

ENGLISH TEACHERS' PROBLEMS IN THE IMPLEMENTATION OF SCIENTIFIC APPROACH IN CURRICULUM 2013

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Abstract

The aim of this study was to describe the problems in the implementation of scientific approach to teach English in SMKN 1 Pontianak. The design of this research is a descriptive study. The subject of this research was two English teachers who teach tenth-grade students of SMKN 1 Pontianak in academic year 2017/2018 who mentioned as first and second informant. In collecting the data, the researcher used semi-structured interviews, classroom observations, and documents study. The findings showed that the implementation was not completely in line with the standard of Ministry of the Education and Culture. Problems occurred in all stages of scientific approach; observing, questioning, experimenting, associating, and networking. The teachers faced problems in creating creative observation activities, encouraging students to ask, designing appropriate task, engaging students to be active in discussions, and giving feedback after students' presentation. These problems happened because of some factors; time management, lack of facilitation, students' level of competence, and human resource knowledge itself. Both of the teachers did not pay attention to these factors while designing the task for experimenting activity. The second informant could implement these stages better than the first one. It happened because she has had training.

Keywords: Teachers' Problems, Scientific Approach, Curriculum 2013

INTRODUCTION

In the beginning of 2013, the Ministry of Education and Culture designed a new curriculum known as Curriculum 2013 for elementary and high schools level. It effects to the use of a variety of approaches and methodologies in a learning process. In this curriculum, learning activities apply scientific approach as the main approach. A scientific approach is basically aimed at the ability to gain or develop new knowledge through science-based learning cycles. It has five steps of its implementation. They are: observing, questioning, experimenting, associating, and networking. This curriculum is expected to generate productive, creative, innovative and effective human resources through the competence strengthening in the domain of

attitude (spiritual and social), knowledge, and skills (Mulyasa, 2014, p. 99). However, the implementation of scientific approach in curriculum 2013 continues to reap controversy, especially in English teaching and learning.

Based on similar research findings from Muhammad Zaim (2016) in Padang University found another teachers' problem in implementing this curriculum. The findings showed that, among the five steps of scientific approach, the teachers were not able to implement the *observing* and *questioning* steps optimally yet. Furthermore, in *experimenting* and *associating* the teachers have applied them well, and in *communicating* the teachers have applied them optimally.

Based on the study above, the researcher intended to conduct a research about the problems

being faced by English teachers in SMKN 1 Pontianak in the implementation of scientific approach in curriculum 2013. The problem might occur in some stages such as in observing, questioning, experimenting, associating, or networking stage. Furthermore, another aspect such as the human resource knowledge, task difficulty, students' level, or the facilities might become the trigger of the problems.

In accordance with the standard competence of curriculum 2013, learning objectives should include the development of attitudes, knowledge, and skills. Attitudes are acquired through activity: accept, execute, respect, appreciate, and practice. Knowledge is gained by the act of remembering, understanding, applying, analyzing, evaluating, and creating. Skills are acquired by activities of observing, asking, experimenting, reasoning, serving, and creating (Ministry of Education and Culture, 2013a). Learning by using scientific approach involves the ability of high-level thinking. According to Priyatni (2014, p. 97) stated in her book, when conducting observation activities, students do identification to find the problem. After problems are discovered, students formulate it by posing questions, then the questions are answered by collecting data with various techniques, analyzing data, drawing conclusions, and communicating its findings. The whole stage involves basic to high-level thinking skills ranging from identifying, remembering, and organizing (comparing, classifying), analyzing, summarizing and evaluating. This is how scientific approach works to support the aim of curriculum 2013 in gaining knowledge.

Learning by a scientific approach is also able to develop character education. Learning that is carried out by scientific procedures to develop precision, honesty, responsibility when the students do observation activities then report the results of his observations. When students find problem based on observations, then formulated in the form of questions and submitted, formed the character of confidence. Critical, creative, caring characters are formed when students

engage in experimenting and experimenting activities both in groups and on their own. Confident and polite characters are formed when students communicate their findings or work. It means scientific approach can also support curriculum 2013 to develop students' attitude and skills. These three points expected to make students more effective, creative, and innovative, and productive. In other words, by having these points, students have soft skills and hard skills to live properly. In order to achieve the goals of curriculum 2013, scientific approach has used. It has five stages of implementation such as observing, questioning, experimenting, associating and networking.

