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The Implementation of Scientific Approach in English Teaching Practice

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ABSTRACT
This study explores the challenges in implementing the scientific approach perceived by the EFL pre-service teachers and investigates the EFL pre-service teachers' strategies to overcome the challenges. This research applied a descriptive qualitative design with the in-depth interview as the data collection method. This study was conducted at the English Language Education Department (ELED) at a private university in Yogyakarta with 5 EFL pre-service teachers who employed the scientific approach in their teaching practices when doing their internship program as the participants. This research found that the EFL pre-service teachers faced some challenges in implementing the stages of the scientific approach. These challenges were the challenge in asking the students to ask questions, maintaining the students' focus in gathering information, asking the students to have a discussion, and enhancing the students' self-confidence to share the conclusion of their discussion. However, there were some strategies that these EFL pre-service teachers applied to overcome these challenges. The strategies were helping the students to make questions, monitoring the students in gathering information, monitoring the students in doing the discussion, and building the students' self-confidence.

Keywords: *Scientific Approach, Pre-service Teacher, 2013 Curriculum*

1. INTRODUCTION

A curriculum is a tool to achieve good learning outcomes through the teaching process. The curriculum reflects a set of desirable goals or principles triggered through development processes and contributes to positive learning experiences for students (Astria, 2017). The government is constantly making changes to the curriculum and replacing it with a better one. The changing era has also been a factor in changing the curriculum. The government adjusts the curriculum based on the era, so the world of education increases because the curriculum itself is dynamic (Sukmadinata, 2012).

The scientific approach is an important learning method for all subjects, including English. The 2013 curriculum has promoted the scientific approach as the primary learning method for all subjects, including English (Abidin, 2014). Based on the researchers' observation, most pre-service teachers have difficulties implementing this approach in teaching English during their internship program. The pre-service teachers have challenges in implementing all the steps of the scientific approach. Azizah et al. (2015) stated that students' motivation in learning English is low. The students mostly tend to be passive while learning, making it challenging for the teachers to implement the scientific approach. Also, according to Malaikosa (2020), the common underlying factor that causes the teachers' difficulty in implementing the scientific approach is the lack of teachers' knowledge regarding the scientific approach.

From the two studies above, the factors affecting the implementation of the scientific approach might come from either the students or the in-service teachers. The first study explained the problem from the students' side, whereas the second study explained the problem from the in-service teachers' side. In addition, a plethora of research has been conducted to investigate the challenges faced by the in-service teachers in implementing the scientific approach and the strategies that these in-service teachers applied to overcome the challenges. Few studies investigated pre-service teachers' challenges in implementing the scientific approach and their strategies to solve the challenges. Therefore, the researchers are interested in researching this topic from the point of view of pre-service teachers after they implemented the scientific approach in their internship program.

This research explores pre-service teachers' perspectives of an English Language Education Department in a private university in Yogyakarta. It takes the case of internship during the fifth and sixth semesters for the students from this department because they prepared the teaching instruments for high school students in the fifth semester. Then, they had their teaching practice in the sixth semester. This study focuses on exploring the pre-service EFL teachers' perception regarding the challenges in implementing the

stages of the scientific approach and the strategies that the EFL pre-service teachers used to overcome the challenges.

2. LITERATURE REVIEW

2.1. Indonesian Curriculum of 2013

The Indonesian curriculum of 2013 put the students at the center of learning. Wahyuni (2015) stated that in student-centered learning, students must actively observe, ask questions, discuss, associate, and communicate the lessons based on the contents of the 2013 curriculum. Some schools in Indonesia have used the Indonesian curriculum of 2013 from 2013 up to date. After making eleven changes to the curriculum in Indonesia, the 2013 curriculum is designed to complement the previous ones.

The Indonesian curriculum of 2013 focuses on four main competencies. Machali (2014) mentioned four core competencies in the 2013 curriculum: spiritual, social, knowledge, and skills. These competencies are formed to create the attitudes and personalities of students, who are religious, cultured, knowledgeable, and capable of learning. National Education aims to develop students to become godly humans to God Almighty, noble, healthy, knowledgeable, creative, democratic, independent, and responsible (Indonesian Ministry of Education and Culture, 2013). To achieve this goal, educational institutions must carry out education following the developments in the community.

