



English Teachers Professional And Pedagogic Competence Toward The Scientific Approach in Madrasah Aliyah In Jayapura City

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Abstrak

Kurikulum 2013 memberikan pendekatan baru dalam proses pembelajaran di kelas. Pendekatan saintifik diberikan untuk mengembangkan keterampilan, pengetahuan, dan sikap siswa. Namun, pendekatan saintifik ini menjadi tantangan baru bagi guru dalam penerapannya. Tantangan ini ditunjukkan dengan munculnya berbagai isu yang berkaitan dengan masalah yang dihadapi guru. Tujuan penelitian ini untuk melakukan penelusuran lebih mendalam terkait penerapan pendekatan saintifik dalam proses belajar mengajar yang dilakukan oleh guru bahasa Inggris di sekolah Madrasah Aliyah Kota Jayapura. Penelitian ini menggunakan jenis penelitian kualitatif dengan metode deskriptif. Sampel dalam penelitian ini adalah guru bahasa Inggris yang mengajar di Madrasah Aliyah di lingkungan Kota Jayapura. Subyek penelitian ini dipilih dengan menggunakan teknik *purposive sampling*. Dalam penerapan proses pembelajaran bahasa Inggris antara guru Darul Maarif Numbay Jayapura dan Al-Muttaqin terdapat perbedaan dalam penerapannya. Diantaranya, dalam prosedur kegiatan inti, guru Darul Maarif lebih banyak menerapkan semua prosedur kegiatan inti. Hal ini membuktikan bahwa perlu adanya tindak lanjut berupa pelatihan penerapan teori saintifik dalam pengajaran Bahasa Inggris kepada guru di Madrasah Papua.

Kata Kunci: *Kompetensi Profesional, Pedagogik Guru Bahasa Inggris, Pendekatan Saintifik*

Abstract

The 2013 curriculum provides a new approach to the learning process in the classroom. A scientific approach is given to develop students' skills, knowledge, and attitudes. However, this scientific approach is a new challenge for teachers in its application. This challenge is indicated by the emergence of various issues related to the problems faced by teachers. The purpose of this study is to conduct a more in-depth search regarding the application of a scientific approach in the teaching and learning process carried out by English teachers at Madrasah Aliyah schools, Jayapura City. This research uses a type of qualitative research with descriptive methods. The sample in this study was an English teacher who taught at Madrasah Aliyah in Jayapura City. The research subjects were selected using a *purposive sampling* technique. In the application of the English learning process between the teachers of Darul Maarif Numbay Jayapura and Al-Muttaqin there are differences in their application. Among them, in the core activity procedures, Darul Maarif teachers mostly apply all core activity procedures. This proves that there is a need for follow-up in the form of training in the application of scientific theory in teaching English to teachers at Madrasah Papua.

Keywords: *Professional Competence, English Teacher Pedagogy, Scientific Approach*

Introduction

Implementation of learning in schools cannot be separated from using the curriculum. The curriculum is a set of plans and arrangements regarding the objectives, content, learning materials, and methods used as guidelines to achieve learning objectives (Government Regulation No.19 of 2005). The curriculum is a guideline for formulating the objectives of learning and guidelines for determining the steps and learning materials in order to achieve these learning objectives. In other words, the curriculum is an outline used to guide the learning process in schools.

In the world of education, the curriculum is constantly evolving in line with the development of society. The Ministry of Education and Culture continues to renew and innovate in the field of education, one of which is the curriculum. The government has innovated the Indonesian education curriculum, so the 2013 Curriculum was born. Curriculum changes are an effort to improve the quality of education in Indonesia.

The 2013 curriculum for the education system in Indonesia has been implemented in stages since the beginning of the 2013/2014 school year. Kunandar (2013) revealed that the 2013 Curriculum aims to prepare Indonesian people to have the ability to live as individuals and citizens who are faithful, productive, creative, innovative, and able to contribute to the life of society and the state. In other words, the government places science and citizenship education in an integrated manner with religious and moral education to create new human resources with character.

