and knowledge.

Communicating

Communicating is the last step in the scientific approach. According to Jamaic (2006, p. 89), communicating occurs through verbal and non-verbal communications. It can refer to speach where the speaker and the listener are communicating in the same context and they are mutually intelligible. Communicating in the scientific approach means that the students are required to be outspoken in presenting what they have learned, and in certain situations students may be ordered to be more active in delivering their ideas, thoughts and feelings by preparing a good speach to present their conclusions.

Recommended Methods to Support the Scientific Approach

Mulyasa (2014, p. 67), has said that there are three methods of teaching-learning which are known – i.e. inquiry based learning, project based learning and problem based learning. These three methods are similar to the characteristics of the scientific approach where students have to find information, analyze it and finally report it.

Inquiry Based Learning

Inquiry-based learning, which was developed in 1960, is principally very closely related to the development and practice of thinking skills. The promotors of inquiry based learning were Vygotsky and Freire. These experts developed the way of learning where learners are learning based on their experiences and experiments. Inquiry based learning is close to constructivist learning which allows the learner to generate information and make meaning of it based on personal or societal experience which is referred to as constructivism.

Project Based Learning

Project-based learning (PBL) is a student centered pedagogy that involves a dynamic classroom approach in which students acquire deeper knowledge through active exploration of real world challenges and problems (Dewey, 1960, p. 77). Blumenfeld (1991, p. 77), says that the basis of PBL lies in the authenticity or real-life application of the research. Students, working as a team, are given a driving question to respond to or answer and then directed to create an artifact (or artifacts) to present the knowledge they gain. Artifacts may include a variety of

media such as writings, art, drawings, three-dimensional representations, videos, photography or technology-based presentations.

Problem Based Learning

"Problem Based Learning (also PBL) was developed at the McMaster University Medical School in Canada in 1960 and has since spread around the world. The goals of PBL are to help students develop flexible knowledge, effective problem solving skills, self-directed learning, effective collaboration skills and intrinsic motivation. Problem-based learning is a style of active learning" (Dewen, 2004, p. 88).

PBL is a method of learning and teaching which allows students to focus on how and what they will learn. An unfamiliar problem, situation or task is usually handled through small group work and allows the students to utilize their prior knowledge in the topic area and identify gaps in their knowledge as they attempt to solve the problem (John, 2007, p. 88). According to Dewen (2004, p. 88), Problem Based Learning is a student-centered approach to learning that encourages students to be self-directed, interdependent and independent as they attempt to solve the set problem. Working in groups, students identify what they already know, what they need to know and how and where to access new information that may lead to a solution of the problem.

Discovery Based Learning

Discovery Based Learning is nearly the same as inquiry based learning, because it is learning through discovery which allows students to find something new in their daily experience for learning materials. Teachers only give their students clues for learning from the material and the students are ordered to find out things by themselves based on their own discoveries, They then discuss their discoveries in the classroom as a learning community. According to Juan (2013, p. 99), discovery based learning trains students to be discoverers who are able to create something new. Students become explorers who are able to explore their surroundings.

RESEARCH METHODOLOGY

Research design is done in order to clarify how data will be gathered to answer a research question. This study is a classroom

research study which observed the activities of the teachers in implementing the scientific approach based on the 2013 Curriculum at Senior High School 1 Bireuen (SMAN I Bireuen). Mckay (2006, p. 03) defines classroom research as a cover term for a whole range of research studies in classroom language teaching-learning. This study used qualitative research for presenting the data, Herdian (2011, p. 8) Qualitative language research is: (a) an attempt to capture the sense that lies within and that structures what people say about what they do; (b) an exploration, elaboration and systematization of the significance of an identified phenomenon; (c) the illuminative representation of the meaning of a delimited issue or problem. The data for this study was obtained from observations and interviews. The instruments used were an observation sheet and an interview guide. Besides, the writers used video recordings for a supporting instrument. The observation sheets were used to collect the data about the instructional processes conducted by the teachers at SMA Negeri I Bireuen in using the scientific approach based on the 2013 Curriculum. The writers also interviewed the two teachers regarding their reasons for the way they conducted their teaching activities in the classroom covering the three dimensions viz: the dimension of teaching plans, the dimension of teaching processes and the dimension of teaching evaluation. The video recorder was used to record all the activities of the teacher and her students during the instructional processes which were happening in the classroom.