The 2013 curriculum is a form of the nation's readiness to form innovative, creative, and productive generations, forming a generation that can face challenges in difficult times to come. The success in applying the 2013 curriculum is dependent on teachers' creativity. Teachers are required to make as creative learning plans as possible to apply the rules of the 2013 curriculum (Azizah et al., 2015).

2.2. Definition of scientific approach

There are various definitions of the scientific approach. Rusman (2015) stated that approach is someone's perspective toward a learning process. According to Daryanto (2014), the scientific approach is a learning process that has been set to make the student active in the learning process by doing some steps, namely observing, questioning, information gathering, reasoning or data analyzing, and communicating. Similarly, Nurul (2013) stated that a scientific approach is an approach that uses scientific steps and inquiry in the implementation of learning. The students, individually or in groups, actively explore the concept under study, while the teacher is only a director and evaluator of the process. In the learning process, the teacher plays a facilitator who facilitates the students by giving the concept that must be learned. Then, students as the center of learning must observe and identify what the concept is all about. After that, the students ask the teachers or other friends individually or in groups regarding the concept, and then they search the information related to the concept. Students might search for any resources or relate the concept in the real world. Finally, the students present the concept in front of the class (Indonesian Ministry of Education and Culture, 2013).

2.3. The scientific approach procedure

In the implementation of the scientific approach, there are five stages that the students must do. These stages are observing, questioning, experimenting, associating, and communicating. The explanation regarding these five stages is as follows.

2.3.1. Observing

The first stage in the scientific approach is observing. In this stage, students should investigate material that the teacher has prepared. For example, if the teacher prepares material in a video, students observe and listen to the video carefully. If the material is a textbook, students observe it by reading the textbook's contents. Thus, the observing process uses five senses in the body, such as hearing and sight (Priyana, 2016). Hosnan (2014) also stated that in the observing stage, the teachers allow the student to observe the concept of the material.

2.3.2. Questioning

After observing the material, students will come up with some questions regarding the material under study, and they must answer these questions. Students must actively ask questions by discussing and gathering the questions together and then discussing the answers. Azizah et al. (2015) stated that the questioning stage is where the students construct the knowledge through group discussion.

2.3.3. Experimenting

The next stage is experimenting. In this part, the students explore the knowledge and try to implement it in real life. They can obtain knowledge from any resources like the internet, textbook, or discussion. The students will communicate the opinion with their friends and practice knowledge (Priyana, 2016).

2.3.4. Associating

After experimenting, the students are then associating the concept. In associating, students gather ideas from the results of discussions and information gathering. Afterward, the information will be analyzed by questioning and answering questions regarding the concept discussed. Then, the conclusion of the analysis will produce an answer to the question, or in other words, the students get a new idea. A collection of ideas forms a new experience, and the newly formed experience can then be correlated to the previous one (Ministry of Education and Culture, 2013).

2.3.5. Communicating

The next stage is the communicating stage. There are several ways that the students can communicate information from the questions, one of which is to present conclusions from the analysis results. After the students associate the

information, they will gain a new idea. In this stage, the students can share their ideas with their friends or in front of the class. In this section, students can develop students' knowledge abilities and skills (Ministry of Education and Culture, 2013).

2.4. The challenges in implementing the steps of the scientific approach and the strategies to overcome it

2.4.1. Observing

In the observing stage, the students observe the material that the teacher has prepared. The challenge was asking the students to do the observation. It was becoming a problem because most of the students had low motivation in doing the observation. Oktavianti (2018) found that the teachers have a challenge in motivating the students who have low motivation in learning. Ratnaningsih (2017) argued that using creative and exciting media like the video might be a solution to enhance the student's motivation to do the observation.

2.4.2. Questioning

In the questioning stage, the students explore the knowledge by asking questions. The challenge that happened in this stage was asking the students to ask questions. Sejati (2015) stated that the problem is to promote the students' curiosity toward the materials by asking questions. Most of the students were passive when the teacher asked them to ask questions. To overcome the challenge in this stage, Ratnaningsih (2017) also stated that offering some questions related to the study and starting the discussion with students can encourage them to ask more questions. So, the teachers are encouraged to start the discussion to trigger the students to ask more questions.