In addition, the 2013 Curriculum provides a new approach to the learning process in the classroom. The scientific approach is given to developing students' skills, knowledge, and attitudes. In addition, the scientific approach in the 2013 curriculum focuses on developing students into productive, creative, innovative, and practical students through integrated skills, attitudes, and knowledge. This goal can be achieved by designing effective and meaningful instruction for students. Therefore, teachers are expected to use the scientific approach in learning and learning.

However, this scientific approach is a new challenge for teachers in its application. This challenge is shown by the emergence of various issues related to the problems faced by teachers. The problems that arise are due to a change from learning initially centered on the teacher now emphasized to be student-centered. Ayuni (2015) adds that a problem is caused by the teacher's lack of understanding of the scientific approach. In addition, teachers are challenged to provide equal portions of affective and psychomotor aspects to students. The 2013 curriculum requires teachers to be more creative and innovative.

Based on the above phenomena, teachers face various problems applying the scientific approach to teaching. Darnius (2016) revealed that teachers have difficulty applying learning steps with a scientific approach. One is in the questioning step, and the teacher has difficulty raising students' enthusiasm to ask questions. This is because teachers are still not used to training and emphasizing students to be involved in finding out for themselves until students learn what is being studied. In addition, the teacher also experienced difficulties in stage communication because many students still did not dare to respond to something the teacher had stated. Cahyanto (2015) adds that other problems experienced by teachers in implementing learning using a scientific approach are difficulties in growing students' reasoning, fostering students' courage to communicate the work or tasks that have been done; strengthening the memory of students; mastery of the class, carrying out the activity steps; lack of assessment time; and develop learning resources and media in the classroom. This shows the importance of the teacher's understanding of the scientific approach before applying it in the teaching process in the classroom.

Therefore, the phenomenon that occurs as described above shows the need for teachers' potential and creativity to successfully implement the scientific approach in the learning and learning process. Mulyasa (2013) states that teachers have an essential role in the success of curriculum implementation. Quality teachers depend on how they can teach in the classroom with their creativity and innovation. Teachers must have high competence and responsibility to carry out the planned program. In other words, teachers must make students productive, creative, and innovative to achieve the expected national education goals. So teachers should understand the substance of the 2013 curriculum, especially the scientific approach and its implementation in the learning and learning process.

Based on the description of the phenomenon above, the pilot study conducted by the researchers revealed that the 2013 curriculum had been implemented in schools in Jayapura. However, in its application, some teachers still apply the scientific approach in an integrated manner. In other words, applying the scientific approach in the learning and learning process in the classroom is still not going well. Therefore, the researcher intends to conduct a more in-depth investigation related to the application of the scientific approach in the teaching and learning process carried out by English teachers at Madrasah Aliyah schools in Jayapura City.

Method

This study used a descriptive method. The descriptive method is used in this study to describe opinions about the theoretical interpretation of the scientific approach and how it is applied in teaching English. Qualitative data is collected by researchers from the location of the research. Qualitative data consists of recordings of what the research object has done, such as in the form of interview transcripts and also observation notes. The data of this research is in the form of the opinion of the teachers about their theoretical interpretation of the scientific. In addition, teaching strategies and activities in the classroom during the process of teaching English will be the data of this research. Therefore, this study's data sources are English teachers who teach at the Madrasah Aliyah level in the Jayapura City environment.

This research was conducted at Madrasah Aliyah level schools in Jayapura City. Based on the research data, which is the knowledge of the English teacher regarding the scientific and its implementation, the subject of this research is an English teacher who teaches at the Madrasah Aliyah level in the Jayapura City environment.

The subjects of this study were selected using a purposive sampling technique. Purposive sampling is a sampling technique as a data source with specific considerations (Sugiyono, 2016). This is done to obtain the required data from resource persons who teach English by applying a scientific approach. From the purposive sampling method, the sample consisted of 2 people, namely English teachers at Madrasah Aliyah Al-Muttaqin Buper Jayapura and Madrasah Darul Maarif Numbay Jayapura.