Data Analysis

According to Mckay (2006, p. 55), the analysis of data generally entails arriving at original categories to summarize the data that was gathered. Depending on the method used, data can include field notes, interviews, conversations, verbal protocols, surveys and written texts. Unlike a quantitative study, the findings are not reported by using statistical procedures but rather rely on rich description of typical scenes that were observed. Because of this, the language is descriptive rather than abstract.

RESULTS AND DISCUSSION

To answer the research questions, the results of this study focused on the dimensions of the teaching plans, the dimension of the teaching

processes and the dimensions of the teaching evaluation. The results are given in the sections that follow:

Findings Related to the Dimensions of the Teaching Plans

Data from the syllabus and the lesson plans of the teachers was compared with the regulations from the Minister of Education *(Permendikbud,* 2013) no 81.A. There were significant differences, viz: The teachers did not follow the rules for legalized lesson plans. Based on the writers' observations, the teachers used the wrong base competency for points 1.1, 2.1, 2.2, 2.3 and 3.2 which did not match with the base competencies that were written in the syllabus, the correct ones were 1.1?, 2.2?, 3.8 and 4.12. Similarly for the indicators of learning, when the teacher set out the final results for learning conditional sentences, she did not use indicators for the social functions, the structure of the text and the language elements of conditional sentences, the teachers directed the students to make the text for conditional sentences to involve all of the types viz: type I, type II and type III.

Otherwise, in the learning materials the teachers only put the definition of a conditional sentence, the pattern and examples of such sentences, the teachers did not write about the materials recommended from the internet website or text-book. Turning to the processes of teaching, the teachers still used the key terms namely exploration, elaboration and confirmation, while these terms were those used in the previous *KTSP*. lesson plans. While in the 2013 Curriculum the terms used related to the rules for the scientific approach, viz; observing, questioning, associating, experimenting, and sharing the information and the words exploration, elaboration and confirmation became part of the teaching strategy.

While evaluation, according to the 2013 curriculum, uses authentic assessment, it must not only focuss on the students' scores but must also report on the students' learning readiness, learning processes, and learning outcomes. The learning outcomes must include attitude competencies (spiritual and social), knowledge and skills which based on Bloom must include cognitive, affective, and physicomotoric. While the evaluation that was written for the lesson plan of the teachers was only an evaluaton of the learning processes and the learning outcomes, it did not match with the new curriculum rules.

Findings Related to the Dimension of Teaching Processes

Related to the teachers' classroom practice, the writers grouped the teaching processes for the scientific approach, based on the rules of the Education Ministry (2013), into the five learning experiences viz: observing, questioning, associating, experimenting and sharing the information. The content or the activities associated with each step were clearly written according to the rules from the Ministry of Education *(Permendikbud)* No. 81 A of 2013.

Observing

In the first meeting, the observing activity was started by the students, who were asked to observe the materials presented by each teacher, which could be in the form of a text, a video, a simulation or a picture(s). In the pre-teaching activities for that meeting, one teacher did not present anything to be looked at; she only did brainstorming related to the learning topic which was *Conditional Sentences*, familiarly called *If Sentences.* Both teachers asked the students to do the observations in different ways. Both teachers did not use the correct procedure that was legalized by the Minister of Education (Permendikbud, 2014). The teachers did not display appropriate objects, and they missed some aspects such as point (b), the teachers did not give the students the rules and the scope of the observations. The teachers did not determine the primary and secondary data, and the students were not required to write down what they had found from their observations. It could be concluded that the observation activities that were done by the teachers were not satisfactorily.