2.4.3. Experimenting and associating

The experimenting and associating stages are conducted simultaneously. In the experimenting stage, the students collect the data to answer the problem. Then, the data are processed in the associating stage by doing a group discussion. The challenge in these stages is asking the students to collect the data and do the group discussion. Oktavianti (2018) stated that the problem that mostly happened in this stage was that the students did not want to do the exercise and sometimes avoided the group discussion. The strategies to overcome this challenge are leading and monitoring the process of data gathering and the discussion (Ratnaningsih, 2017).

2.4.4. Communicating

In the communicating stage, the students should explain or present the result of the discussion. In this stage, the teachers commonly faced problems asking the student to communicate the discussion in front of the class. Similarly, Wati et al. (2014) stated that the problem that mostly happened in the communicating stage is the students' lack of confidence to communicate the result of the discussion in front of the class. To overcome this challenge, Suyanto (2018) argued that giving support and helping the students while communicating the ideas can enhance students' self-confidence in expressing their ideas.

3. METHODOLOGY

This section elaborates how the researchers conducted the research. It covers the research design and participants. It also elaborates the data collection technique, data collection procedure, data analysis, and trustworthiness of the research.

3.1. Research Design

The research explores the pre-service teacher's perception of using the scientific approach in teaching and learning practice. Hence, this research applied a qualitative approach. This approach was chosen to support analyzing data which is about the perspective that requires a clear explanation. Creswell and Creswell (2018) stated that qualitative research explores the phenomena and problems and understands the human life and process by exploring the experience or perspective.

This research applied a descriptive qualitative design. Descriptive qualitative is suitable for this research in that the researchers learned the participants' experiences. Supported by Lambert and lambert (2012), descriptive qualitative is employed to gain and describe certain phenomena, issues, and experiences. In applying this design, the researchers describe the situation/phenomenon, and then the researchers also gain clear information based on the response from the participants. Creswell and Creswell (2018) stated that researchers could gain comprehensive information about an ongoing issue from the phenomena or situation. Moreover, the research questions are mainly purposed to explore the perception, and it was related to the statement because this research analyzed the participant's feelings and attitudes through interviews.

3.2. Research Participant

There were five participants in this research, and they were EFL pre-service teachers who were currently pursuing their bachelor's degrees at a private university in Yogyakarta. There were two criteria set by the researchers in choosing the participants of this study. The first criterion was that the participants had conducted teaching practices in their internship program in their 6th semester when this study was conducted. The second criterion is that the participants employed the scientific approach in their teaching practice. By employing the scientific approach in their teaching practices during their internship program, these EFL-preservice teachers have enough experience to share for this research. To find the participants, the researchers employed convenience sampling in that they chose the individuals that are closest to them. Cohen et al. (2011) stated that convenience sampling is conducted by choosing individuals nearest to the researchers. The five participants consist of four females (Mawar, Jasmine, Arimbi, and Bunga) and one male (Sevensky) EFL pre-service teacher at a private university in Yogyakarta. Their names have been changed

into pseudonyms to maintain the participants' confidentiality.

The first participant is Mawar; she is 21 years old, and she is a student of English Language Education Department batch 2017, and she is in the 6th semester when she did the 6th internship. She did the internship in January 2020. The second participant is Jasmine; she is female 22 years old, student of English Language Education Department batch 2017 and in the 6th semester when she did the internship. She did the internship in February 2020. The third is Sevensky; He is male 21 years old, student of English Language Education Department batch 2017 and in the 6th semester when he did the internship. He did the internship in January 2020. The fourth is Arimbi; she is female 21 years old, student of English Language Education Department batch 2017 and in the 6th semester when she did the internship. She did the internship in January 2020. The fifth participant is Bunga; she is female 21 years old, student of English Language Education Department batch 2017 and in the 6th semester when she did the internship. She did the internship in February 2020.