This research was conducted in two different schools, namely:

- a. Madrasah Aliyah Al-Muttaqin Buper Jayapura
Observation: Thursday, September 19, 2019
Interviews : Thursday, September 19, 2019
- b. Madrasah Darul Maarif Numbay Jayapura
Observation: Friday, September 27, 2019
Interview: Friday, September 27, 2019

Data Collection Techniques Data. Collection techniques carried out by researchers in this study are as follows. Observation made during the learning process include preliminary activities or preliminary activities to closing activities. Researchers also made observations on the assessment techniques used by teachers. Interviews, this study conducted interviews with the 12th-grade English teachers at Madrasah Aliyah Al-Muttaqin Buper Jayapura and Madrasah Darul Maarif Numbay Jayapura.

Results and Discussion

Results

Research conducted by researchers, in this case, includes two things, namely the interpretation and application of scientific approach theory by English teachers to English language teaching at the Madrasah Aliyah level in Jayapura City. The results of the research from these two things are as follows.

A. Interpretation of Scientific Approach Theory by English Teachers

This study uses interviews and documentation studies to describe the interpretation of scientific approach theories implemented by English teachers at Madrasah Aliyah Jayapura City. The following are the results of the research.

1. Description of Interpretation of Scientific Approach Theory by an English Teacher in Class XII at Madrasah Darul Maarif Numbay Jayapura

The results of interviews conducted by researchers on September 27, 2019, with English teachers, namely the teacher's interpretation of learning English using the 2013 curriculum, have interpreted the theory of scientific approaches in the English learning process that is applied to students.

Based on the interview, the teacher makes their own Learning Implementation Plan (RPP). In the prepared RPP, the teacher does not always use the scientific approach because it is adapted to the material in the classroom. This follows the results of the following teacher interviews.

Researcher: *Yes, did you describe the Scientific Approach RPP used according to the 2013 curriculum?*

Teacher: *Okay, see, maybe for some RPP, there are several approaches. It is a scientific approach, but not all are aimed at it. I also include that approach. Nevertheless, there are also some that I include in the Scientific approach.*

Researcher: *What do you mean by not including the Scientific Approach? Are there five steps involved in the Scientific Approach activity? What do you mean? Is there a certain RPP that includes the five steps or only part?*

Teacher: *Eh..., I usually adjust it to the material. If the material, uh...it allows for a sensitive approach, I will use it. (September 27, 2019)*

In the process of learning English, used by the teacher to the students, it is determined based on the making of the learning concept. In this case, the learning concept used is in the form of lesson plans. The process of making lesson plans in the scientific approach theory that has been carried out is by including the identity of the school first and other matters, formulating learning objectives, determining the material to be taught based on the syllabus, determining the method to be used, determining the learning activities to be carried out, selecting sources to learn and formulate an evaluation or assessment. This is by the results of the following teacher interviews.

Researcher: *Okay, then, eeeeeee , can you please explain how to prepare the RPP?*

Teacher: *Yes, the steps in making the first lesson plan: ee*

- a. I put my ID. Such as school identity and others.*
- b. Then, formulate learning objectives.*
- c. Determine the material to be taught later.*
- d. Then, Define the method.*
- e. Then also determine the learning activities, what will be done*
- f. Then choose the source of learning resources. Moreover the last one is evaluation or assessment. (September 27, 2019)*

Based on interviews, the steps in writing an assessment design in the theory of a scientific approach include; determining the material to be taught based on the syllabus, determining the test of the material, and creating an assessment practice that is used to make it easier to score the test results.

The interpretation of the scientific approach to learning also involves the learning resources used by the teacher in teaching English. The learning resources used by the teacher come from various sources, including print media in the form of reading books related to learning English. This internet is an additional source and expansion of understanding related to learning resources, as well as discussions between teacher friends in teaching English to be material for improving learning. Students using a scientific approach. This follows the results of the following teacher interviews.