Questioning

Questioning is very important in the teaching-learning processes, because it can stimulate the students' motivation for thinking, speaking and/or giving ideas. At the beginning of the teaching-learning processes, the teachers asked what was the students' understanding of conditional sentences. The writer found that only three students tried to answer the question, and no students asked the teachers questions. The same as in the observations activities, the teachers also wrote the title of the slide in capital letters 'QUESTIONING'. The teachers had prepared the WH-questions that consisted of *what, where, who, when, why and how*. Then, the students tried to ask questions by using the situations given by the teachers. The writer saw that the students were interested to ask questions in this way. During this activity, there were many

students who raised their hands, but the teachers chose to ask those students that they liked best to answer their questions.

Associations

Associating is the process of logical and systematical thinking related to the empirical data to make conclusions based on the facts. Associating can be done by each teacher or by the students in a deductive or an inductive way. The deductive way takes the learning conclusion from the general to the specific, while the inductive way is the opposite of the deductive. Based on the writer's observation, teacher I did both deductive and inductive associations.

Deductive association was done by teacher I when she drew an island and asked the students to imagine that they owned the island: What would they do?, What would they build? and What would they plant?. The teacher also said that all of their answers were not real because they only imagined the situation. Teacher I then concluded that the sentences which used *if or* included an *if clause* were conditional sentences, and finally teacher I wrote the pattern for a conditional sentence plus some examples on the white board.

The inductive association was done while teacher I taught the biography of Albert Einstein, a famous scientist known by people from all over the world. Teacher I firstly showed them his picture and gave them a clear description about his name, nationality, job, achievements, etc. Then, the teacher asked the students to make a biography of the person that they like best in the school. Inductive association is also good for students, because they could elaborate their own understanding after seeing a specific example given by their teacher.

Experimenting

To find out whether the students had this ability or not, the teacher should facilitate the students to do experiments. Teachers have freedom to have students carry out experiments either inside or outside of the classroom. But, in the instructional processes observed by the writers, the experiments were done in the classroom. The experimenting activity that was set by teacher I aimed to train the students in constructing conditional sentences based on an object, which was an island. In the activity, she asked the students to answer the questions: *What will they do if they own the island?, What will they plant if they own the island?* and *What will they build?*. In doing this experiment, this teacher did not follow the steps for an experiment as regulated by

Permendikas, because the material for the conditional sentences did not have proper preparation. But, this teacher knew that the procedure for making an experiment was complete. The students were actively involved in the teaching-learning process; all of them worked and gave their contributions to their groups. The time allocated by this teacher was sufficient, and she did not need to use additional time.

Communicating

Sharing information is the activity to deliver the results from observations and experiments. This activity is important to train students in the ability to report their results. Sharing information, which is one form of communicating, was also done appropriately in the classroom, which could be seen when the students in their groups delivered the results of their work. However, based on the observations, the students had developed a wrong mindset as there were some students who gave the responsibility to share their results to the head of their group as their speaker.

Sharing of information happened with teacher II in the pre-teaching activities when she asked her students to recall the different types of conditional sentences. The teacher tried to stimulate the students' motivation to continue their learning about conditional sentences. As a result there were three students who shared information about the meanings and the patterns of conditional sentences.

Then the students shared what they had done in the experimental activity: They read aloud the sentences that they had made in their groups and the teacher then wrote them on the whiteboard and she also clarified whether each sentence was correct or had any error(s). Teacher II then corrected the sentences directly so thestudents could learn how to write correct sentences. She also shared some tips for learning to ignite the students' learning adrenaline to be more motivated in following the teaching-learning processes in the classroom.

Sharing information usually occurs after the experimenting activities. Based on the findings, sharing information happened after teacher II had given additional work to the students to find new information and they discussed and shared it before the teaching-learning process began. Factually, in that meeting, teacher II had not give additional homework, so that no information sharing occurred in the pre-teaching activity of the aforementioned meeting. Sharing information was also done to deliver the results of the experiments. In

this case, each of the students read what they had done in their group, and the teacher listened to and wrote the results of their sharing on the whiteboard.