3.3. Data Collection Method

The method used in collecting the data was an interview. This method helped the researchers in exploring in-depth information from the participants. Cohen et al. (2011) stated that the researchers could gain complex data and complete answers by interviewing the participants. The researcher used a semi-structured interview. This type was chosen because the researchers explored the answer of the participant by using the probe. Newcomer et al. (2015) argued that a semi-structured interview is suitable to use, especially when the open-ended questions require follow-up queries.

The instrument used in this research was the interview protocol. The protocol has the function of a guideline for the researchers when doing the interviews. The interview protocol consists of the rule, the interview questions, and probes (the follow-up) for the interview. Rabionet (2011) stated that the interview protocol helps the interviewer develop the participants' information by using the probe. The supporting tools in doing the research were the pen and the paper to support the interview process. The paper and the pencil were used to take notes of some information that the researchers thought would be important for the analysis. Then the last was an audio recorder in a smartphone to record the interviews to ensure that there was no missing information.

3.4. Trustworthiness

Member checking was conducted to ensure the credibility of this research. The researchers send the interview transcripts and the interpretations to the respective participants to be reviewed. It allowed the participants to check whether the transcript is correct based on what they have stated in the interview and whether the interpretations are correct. The participants were allowed to correct or add information if necessary. Cohen et al. (2011) stated that member checking allows the researchers to check whether the data and the interpretations of the data done by the researchers are correct. If the participants think that the data are incorrect or insufficient, they can correct them or add more information if necessary. All the five participants in this research approved the data and the interpretations. Therefore, the researchers then analyzed and elaborated the findings.

4. FINDINGS

4.1. The EFL Pre-Service Teachers' Challenges in Implementing Scientific Approach

There are five stages in the scientific approach: observing, questioning, experimenting, associating, and communicating. The researchers found that the EFL pre-service teachers' challenges occurred in the questioning, experimenting, associating, and communicating stages from these five stages. Based on the interview results, the researchers did not find any challenges in the observing stage because the pre-service teachers claimed they could apply it easily in this step. Mawar stated, "There are no challenges in the observing stage because, in this stage, I just give the student an activity to observe something." Sevensky added, "In this stage, the students are listening and observing what I prepared in PowerPoint, so there is no challenge." Arimbi also has a similar statement, "In the first stage, there are no challenges because the students are just watching videos." While Bunga said, "the focus of students is quite limited, but I can still handle it."

However, based on the interview with the participants, they faced challenges in conducting the other four stages: questioning, experimenting, associating, and communicating. Here are the challenges.

4.1.1. Challenge in Asking the Students to Ask Questions

This challenge happened in the questioning stage. In this stage, the students should ask questions about what they have observed in the observing stage. Based on Mawar's statement, "The students did not ask any questions, and they are also still confused about how to create a question." Jasmine added, "During the questioning stage, no one is asking questions. When I asked for the second time, the students still kept silent." Sevensky also added, "It is difficult to encourage the students in creating a question. Nobody is asking questions if I did not ask them." Similarly, Arimbi mentioned, "It is difficult to encourage the students to ask questions." Bunga also stated, "My students sometimes felt difficult in finding the question, and they sometimes did not understand about the lesson, so it makes them could not make a question."

4.1.2. Challenge in maintaining the Students' Focus in gathering information

This challenge happened in the experimenting stage. In this stage, the students should explore the information related to the topic that the teacher has prepared. Ministry of Education and Culture (2013) stated that students could find information from various sources. They can use sources such as textbooks, discussion, experience, and the internet. The students have the freedom to use their mobile phones to search the information from the internet.

In finding information, the students primarily accessed the internet through their smartphones. However, some students did not use their smartphones for learning purposes. The pre-service teachers found that the students were distracted by other applications on their mobile phones. As Mawar stated, "I ask them to find the information on the Internet using their mobile phone, but the students are distracted by their mobile phone; they opened Mobile Legend game and chatted with his mother and his girlfriend in WhatsApp." Jasmine also added, "I try to motivate the students to focus on the learning activities, but then the biggest distraction is the mobile phone." Sevensky added, "The challenges in the experimenting stage are commonly the students browse other topics that are not related to the lesson, and they sometimes even using their Mobile Phone for playing games." The same idea came from Arimbi, who stated, "The students are distracted by their mobile phones. They should find the information related to the topic, but they tend to play games, or some of them are busy with their Instagram." Similarly, Bunga mentioned, "They sometimes did not focus on using their Mobile phones because they are not only searching for information but also opening their Social Media accounts like Instagram or Facebook."