Researcher: *Okay, sir, teacher, how do you determine the learning resources that will be used every time you meet?*

Teacher: *Okay, if it is a learning resource. What I usually use I get from the book textbook. Besides that, I combined it with the materials I was looking for on the internet.*

Researcher: *Okay, on the internet, apart from the internet, do you think there are others?*

Teacher: *Eh..., I usually ask my friends too; ask for a solution from a friend, how do you make this material so that it attracts students' interest in learning (So, usually from books or the internet?) Yes, from books or the internet.*

Researcher: *So, usually from books or the internet, huh?*

Teacher: *Yes, from books or the internet.*

The activities carried out by the teacher in applying a scientific approach are based on the situation of the English subject hours. This is done because teaching English which is done at different times, such as the beginning of the subject, namely in the morning, and at the end of the lesson, namely the hour before going home, influences students' interest in learning English, so the stimulus for students will be different in learning English. . In the morning students are more enthusiastic about receiving learning materials than in the afternoon in English learning activities. Related to this, the teacher uses learning media in English learning videos to stimulate students during the day's English learning process. In addition, activities to initiate the early learning of a scientific approach are preliminary activities. This activity aims to familiarize students with the beginning of English learning materials and encourage students' motivation in the English learning process. The steps in scientific approach activities include observing, asking questions by collecting information, managing information, and communicating so that there is harmony in understanding a learning material. Observing activities in a scientific approach include reading a source or article in learning English, listening to a lesson related to learning English, or observing phenomena that occur by involving the students' five senses so that they grow in life precision, discipline, and the use of time.

In addition, the learning media used by the teacher in learning English using a scientific approach is used conditionally. In this case, if it is possible to use the media via electronics, this can be used. However, if the situation is not possible, such

as a power outage, then image media is used in the learning media, which is effective in learning English.

In the preparation of the assessment instrument, there are procedures in compiling it, including the role to be assessed, determining indicators, determining the type of scale in assessing students, writing draft instruments, communicating with teacher friends regarding the suitability of the assessment, revising the results of discussions for student assessment, and analyze the value in English learning activities. In addition, the learning assessment process includes learning objectives, regularity in learning, chipmunk, and alignment in assessing English learning using a scientific approach.

The purpose of the assessment made by the English teacher in the learning process of a scientific approach to students is to measure students' abilities after the learning process, regularity in making questions according to the grid, giving chipmunk, namely the motivation of students in learning English, and the alignment carried out in the assessment of participants objectively which is seen from the ability of students in the English learning process. In the assessment using a scientific approach, students' attitude criteria are also used, including determining attitudes that will be developed by referring to KAI I and KAI II, determining the indicators listed in KAI I and KAI II, and designing learning activities that can lead to positive attitudes. Has been determined in KAI I and KAI II. In addition, the assessment of students' knowledge is based on creating a rubric to assist teachers in assessing the English learning process using a scientific approach. The stages carried out in the assessment of knowledge using a scientific approach include creating questions, making answer keys, and making assessment rubrics that are adjusted to the questions that will be used to give tests to students. The assessment used in learning English using a scientific approach is not only an assessment of attitudes and knowledge. However, using a scientific approach, a skills assessment is used to learn English. The steps used in making student skills assessments are planning assessments related to the skills to be assessed against students, implementing skills assessments, utilizing the results of the skills assessment, and reporting the results of the assessment in the form of a scale listed on a 0-100 scale supported by descriptions—description of the folio paper. Making an assessment draft is carried out before the

learning and assessment process occurs. In addition, the scale used in the assessment draft, such as the *speaking*, consists of fluency in speaking, clarity in speaking, and the use of *grammar* when speaking skills in English. In addition, remedial activities are still used in the PTS process (mid-semester assessment. However, remedial activities are rare, even never carried out, because the results of PTS scores have met the minimum requirement criteria in English learning.

The appropriate scientific approach is related to students' understanding in recognizing and understanding various English materials does not only depend on the teacher but can come from any source and at any time in learning English. Due to the scientific approach in the English learning process, students do not only understand the material from one source. However, students can get information on learning materials from various other sources. Then the teacher provides harmony in understanding English learning materials using a scientific approach.

2. Description of Interpretation of Scientific Approach Theory by an English Teacher of class XII at Madrasah Al-Muttaqin

Researchers interviewed English teachers at Madrasah Al-Muttaqin on Friday, September 27, 2019. The results of the interviews are related to the interpretation of the theory of approach science in learning English. The making of teaching concepts carried out by teachers is taken from the available lesson plan format. Then the concept of learning is changed regarding the identity of the school. This is done because of the teacher's limited time in designing the concept of the learning process.