Observing activity is a process which needs all of the senses such as seeing, observing, reading, listening, and scrutinizing. In observing by reading, students are exposed to models of text in order to list items they need to know in order to understand and/or produce texts or communicate ideas. The texts can be authentic and/or simplified. The items to list basically include the social function of the text, text structure, grammar, and vocabulary. Meanwhile, in observing activity by listening, students activities conducted in this stage are, for example, students listen to an audio recording, watch a video, watch the teacher (with or without other students) demonstrate a monologue or dialogue, watch other students act out a monologue or dialogue, and read texts. 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.

In this second stage, students ask or formulate questions based on the identified items. The questions at least cover all of the achievement indicators stated in the lesson plan. The hypotheses or temporary answers are formulated based on the existing knowledge. Students need to be motivated to ask questions regarding the existing knowledge. The activities can be asking

questions, asking and answering questions, and discussing what is not understood or additional information to find out a clarification. Examples of the activities in asking questions can include, students ask questions about the social function, generic structure, and linguistic features of the text being read or heard (watched) that they do not understand or want to know more, or with guiding questions.

The next step is experimenting, in this stage, the students will be asked to collect the data. The students can use many kinds of sources also re-observe deeper about the object or even some experiments. The experiment is done to have an authentic result of learning. In this stage, the students are also expected to solve the problem to develop their skill in solving the problem.

In order to design a good task for students, Nunan (2004, p. 176) suggested that it depends on such factors as the attitude of your learners and the availability of resources. He added that teachers who work in a foreign language context will be faced with greater difficulty in obtaining authentic samples of input than second language teachers, particularly in obtaining aural input data, although the media and internet greatly facilitate matters these days. In other words, it is better to derive communicative activities and other exercises, such as grammatical manipulation exercises, rather than deciding to teach a particular item and then creating a text to exemplify the target feature or item. Setting and student configurations also need to be considered. Getting them in and out of groups of different sizes quickly and efficiently so that time on the task is maximized is an important classroom management skill.

Associating is the process of analyzing the information to find the relationship between one information to other information and to find the patterns of the interrelationship of the information, therefore the one can make a conclusion from the patterns found. However, associating stage in curriculum 2013 emphasizes the students to be more active than the teacher.

This is in line with Suharyadi (2014, p. 1351) who stated that in the associating stage the learning process will be managed effectively if there is a direct interaction between teachers with learners through stimulus and response.

The last stage is networking or also known as communicating. The learning activities of this phase are delivering the observation result and summary based on the oral and written analysis as well as other media used. Furthermore, the activities are delivering results in the form of conceptualization as demonstrated oral and written, write, explain, edit the work of a friend; the magazine published the results of the work on the walls, bulletin school, learning journals, and school blogs. In addition, it is the writing activity or telling what has been found in the activity of collecting information, associating, and finding a new pattern. The collected are delivered in front of the class (Ministry of Education and Culture, 2013d).

RESEARCH METHODOLOGY

This research aims to describe problems in the implementation of scientific approach in teaching English at SMKN 1 Pontianak. Two English teachers of SMKN 1 Pontianak who teach tenth-grade students in the academic year 2017/2018 were investigated as the informants by the researcher. Based on the researcher pre-observation, those teachers have problems in implementing the scientific approach. Therefore, the researcher has conducted a qualitative research in descriptive study form. Descriptive research studies concern with describing the characteristics of a particular individual, or of a group (Khotari, 2014, p. 37). By using descriptive study, this research focuses on describing all of the phenomena to answer the problems that have been stated in the research problem.