4.1.3. Challenge in asking the students to have a discussion

This challenge occurred in the associating stage. Associating is the stage where the students must process the data or information gathered in the experimenting stage. The activities of associating are finding the relation between the information, discussing the information in group, analyzing the information, and making a conclusion related to the topic. All five participants claimed that this stage was the challenging one, during which the pre-service-teacher asked the student to discuss the topic, but the student did not do the instruction given.

Mawar stated, "The students are chatting with their friends until the time is over, and then the data that the students associate is out of the topic from the information." Then, Jasmine also stated, "The students are talking with their friends, so they are not discussing the information they obtained and then did not finish the discussion at the time provided." Then, Bunga also stated, "The challenges are the students did not only discuss the information they get from the internet but also discuss other topics, which are not related to the lesson; they tend to talk to each other."

4.1.4. Challenges in improving the students' self-confidence in communicating the conclusion

This problem happened during the communicating stage. In the communicating stage, the students are asked to explain the result of their discussion. In this stage, each group will read the conclusion before the class and convey their ideas about the topic. The EFL pre-service teacher will give feedback to the group at the end of the presentation. The other groups will pay attention to the presentation and will give feedback for the presenting group. The communicating stage is where students present their findings in spoken, written, and other media (Hosnan, 2014).

In this stage, the students often have no courage to perform in front of the class. The pre-service teachers have run out of time because it is challenging to motivate the students to participate. Based on the interview result, Mawar argued, "When I ask the students to explain the result in front of the class, they did not come forward because they are shy and then the time for communicating stage is over." Similarly, Jasmine argued, "The students did not have the confidence to explain what they have discussed, and then the last problem is about the time. The time is spent to motivate the student to be courageous in communicating their result." Sevensky added, "For the communicating stage, I did not implement it because of too much time spent in the discussing stage. Thus, for the result, I ask them to write the result and collect it in the next meeting." Bunga also stated, "the students have no confidence to speak in front of the class."

4.2. The EFL Pre-Service Teachers' Strategies to Overcome the Challenges

The researchers found some pre-service teachers' strategies to overcome the scientific approach's challenges based on the interview result. Below are the strategies employed by the EFL pre-service teachers to face each challenge explained above.

4.2.1. Helping students in making question

This strategy was used to overcome the challenges in the questioning stage. The challenge that happened in the questioning stage was asking the students to ask questions. To make the students actively ask questions, some EFL pre-service teachers help the students by giving stimulation like preparing a guideline, giving clues, and starting a conversation with the students. Mawar stated, "I give them stimulation by showing a PowerPoint about questions, and after that, I give them a guideline on how to make a question. It was quite effective because some of them are starting to ask questions." Jasmine also argued that "I do an activity that can stimulate the students to ask questions. I give an explanation text and ask the students to read it. After that, I start a conversation with them about what explanation text is."

Similarly, Sevensky also stated, "I have to stimulate them by starting some conversation and asking some

question about the informal letter, so then they can create a question." Arimbi added, "In the second meeting, I prepare some rewards, so it can motivate the students to ask questions." Bunga also stated, "I give them some clue, sometimes when they ask a question, but the purpose is still not clear then I help them by saying "did you mean something like this?" and then they say yes."

4.2.2. Monitoring the students in the process of information gathering

This strategy was employed to overcome the challenge in the experimenting stage. The challenge is maintaining the students' focus in gathering information. Most of the students did not search the information as the EFL pre-service teacher asked. The students used their smartphones not only for study purposes but also for something that was not related to the learning activities. It cannot be denied that smartphone makes students distracted by other applications like social media, music, and games.