The concept of the learning process includes a scientific approach theory that already exists in five steps of learning activities. In addition, an assessment design is needed in learning activities to determine students' learning abilities. The learning resources used are based on what is already available in the school environment, such as textbooks which are often used as learning resources. The theoretical interpretation of the scientific approach related to the time allocation used by the English teacher is not adjusted to the syllabus. This is done because the participants' ability required an additional learning process in English, so the allocation of time used by the madrasa is four hours a week.

The learning process carried out by the teacher follows the learning concept. Among them are preceded by preliminary activities. This activity includes checking student attendance, delivering

the basics of learning materials to be studied, and conveying the learning objectives of the scientific approach listed in the lesson plans. The learning media used in the learning process is adjusted to the conditions needed by the material and students in the English learning process. Among the media that are usually needed in the learning process are video and image media in helping the English learning process. The process of learning English also uses an assessment of students. The assessment carried out is not only in the form of notes, but the assessment carried out by the teacher is in the form of observing and seeing firsthand the students' abilities in the English learning process. Besides that, the closing activity is carried out by the teacher by motivating to be able to complete the tasks given by the teacher for the continuation of the English learning process.

Assessment of 2013 curriculum learning is interpreted in the learning process using scoring and assessment rubrics from student learning outcomes. The steps taken are modifying the assessment rubric already available in the teacher's handbook and also making your scoring or assessment rubric if it does not follow the surrounding conditions. The daily tests are carried out after the completion of the learning process carried out by each KD. In addition, the assessment using the reference mode criteria is applied to performance, such as products in students' English learning activities at school. Meanwhile, the assessment using the average criterion reference is used, which is adjusted to the topic of learning English, the order of learning, and analyzed at the end of the assessment. Assessment using the optimum achievement is used in the assessment of knowledge. Because based on the teacher's explanation of teaching English, if the skill assessment uses the optimum criteria reference, then the KKM is also determined in learning English.

The teacher's English learning process also uses a remedial process. This remedial process is carried out without the students realizing it. This is done because it maintains the feelings of offended students regarding their scores below the KKM average. However, the teacher gives additional tasks to complete the assessment under the English KKM.

The explanation above provides an overview of the teacher's interpretation of the teaching process using the 2013 curriculum. The interpretation is adjusted to the abilities and circumstances of the teacher and students. Because if the teacher does not adjust the situation, it is not

necessarily appropriate and on target in delivering English learning.

B. Application of Scientific Approach Theory by English Teachers

Research on applying the Scientific Approach to class XII students at Madrasah Darul Maarif Numbay Jayapura and Madrasah Aliyah Al-Muttaqin Buper Jayapura includes preliminary activities, core activities, and final activities. The results of research conducted by researchers are as follows.

1. Description of the Application of Scientific Approach Theory by an English Teacher in Class XII at Madrasah Darul Maarif Numbay Jayapura

The results of observations made by researchers on Thursday, September 19, 2019, show that teachers can apply the theory of the Scientific Approach well. The teacher's application of the scientific approach theory consists of three English learning activities that are applied to students. The three activities for applying the theory of the scientific approach include preliminary (*pre-activities*), core activities (*while activities*), including the implementation of the scientific approach, and *post-activities*. The following is a table of the teacher's implementation of the scientific approach.

a. Based Pre-Activities

On the results of observations, there are five preliminary activities in learning English carried out by teachers. The results of the observations are listed in the table. 4 in the preliminary activity, one activity is complete, and the results of the findings are. The activity is to condition a pleasant learning atmosphere, and the teacher asks how the students are, followed by checking attendance by reading the attendance list of students.

There are two complete observations in applying English learning using a scientific approach. Among them, in conveying the competencies that will be achieved, including their use in daily life, the teacher uses a method by asking about funny stories in everyday life in Papua, which is commonly called a mop. In addition, the teacher's process of conveying a line of material coverage and activities to be carried out by conveying to students the meaning or meaning of words in Indonesian in a discussion of the material to be studied.

b. Core Activities (*while Activities*)

From the results of observations that have been made, the core activities in the process of learning English, there are several procedures in teaching English by applying a scientific approach. These procedures include six procedures for observing activities, four for questioning activities, ten for gathering information through experimenting activities, six for reasoning or associating, and seven for communicating activities.