The research participants of this research were English teachers in SMKN 1 Pontianak who teach tenth-grade students in the academic year 2017/2018. They were called as the informants. They were selected because they faced problem in implementing scientific approach in curriculum

2013 in the teaching-learning process. This is the first year for SMKN 1 Pontianak to use curriculum 2013 and it is started to the ten grade student in the academic year 2017/2018. It means this is the first experience for them to implement the scientific approach in English learning.

The first informant who teaches X BDP 1 and 2 (Online Business and Marketing), X AKL 1 and 2 (Accounting and Financial Institutions) class was called I1. Meanwhile, the second informant was called I2, teaches X UPW 1 and 2 (Travel Agency) and X AKL 3 and 4 class. There were three techniques for collecting qualitative data which called triangulation. In this research, the data was collected by using interview, classroom observation, and documents study.

The interviews were conducted by using interview guidelines which arranged by using indicators of the implementation of scientific approach as stated in Ministry of Education and Culture (2013). In this study, the interview has been conducted three times to each informant until the information obtained was adequate, clear, and consistent. Hence, the first interview in this study was started with some general questions about the implementation of a scientific approach. It used a list of 24 questions in interview guideline. The second and third stage of interview explored more or confirmed the information that has been obtained through the results of classroom observation and document study.

Moreover, an observation was done by using direct observation in the classroom. It was conducted to evaluate the congruence to the English teacher to avoid bias, inaccurate data, or the informants' answers which do not accurately represent what they are trying to say. As Yin (2010, p. 132) has stated that it would be foolish to regard a self-report as representing totally accurate renditions of real behavior and how it actually transpired. In this stage, the researcher took some notes and filled in observation sheet based on a rubric specifically designed based on the indicators of scientific approach as stated in Ministry of Education and Culture (2013). The indicators were observing (seeing, reading,

listening), questioning (asking questions from factual to hypothetical), experimenting (determine the necessary data, source of data, and collecting data), associating (analyze the data, determine the relationship of data, summing up the result of data analysis), and networking (delivering the results in the form of written or spoken task). There were 24 checklists of teachers' activities while implementing scientific approach.

The documents study were done by reviewing some documents of the informants, they are: English teachers' lesson plan, syllabus, and course book. Therefore, another things which were needed to support the researcher in conducting this research were interview guidelines and classroom observation checklists. To answer the research problem, the data from interview and classroom observation were been analyzed in a qualitative way. There were three main components for analyzing data in qualitative research based on Milles and Huberman (1984, p. 23), they are: (1) Data reduction, (2) Data display, and (3) Conclusion drawing/verification.

Triangulation technique was used to test the credibility of data in this research. As stated by Wiersma (1986, p. 246), triangulation is qualitative cross-validation. It also assesses the sufficiency of the data according to the convergence of multiple data sources or multiple data collection procedures. Thus, there is a triangulation of sources, triangulation of data collection techniques, and time. But in this study, researchers used triangulation of sources, they are; interviews, classroom observations, and documents study. The data was then described, categorized, where the views were the same, different, or specific from the three data sources. The first thing done was to compare the results of class observations with the results of interviews. Then compared the results of interviews with document contents such as lesson plan, syllabus, and course book.

RESEARCH FINDINGS AND DISCUSSION

This chapter presents the findings and discussions. As it is described earlier, this study

tried to answer the following questions: "What problems are being faced by the English teacher in the implementation of scientific approach in curriculum 2013 in SMKN 1 Pontianak in academic year 2017/2018?" In answering this question, the researcher obtained three types of data; semi-structured interviews, classroom observations, and documents study.

First, a semi-structured interview was done three times to each informant. Secondary data were obtained through classroom observation that has been done two times for each informant. The first classroom observation was conducted with the first informant on Tuesday, 29th August 2017 at 10.15-12.15 PM in X BDP 1 class. The second one was done on Thursday, 31st August 2017 at 8.30-10.55 AM in X AKL 1 class. The third one was done to the second informant on Tuesday, 29th August 2017 at 13.25-15.25 in X AKL 3 class. Last classroom observation was done on Monday, 4th September 2017 at 09.15-11.35 in X AKL 4 class. Moreover, documents study were also done by reviewing some documents from the informants such as; lesson plans, syllabus, and course books. The findings were derived from the data based on the stages in scientific approach; observing, questioning, experimenting, associating, and networking.