Findings Related to the Dimension of Teaching Evaluation

According to *Permendikbud* (2013) the evolution or the assessment of the teaching-learning processes based on the 2013 Curriculum is authentic assessment. Authentic assessment is a process of assessing awareness and requires the students to be able to demonstrate a deeper understanding of thinking, motivation, and attitudes. Based on the observations of the writer, the system of assessment based on her lesson plan did not fulfill all the requirements for the 2013 curriculum, because the teacher only evaluated the learning process and the students' outcomes, while she did not evaluate the students' learning readiness, and their attitudes.

Based on the rules for the 2013 Curriculum, in evaluating the students ' motivation, readiness, and their attitude, a teacher has to use an instrument, namely an observation sheet, but the writer did not see these teachers use any instrument. They only taught and gave scores tor tests. From the interview one teacher answered that the scoring system she used followed the rules that she had written in her lesson plan and she evaluated the students based on the process and the product. But, she did not use an instrument to record the students' attitudes. So, the writer concluded that she did not do the evaluation based on the rules given in *Permendikbud* no 81.A.

Discussion

The purpose of this research was to find out the processes used by the two ESL teachers at Senior High School No. I in Bireuen in implementing the scientific approach based on the new 2013 Curriculum which covers three dimensions viz: teaching plan, teaching process, and teaching evaluation.

Related to the dimension of planning, the writer analyzed the lesson plans of the two teachers who were the subjects of this research. Based on the rules from the Minister of Education and Culture (Permendikbud. 2013. No.81.A), there were eight points that should be included in the frame of the lesson plan that were described above. But the lesson plans of these teachers contained nine points. Points I and II were correct; point one contains the information about the school, class, time allocation, learning topic, etc. Point II was also correct, which is

about core competency. While the substance of the other points was wrong, because they did not match the regulations. The writers conclude that the planning of the teachers was poor, as the results for the dimension of teaching planning did not match the requirements.

Likewise for the dimension of teaching process, both teachers used the scientific approach following the steps for the scientific approach i.e observing, questioning, associating, implementing, and sharing the information. But, when compared with the regulations from the minister, number 81.A, both teachers missed some points which had a poor effect on the teaching-learning processes in the classroom. So, the writers conclude that both teachers did not organize their teaching practice perfectly.

Similarly with the dimension of evaluation, based on the rules in *Permendikbud 81A*, the teachers should use authentic assessments in doing the evaluations of the students, and they should be done in every meeting. The teachers should not only evaluate the students' achievements, but they should also evaluate their attitudes in the classroom. In collecting the data related to the students' attitudes, the teacher should use an instrument. But, based on the writers' observations, neither teachers had an instrument to collect data about the attitudes of the students. So, the writers concluded that the dimension of teaching evaluation was also incomplete following the failure of their teaching plans and of the teaching processes of both teachers.

CONCLUSIONS

The result of this research were related to the three dimensions of teaching plan, teaching process and teaching evaluation. The dimensions of the teaching plan were not prepared well before running the teaching processes based on analysis of the lesson plans of the teachers. Their lesson plans did not match the frame work for proper lesson plans recommended in the rules, viz: *Permendikbud* no.81.A for the 2013 curriculum. The dimension of teaching processes that the teachers followed for the teaching-learning process was not based on the lesson plans that had been prepared. The teachers used the steps of the scientific approach viz: observing, questioning, associating, experimenting, and communicating, but during the steps both teachers missed some aspects, and the teaching processes were not run according to the rules in *Permendikbud* no.81.A as required by the

2013 curriculum. The dimension of evaluation used non-authentic assessments that gave the biggest emphasis to the cognitive domain. This is not the same as the mandate from the 2013 curriculum *Permendikbud* no 81A to use authentic assessments.

The writers suggest that in using the scientific approach based on the 2013 curriculum teachers need to understand the steps and the substance of it as much as possible, and then teachers should have good ability to implement them in the classroom. Teachers should be good facilitators who can place their students at the center for learning. This means that the students should be made to be more active than the teacher during the instructional processes carried out in the classroom.

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