We are observing activities that have been carried out, one that is not, namely observing by watching. This activity occurred because the media were audio and reading text about *spoof text*. In addition to the other activities, the results of the observations are included in the complete criteria. The activities of the English learning process were continued with questioning activities. This activity consists of one observation result with a suitable category, one activity observation result with a complete category, and two very comprehensive observations. The learning process activities were followed by collecting activities, so from the observations, there were four activities with complete categories, one with complete categories, one with good categories, and three not carried out in the learning process. Then the next activity is the reasoning or association activity, which consists of three activities with complete categories, two with complete categories, and one not carried out as well as communicating activities that consist of one very complete and complete category. In contrast, other activities are not carried out in learning English.

c. Closing Activities (*Post Activities*)

Based on the observations, there are four very complete categories of learning activities carried out by teachers, and other activities are not based on the learning implementation plan. The findings obtained from observations in English learning include students identifying their work, the teacher repeating the material in the learning process in general, the teacher discussing with the students by reviewing the material that has been discussed, and collecting the results of the work that has been given during the process. English learning.

2. Description of the Application of Scientific Approach Theory by a Grade XII English Teacher at Madrasah Al-Muttaqin

Observations made by researchers on Friday, September 27, 2019, explained that teachers need training in applying scientific approach theory. It can be seen that the results with a complete category consist of three learning process activities. While the observation results of the complete category, there are twenty-two learning activities. Then the complete category from the observations, there are three activities. In addition, twenty-one activities have not been implemented in the learning activities of scientific approach theory by teachers in the English learning process.

The teacher's application of the scientific approach theory based on the observation findings consists of three English learning activities that are applied to students. The three activities for applying the scientific approach theory include preliminary (*pre-activities*), core (*while activities*), including implementing the scientific approach, and *post-activities*. The following is a table of the teacher's implementation of the scientific approach.

a. The *Pre-Activities*

Results of the observations have found that the preliminary activities that should be carried out are five steps of activities. These activities include one; the teacher conditions the learning atmosphere, two; the teacher discusses the competencies that have been learned and developed previously related to the competencies to be learned and developed, three; the teacher conveys the competencies to be achieved, and their benefits in everyday life, four; the teacher conveys the outline of the material and activities to be carried out, and five; the teacher conveys the scope and assessment techniques to be used.

Based on the observations, two activities were not implemented by the teacher, namely preliminary activities two and five. In addition, from the observations, there are two very complete categories, namely in activities three and four. In these activities, there were findings included in activity three, namely from the results of observations after the teacher implemented activity three, students could find out the function of the information discussed. In addition, the teacher applies a scientific approach in the four preliminary activities by conveying the coverage of the *Caption and Quotes material*. From the observations, there is also a complete category in the preliminary activity one, with the findings of the teacher

making groups at the beginning of the learning activity.

The results of the explanation above show that the teacher applies the theory of a scientific approach that has not been implemented in detail. This can also be seen in the results of observations from the interview answers. The answer is the teacher's lack of explanation regarding the steps in a learning process.

b. Core Activities (*while Activities*)

Through the results of observations that have been carried out, the core activities in learning English are several procedures in teaching English by applying a scientific approach. These procedures include six procedures for observing activities, four for questioning activities, ten for gathering information through experimenting activities, six for reasoning or associating, and seven for communicating activities. The procedure for applying the scientific approach theory is in line with the procedures for activities carried out by the English teacher at Darul Maarif Numbay Jayapura. However, the results of the observations and the results of the findings in the core activities are different. The following describes the results of observations from applying the scientific approach carried out in the English learning process at Madrasah Al-Muttaqin.