Observing

Based on the first interview session, both of informants said they have already implemented observing stage in all meetings. Meanwhile, they faced problems in creating creative observing activities to increase students' curiosity. Students' curiosity can be seen if they showed positive responses to the teacher such as giving eye contact, taking note, asking actively, giving opinions, listening to the teacher, or having a discussion with their friends. However, based on the classroom observation result, both of the informants could not always create good observing activities. The research found that students gave more positive responses when the teacher used creative activities such as seeing or listening rather than reading activity. It happened

because they were lack of facilities and human resources knowledge.

These findings were in line with the statement from Firdaus, Arif, and Barmawi (2012, p. 119) who stated that one of the problems in vocational teachers in implementing curriculum is the school equipment which still less able to accommodate the competencies demanded by the curriculum so that many students rate low on the competency item. Human resource knowledge was caused by a lack training. The findings also revealed that both informants have different competencies in implementing scientific approach. Only second informants got the training because she was chosen to be the master teacher in her school. The first informant only got the material about the training from some soft files and sharing with the second informant and another teacher. Meanwhile according to Fathurrahman (2015, p.187) to be able to implement scientific approach, every teacher should have training first. Whereas, not all of the teachers receive it. This condition led to being a problem. That is why further training is necessary in order to increase the application of observing stage.

Questioning

Based on the observation result done by the researcher, researcher found that both of the informants faced problem in encouraging students to ask by using different strategies. Moreover, students' questions were still about general things such as meaning and pronouncing. Informants could not ask about other things covered in the lesson plan and syllabus. Based on the interview result, both of them said that sometimes they used guiding strategies to encourage students. They gave students time to ask, and if the students seemed to be silent, the teachers asked them back. The reason for this problem was because some students still have limited vocabularies only some students were eager to ask questions. It was seen that some students felt afraid of making mistakes. However, in this case, this problem has occurred because the

informants thought that it might take time to use different strategies to encourage students to ask. Meanwhile, they had to spend more time in experimenting stage. It was why both of the informants did not make many efforts to encourage their students.

Experimenting

In experimenting stage, students were asked to collect the data by using any kind of sources. Based on first classroom observation result, students were asked to make dialogue about complimenting others, analyzed the differences between complimenting and showing care, and also made creative congratulation card. By doing these activities, they were expected to solve the problem to develop their skill in English. Meanwhile, the observation result showed that teachers' knowledge about designing tasks was the problem of this stage. They could not able to arrange tasks based on the limited facilitation and student's level of competency they had. Therefore, it affected another problem such as time management of the class. The first informant did not have enough time to implement networking stage well because they spend much time to do experimenting task.

Furthermore, the first informant felt that experimenting stage is one of the hardest stages to be done. As she mentioned in the first interview that the hardest thing to in implementing scientific approach is to make students be creative, for instance in developing a topic to gain more data and answering some questions. It happened because they spent too much time in doing the experimenting activity. The teacher should have designed an experimenting activity or task that appropriate for their level to minimize this problem.

The task difficulty should become one the focus of teacher to design an experimenting activity. Nunan (2004) classified task difficulty from the easier to the more difficult based on three factors; leaner, task, and the text/input. The task made by the first informant was classified as more difficult rather than the second informant because

the students have no prior experience about using the expression of compliment. The input was not really clear because they did not observe about the character of its expression, few contextual clues of the teacher, and grammatical accuracy was highly required.

Associating

According to the second informant in the first interview, this stage was also hard to be implemented because they lack of facilities, therefore teachers still became the main resource in the classroom.

Networking

The last stage is networking or also known as communicating. The learning activities of this phase are delivering the observation result and summary based on the oral and written analysis as well as other media used. The process in this stage is not only in form of verbal communicating or sharing but also written activities such as journals, diaries, and or reports. In this research, both of the researchers already implemented this activity mostly in form of verbal communication. However, in its process, guiding students to give feedback and time management still became the problem that faced by the informants. These findings were in line with the previous study which has done by Zaim (2017) who stated that some teachers have problems in providing feedback on students' performances and making a conclusion. It was caused by the limited time available they have.