The pre-service teacher closely monitored the students using their smartphones to ensure that they only used them for study purposes to overcome this challenge. Based on the interview, Mawar revealed, "I went to the students one by one and asked the progress that they have made. I said, "Don't open other applications," so they will be kept on track. She also added, "Some of the students help me supervise their friends because there are only seven to eight students in one class. I keep warning the students to stay making the task not playing game or opening other applications." Jasmine also did a similar thing. She explained, "The task is done in pairs. I put the students in pairs because they would be distracted to open other applications if they did it alone. Then, I come to each table to check whether they have any problems or not." Sevensky also has similar techniques; he mentioned, "I supervise the students intensely whether they are browsing or playing a game, and I have to warn them to keep browsing the topic related to the lesson." Arimbi also stated, "I give the students a verbal warning because this stage should not be missed. This stage is one of the important parts in the scientific approach." Bunga then revealed, "I supervise them, and sometimes I walk around the class checking each student to see whether they opened the Google app to find information."

4.2.3. Monitoring the students while doing the discussion

The third strategy faced by the students is in monitoring the students was while doing the discussion. This strategy aims to overcome the challenge in the associating stage, keeping the students focused while associating the information/data. The students tend to discuss the things that are out of the topic. The pre-service teachers participate in the discussion process to ensure every group can deal with their problems to overcome this problem. Based on the interview result, Mawar stated, "There is no specific method; I just accompany the students while they are doing the discussion. After that, I will check every group and ask their progress in the discussion."

Similarly, Jasmine stated, "I ask the students to do discussion together." Arimbi also argued, "I ask them about their progress so if there are any problems they can tell me, and I can also give them reward if they keep focusing on discussing the topic." Bunga added, "I involved myself in the discussion, and when they talk to each other, I give them a verbal warning, "keep the focus on what you discuss now," and then the students start to focus again."

4.2.4. Building the students' self-confidence

This strategy aims to overcome the challenge that occurred in the communicating stage. The challenge is in encouraging the student to communicate the result of their group discussion. In the communicating stage, the students should report the result of the discussion. However, the difficulty is to make the students speak and present their results in front of the class. In building the students' self-confidence, there are some techniques that the pre-service teachers use. These were done by supporting and building students' trust in learning, giving a stimulus, and rewarding. Mawar mentioned, "I ask them to come in front of the class and convince them to help them explain the result. When they deliver their opinion, and it is not what they mean, and then I will give them an option." Jasmine also stated, "I apply stimulation method where I give them a stimulus by starting a conversation with them and then they can explain their opinion." Then, Arimbi also stated, "Based on my experience, giving a reward for students is effective. So, they can be motivated to do the task." Bunga then said, "the strategy that I use sometimes is giving a reward for students who want to explain the result in front of the class. I think it was effective because the students are enthusiastic to join."

5. DISCUSSION

There were two findings based on the research focus on this research. The first finding is related to the challenges that the pre-service teacher face while implementing the scientific approach. All the pre-service teachers argued that the biggest challenge in the questioning stage was encouraging the students to make questions. Zaim (2017) mentioned that the problem in questioning was the students' ability to create the questions. When it comes to the questioning stage, the students did not ask any questions even though the pre-service teacher had already asked, but no response from the students. Mahadini and Srijono (2019) also stated that the most challenging scientific approach is the questioning stage because the students tend to be passive and silent in this stage.

Next, the problem in the experimenting stage is that all the participants stated the same argument about this problem. The students did not focus on finding the information; instead, they opened other applications on their mobile phones. Purnamaningwulan (2019) stated that the

other problem arises in using smartphones. The students take advantage of opening other Applications when they are allowed to use their smartphones. Machmud (2018) also stated that smartphones could distract the students while learning; they tend to check the social media and distract the other friends around them, even the whole class.

Then, the problem in the associating stage was asking the students to discuss while processing the data. Oktadiana (2016) mentioned that asking the students to associate the information in a discussion is complex; the student tends to listen to the teacher's explanation rather than reveal their ideas. Oktavianti (2018) also stated that the students mostly avoid being involved in discussion.