One activity is not implemented in the implementation of observing activities, namely observing by watching. This activity occurred because the media in the form of audio and old reading texts were activities that the teacher did not apply. Among them, students observe by listening with or without tools. However, the absence of application in these activities resulted in the findings of teacher and student activities holding a reciprocal relationship (*feedback*). In addition, students observe activities that are not applied in the English learning process by watching with or without tools. This was done because of the inappropriate use of video media in the *Caption and Quotes material*. At the same time, other observing activities from the results of observations fall into the complete category. In the complete category, there are findings including observing the *caption*, the teacher using the book sources available in the Madrasah, which then the students read and observe the text provided, followed by the activities of the students carrying out activities through listening to the explanations from the teacher, and the students doing the observing

activities with See examples of pictures illustrated by the teacher.

The core activities that apply a scientific approach in the subsequent English learning process are four questioning activity procedures. The four core activities implemented by the teacher fall into the complete category. This can be seen from the observations. In addition, the findings obtained in the application of the scientific approach in the core activity of questioning are that the teacher provides reciprocal relationships to provoke students to ask questions, students ask vocabulary related to learning materials, students discuss and answer questions between their respective groups, and Students discuss and exchange ideas between their respective groups.

Ten activities to collect information through trial activities are the next activity in learning English by applying a scientific approach. The observations showed four activities the teacher did not implement in the English learning process. In addition, the teacher applies the complete activity category to the activities of students imitating shapes or movements based on information related to reading sentences that are adapted to the learning material. The complete category includes three activities to collect information and two categories sufficient to apply the scientific approach in the learning process.

Applying the scientific approach to reasoning or associating, there are five complete categories of activities in applying the scientific approach. While the category is sufficient, there is one activity, namely, in the activities of students processing information into new knowledge. This reasoning activity contains findings that the teacher has applied. These activities include teachers provoking students to carry out a reasoning process to develop their minds, students analyzing categories between *Captions and Quotes*, students connecting learning materials with current situations and conditions, and students concluding the purpose of the *captions and Quotes*. The last activity of the core activities in the application of a scientific approach in the learning process is seven communicating activities. The results of observations made by researchers, the teacher did not apply the steps of communicating activities in the English learning process.

The explanation above proves that there are several steps of activities or procedures for learning activities that the teacher does not

implement. This proves that there is a need for training in applying scientific approach theory in learning English in Madrasahs, especially in Papua.

c. Closing Activities (Post Activities)

The results of the observations explain the steps in the last activity. The procedure for learning activities carried out by the teacher consists of eleven final or closing activities. However, there are six actionable steps that the teacher does not implement. Procedures not applied by teachers in the English learning process include teachers conducting cognitive assessments of students, teachers conducting affective assessments of students, teachers conducting psychomotor assessments, teacher planning in follow-up activities of remedial learning, and teacher planning in follow-up activities of enrichment programs, and teacher planning in the form of counseling services.

In addition, there are five complete categories of observations. From the five observations, there are findings that the teacher has applied. The findings include the teacher giving motivation students to reflect on themselves, the teacher concluding the material about the motivation that comes from the *Caption and Quotes material*, the teacher asking the students about the vocabulary that has been studied, the teacher giving directions to the students to develop the results of the discussion and present it to the students. At the next meeting, the teacher motivates students about changes and life's journey.

The explanation above illustrates the comparison that is applied and not applied in learning English. It can be concluded that the application of the scientific approach theory is still in the last activity and has not been applied as a whole in the teacher's English learning process.

Discussion

The results of the analysis of the RPP document contained the application of a scientific approach which became the learning process. This is by Government Regulation No.19, which is then stated as a standard competency formulation. The formulation of competency standards in the curriculum of English subjects taught at the SMA/Ma level is being able to communicate orally and in writing using the appropriate variety fluently and accurately, manifested in each language skill. In other words, learning English is designed to enable students to

communicate in English, covering various topics, activities, and expressions. In addition, it can be seen that the learning process carried out by the teacher to students is not only centered on one learning source but from various relevant sources based on the material to be studied. This follows Musfiqon & Nurdyansyah (2015) that the scientific approach means the basic concepts that inspire or underlie the formulation of teaching methods by applying the scientific characteristics of a scientific approach.