In conclusion, the previous research on teachers' problems in the implementation of scientific approach in curriculum 2013 has shown many similar results. This study has proven that the problems occurred in all the stages in scientific approach such as creating creative observation activities, encouraging students to ask, designing appropriate task, engaging students to be active in discussions, and giving feedback after students' presentation. These problems occurred because of some factors; time management, lack facilitations, students' level of

competence, and human resource knowledge itself. Based on the findings, it can be seen that the second informant could implement these stages better than the first one.

CONCLUSION AND SUGGESTIONS

Conclusion

Based on the analysis and discussions presented in the previous chapter, the researcher makes some conclusions. Both of English teachers in SMKN 1 Pontianak still faced problems in implementing scientific approach. The problems happened when the teachers implemented the classroom procedures of teaching English which consists of five stages; observing, questioning, experimenting, associating, networking. The finding showed that the implementation was not completely in line with the standard of Ministry of the Education and Culture. They faced problem in as creating creative observation activities, encouraging students to ask, and designing appropriate task, engaging students to be active in discussions, and giving feedback after students' presentation. Either questioning or networking stage did not run optimally because the teacher used the time to experimenting stage. They did not use any strategy to increase students' curiosity to ask. They were running out of time to do a presentation and give conclusion because of spending too much time on experimenting stage. It happened because of teachers' problem in designing an appropriate task for experimenting activities. They only took the tasks form the eBook published by Ministry of Education and Culture without considering the task difficulty, therefore students spent too much time to do it and ruined the time management of the teacher. As the result, this problem affected other stages in the scientific approach. Both of the informants agreed that experimenting was the hardest stage to be done. These problems happened because of some factors; lack of facilities, time management, students' level of competence and human resource knowledge. However, the second informant could implement these stages better

than the first one. It happened because she already got training.

Suggestions

Based on the conclusion that has been explained before, the researcher would like to propose some constructive suggestions that will be directed toward the English teachers, schools, lecturers, and other researchers. They are following: (1) English Teachers; It is essential to improve their effort in implementing scientific approach to classroom practice. They are also required to fully understand the nature of scientific approach and the purpose and how to implement of each stage as it expected in the curriculum 2013. They can look for another information from the internet, guidebooks, or mass media. In addition, teachers' capability to design a task should be the concern during the teaching process as the study has confirmed. The creativity is also vital for teachers to conduct meaningful and engaging teaching practice. As the curriculum is recently initiated the textbook in form of eBook and other supplementary materials might not be fully provided by the government. They are expected to use various media and techniques in order to attain the learning objectives. (2) Schools; In relation to the findings described in this study, it is recommended to the schools to more pay the attention to facilitation needed to implement scientific approach. The facilities are such as more projectors, good internet connection, and books which appropriate with curriculum 2013. Therefore, it will make both teachers and students easier in the teaching practice. More and specific guidance in the training is very important to improve teacher's competencies. Specific guidance is referred to different treatments for each teacher based on the subject they teach. Since language teaching and learning is different with science, social or vocational competencies, it is needed to the teacher to know the different implementation of it. (3) Lectures; It is essential for the lectures to train more students as the future English teacher about implementation of scientific approach for

each stage. As well as the how to combine it with other approaches such as text-based to teach a language. Designing task ability should be developed since in the university. (4) The Other Researchers; It is expected to the other researchers to conduct further study. It might cooperate with more informants in order to enhance the generalizability and transferability of the finding of this study. Similar studies can be conducted in a different level of students such as junior high school, and senior high school context. It might be worth investigating as it may cover new findings of the implementation of scientific approach. Teachers' ability in designing task is an interesting problem to be observed more. In relation to duration of the research, further study is recommended to conduct it in the long time as to cover richer and explore more data. Longer observation may cover different topics and subject matter in the learning process, therefore that the activities used by the teacher in serving the purposes of each stage of scientific method might be variously discovered.

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