Lastly, the problem in the communicating stage is the student's lack of self-confidence and the time limit. Most students did not have confidence in reporting the finding in front of the class. Zaim (2017) stated that the students were not confident performing in front of the class because they had low English competence. The other problem that happened in the communicating stage is time management. The pre-service teachers sometimes did not implement this stage because the time was over. Nugraha and Suherdi (2017) mentioned that the five stages in the scientific approach sometimes could not be conducted in one meeting because the time allotment is not precise.

The second finding is about the strategies that the pre-service teachers used to overcome the challenges. The first strategy to overcome the challenges in the questioning stage is asking the students to ask questions. The researchers found that the participants stimulated the students' responses in the questioning stage based on the statements above. Anindyarini (2018) found that stimulus could improve the students' spirit in learning. The pre-service teachers' stimulation was diverse; they included guidelines, conversation, and rewards. All the participants revealed that the stimulus they gave to the students was quite effective because most of the students responded and started to create a question.

The next is the strategy to overcome the challenges in the experimenting stage. The challenge is maintaining the students' focus in gathering information. From the statements above, the pre-service teacher faced the challenge by giving a high control through information gathering. Purnamaningwulan (2019) found that teachers' control plays an essential role in supervising and guiding students using smartphones. In this case, the participants revealed that the most effective way to keep the students focused while using smartphones is to monitor the students. The pre-service teacher will check the students while searching the information.

The next one is the strategy to overcome the challenge in the associating stage. The problem is about the students' focus while associating the information/data. The students tend to discuss the thing that is out of the topic. The pre-service teachers guide every group by participating in the discussion to encourage the students to focus discussion the topic. Wahyudin and Sukyadi (2015) stated that in the associating stage, the role of the teacher is as a facilitator to help students in the process of learning. Therefore, the pre-service teachers guide the students in the process of the discussion. This method effectively keeps the students focused because the pre-service teacher could help the students associate the information in the discussion.

The last is the strategies that the EFL pre-service teachers used to overcome the challenges in the communicating stage. The challenge is to encourage the student to communicate the result of their group discussion. In the communicating stage, the students should report the result of their discussion. From the strategies above, it can be concluded that giving motivation to students is highly necessary to build their confidence. The motivation involves support, trust-building, and the secure feeling the EFL pre-service teachers give to the students. Al-Hebaish (2012) mentioned that building self-confidence could encourage students to express their ideas without fear. Some participants revealed that the most effective way to increase students' activeness in learning was by rewarding them. Implementing rewards in the communicating stage might stimulate the students' confidence in presenting their ideas. Suyanto (2018) also revealed that the teacher should encourage the students by giving support in communicating their ideas.

6. CONCLUSION

A curriculum is a tool used to achieve learning outcomes. Nowadays, the curriculum implemented in Indonesia is the curriculum of 2013; the applied approach is the scientific approach. There are two focuses of this research; the first is to explore the challenges in implementing the scientific approach. The second is the strategies the EFL pre-service teachers employed to overcome the challenges. The researchers employed a descriptive qualitative design with interviews as the data-gathering technique with five EFL pre-service teachers pursuing their bachelor's degree at a private university in Yogyakarta as the participants.

The first focus of this research is finding out the challenges that the students faced while the EFL pre-service teachers implemented the five stages of the scientific approach. From the five stages of the scientific approach, the challenges only occurred in four stages: questioning, experimenting, associating, and communicating. In the observing stage, most participants revealed that they did not face any challenges. The challenges that the EFL pre-service teachers faced in implementing the scientific approach were the challenges in asking the students to ask questions, maintaining the students' focus in gathering information, asking the students to have a discussion, and encouraging the students' self-confidence to communicate the conclusion.

The second focus of this research is exploring the strategies that the EFL pre-service teachers employed to overcome the challenges. The strategies employed by the EFL pre-service teachers were helping the students make questions, monitoring the students in the process of information gathering, monitoring the students while doing the discussion, and building the student's self-confidence.

To sum up, the EFL pre-service teachers still faced some challenges when implementing the scientific approach in their teaching practices during the internship program. The EFL pre-service teachers faced some challenges in the questioning, experimenting, associating, and experimenting stages. Based on the interview, the EFL pre-service teachers have implemented the stages of the scientific approach. Even though they faced some challenges, they still implemented the scientific approach and employed some strategies to face the challenges.

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