So based on the results of observations, interviews, and document research, the process of learning English in Madrasah Papua has interpreted and applied scientific approach theory in learning English. Because the procedures for some learning activities already use the theoretical approach to scientific procedures.

A. Interpretation of Scientific Approach Theory by English Teachers

The appropriate scientific approach related to students' understanding in recognizing and understanding various English materials does not only depend on the teacher. However, it can come from any source and at any time in learning English. Due to the scientific approach to learning English, students do not only understand the material from one source. However, students can get information on learning materials from various other sources. Then the teacher provides harmony in understanding English learning material using a scientific approach. Teachers' interpretation of the scientific approach theory in Madrasah Papua has generally been interpreted in learning English. Because the learning characteristics used as a whole follow Musfiqon & Nurdyansyah (2015), learning that uses a scientific approach has several characteristics, including material explanations that are explained with certain logic and reasoning, explanations that must be free from prejudice or reasoning that deviate from logical thinking lines, encourage and inspire students to think critically and analytically in learning materials, encourage and inspire students to think critically and analytically in learning materials. Inspire students to think hypothetically from learning materials, encourage and inspire students to respond to learning materials based on accountable concepts, and formulate learning objectives.

In the interpretation of the scientific approach theory by the English teacher at Darul Maarif Numbay Jayapura in the form of learning resources used by the teacher from various sources, including print media in the form of reading books related to learning English, the internet, which is an additional source and expansion of understanding related to learning resources. As well as discussions between teacher friends in teaching English to be material for improving student learning by using a scientific approach. The activities carried out by the

teacher in applying a scientific approach are based on the situation of the English subject hours. This is done because teaching English which is done at different times, such as the beginning of the subject, namely in the morning, and at the end of the lesson, namely the hour before going home, influences students' interest in learning English, so the stimulus for students will be different in learning English. . In the morning students are more enthusiastic about receiving learning materials than in the afternoon in English learning activities. So this is the theory in the principle of a scientific approach related to learning to form a *student self-concept* that has been interpreted by Daryanto (2014). Even so, the remedial process for students by teachers at Madrasah Al-Muttaqin is carried out without students realizing it is a matter of maintaining the feelings of students who are offended regarding their scores below the KKM average. However, the teacher gives additional tasks to complete the assessment under the English KKM. This is to the principle of Daryanto's scientific approach (2014) that there is a validation process of concepts, laws, and principles that students construct cognitively.

B. The application of the Scientific Approach Theory by the English teacher

A result of observations made by researchers on Thursday, September 19, 2019, shows that the teacher can apply the Scientific Approach theory well. The teacher's application of the scientific approach theory consists of three English learning activities that are applied to students. The three activities for applying the theory of the scientific approach include preliminary (*pre-activities*), core activities (*while activities*), including the implementation of the scientific approach, and *post-activities*. From the results of observations that have been made, the core activities in the process of learning English, there are several procedures in teaching English by applying a scientific approach. These procedures include six procedures for observing activities, four for questioning activities, ten for gathering information through experimenting activities, six for reasoning or associating, and seven for communicating activities.

While the results of observations made by researchers on Friday, September 27, 2019, the core activities in the English learning process are several procedures in teaching English by applying a scientific approach. The procedure for applying the scientific approach theory is in line with the procedures for activities carried out by the English teacher at Darul Maarif Numbay Jayapura. However, the results of the observations and the results of the findings in the process of learning English at Madrasah Al-Muttaqin are different.

Conclusion

The procedure for applying the scientific approach theory carried out by Madrasah teachers Darul Maarif Numbay Jayapura and Al-Muttaqin is in line with the procedure for scientific approach activities based on Permendikbud Number 103 of 2014, namely the learning process consists of five main learning experiences including observing, asking; collecting information/experiments; associating/processing information, and communicate.

However, in the application of the English learning process between Darul Maarif Numbay Jayapura and Al-Muttaqin teachers, there are differences in application. Among them, in the core activity procedures, more Darul Maarif teachers apply all the procedures for the core activities. This proves that there is a need for a follow-up in the form of training on applying scientific theory in teaching English to teachers in Madrasah Papua.

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