



## Teacher's Willingness towards the Implementation of Scientific Approach: From Theory to Implementation

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### Abstract

Attitude is essential issue to be considered in designing an appropriate learning for learners because it greatly affects the performance and implementation of the teaching and learning process in the classroom. One of the most important attitudes to be explored is the willingness of teachers to implement the curriculum set by the government. This study aims to determine the willingness of English teachers to carry out scientific approach and also to know the implementation of scientific approach in the learning. This research applies qualitative approach with case study design. It is conducted in SMAN 1 Situbondo with three teachers become the informants. Interview and observation are implemented to explore the willingness and the implementation of Scientific Approach. Data analysis in this research using Spradley's method. From this research, it can be seen that the teachers has enough willingness to apply scientific approach totally. Furthermore, the implementation of scientific approach has been implemented well enough and has implemented it in accordance with government regulation.

**Keywords:** teacher's willingness, curriculum 2013, scientific approach

## A. Introduction

In 2013, the government announced the implementation of Scientific Approach (SA) as a learning approach. It is an approach to encourage and inspire students to think critically, analytically, and accurately in identifying, understanding, solving problems, and applying the learning materials (Kemdikbud, 2013). It means that scientific approach intends to build critical and analytical thinking of the students based on scientific process during the learning. In scientific approach, teachers must encourage students to solve problems they have questioned themselves. It is believed that scientific approach can be used to assist them to learn voluminous things.

Therefore, scientific approach affects the learning methodology in English language learning in Indonesia. The philosophical difference between the genre-based instruction and the scientific approach is the product of the language learning. Genre-based approach emphasizes on how students use the language in communication through text-types or genre while scientific approach focuses on building language knowledge through a scientific process and building their critical thinking about the problems encountered when they learn the language (Fauziati, 2014). As the result of the curriculum shifting, four skills in genre-based approach are integrated into two communicative competences, written and oral competence.

Besides, other particular principles on the implementation of scientific approach in classroom are also explored, namely: 1) active learning: a progression wherein students are actively involved in learning, 2) assessment: equipment for determining development toward accomplishment of learning objectives, 3) diversity: the extensiveness of differences that makes each student, cohort, and teaching experience unique (Fauziati, 2014).

Moreover, scientific approach provides another characteristic, which is student-centered learning. It also create students' self-concept, avoid verbalism, give students to do assimilation the concepts, stimulate students to develop their ability to think critically, motivate students to learn something, increase teachers' motivation to teach their students, motivate students to communicate their ideas, and stimulate students to validate the concepts, principles, and theories constructed to develop their cognitive aspect (Nurviyani, 2013).

Based on the above characteristics for scientific approach, the government requires teachers to conduct learning process based on principles, there are: a) Students are facilitated to search for knowledge, b) Students learn from multiple resources, c) The learning process applies scientific approach, d) The learning process implements competence-based learning, 5) The learning process implements integrated learning, 6) The learning process emphasizes the true-multidimensional answers, 7) The learning process implements applicative skills, 8) The learning process improves, balances, and interrelates soft and hard-skills, 9) The learning process empowers long-life learning, 10) The learning process implements exemplary learning, builds willingness to learn, and expands the creativity, 11) The learning process is not always practiced in classroom, 12) The learning process implements technology, information, and communication to improve the efficiency and effectiveness of learning, 13) The learning process accommodates the difference in students' cultural background, 14) The learning process are enjoyable and interesting for the students (Kemdikbud, 2014).

Based on the theories, the construct of the characteristics of scientific approach are: 1) the teaching material is contextually related to the facts and phenomena which can be elaborated through logical reasoning, 2) the use of inductive reasoning in learning, 3) the development of critical thinking must be enhanced through learning, 4) the development of students' moral character must be enhanced, 5) methodologies in scientific approach should be implemented in classroom, and 6) the involvement of the students in the activity must be high and guided to discover knowledge.

Attitude is a mental or neural state of readiness, organized through experience, exerting a directive or vigorous influence on the individual's response to all objects and situations to which it is related (Allport in Murchison, 1935). Besides, attitudes are evaluative responses to individuals, matters, and occasions which includes beliefs and positive and negative feelings about the attitude object. It can be defined as lasting, general evaluations of people (including oneself), objects, or issues (Schneider, 1988). In addition, attitudes is a relatively enduring organization of beliefs, feelings and behavioral tendencies towards socially significant objects,

groups, events or symbols or a general feeling or evaluation (positive/ negative) about some person, object or issue (Vaughan & Hogg, 1995).

Based on the background of the study above, the research question are formulated to be the direction of the extent of the research: (1) What are the teacher's willingness towards the implementation of scientific approach?; and (2) How does teacher's willingness influence the implementation of scientific approach?. The objectives of the research are kinds of willingness of teacher in implementing scientific approach and the influence of their willingness to the implementation of scientific approach in classroom practice. The investigation will provide an elevate perspective of the influence of the willingness theory towards the process of EFL classroom practice. By comprehending it, the quality of the teaching process will be significantly upgraded.

## B. Methodology

The research investigated the teachers' willingness in implementing the learning process of English teaching. Consistent with the research problems, the researcher applied qualitative research with naturalistic case study design. Case study is also defined as an investigation which explores processes, activities, and events (Creswell, 2003). The research was conducted in SMA Negeri 1 Situbondo in the 2nd academic year 2016-2017. The informants of this research were three English teachers implementing scientific approach. The sampling technique implemented in this research was purposive sampling. Purposive sampling is a sampling that is conducted by intentionally selecting individuals and sites to study and comprehend the main phenomenon (Creswell, 2012). Data collection technique was projected to collect data from the research participants. In this research, the data collected was in the form of qualitative data. The researcher only conducted observations and interviews as the principal techniques to collect the data from the informants. In this research, triangulation of method and data was employed. Data triangulation was applied because there were different sources. This research applied Spradley's Ethnographic Data Analysis Technique to analyze the data with four main stages of analyzing the data, namely domain analysis, taxonomy analysis, componential analysis and cultural theme analysis.

## C. Findings and Discussion

### 1. Findings

Findings gathered from the research was focused on whether teachers were enthusiastic to learn more in the development of scientific approach in the teaching. All teachers were excited to join and participate in the workshop and seminar of scientific approach. According to the first Teacher (T1), schools had to deal with the transformation of guidelines of curriculum, so teachers had to be competent in mastering it. The second teacher (T2) frequently discussed with his partner about how to manage oral competence classroom and create better atmosphere in the class. Agreeing with T2, the third teacher (T3) stated that Musyawarah Guru Mata Pelajaran (MGMP) played an important role in developing scientific approach in teaching oral competence.

*"Sering, bahkan belum lama ini juga ada diterbitkan permendikbud baru tentang standar proses untuk SMA, jadi kami guru-guru mapel diajak untuk seminar atau semacam workshop kurikulum 2013."*

*"It is often, recently the new rules had been published about the new standard process of Senior High School, so, we, subject teachers, were asked to join the seminar or such a workshop for Curriculum 2013"*

(Int./T1)

*"Kami di sekolah ada yang namanya MGMP. Dari situ kami mengembangkan tuntutan kurikulum 2013 bersama guru-guru di sekolah, kadang juga dengan guru-guru sekolah lain. MGMP juga sangat berperan untuk mengadakan workshop K-13 dan pengembangan pembelajaran saintifik pada semua mapel."*

*"In our school, there is an MGMP. In that group, we develop the demand of the Curriculum 2013 with teachers in school, sometimes with other school's teachers. MGMP is very*

essential to held a workshop C-2013 and the development of scientific approach in all majors.”

(Int/T2)

*“Pernah, sering sekali pemerintah itu mengadakan seminar tentang bukan hanya scientific approach tapi kurikulum 2013 nya. Jadi pengembangan scientific approach itu diperdalam dalam seminar, atau juga kalau ada MGMP biasanya juga sering ikut.”*

“Sometimes, the government held seminar not only about the scientific approach but also the Curriculum 2013. So, the development of scientific approach is explored in seminar, or also MGMP in which I often joined”

(Int/T3)

In the step of observing, T1 used the projector and played short videos related to the delivered material. While the students were watching the video, the teacher reminded them and asked them to take a note on their book. The school was adequate because in each classroom, the Projector was installed and functioned well. There were no problems found in T1 teaching process in the phase of observing. Meanwhile, T2 provided his students with a certain text. The teacher explained the learning material by using power point presentation. He used his own laptop. He showed the material by using projector. All the students gave full attention to his explanation. He showed a text that contained with conjunction word. He started his material by using the text and asked the students to answer the questions related to the text given. For T2, there were no problems found. T3 showed a short video for his students. The video was about narrative text. The video contained how narrative text was arranged and the explanation of narrative text. In that video, there was a short dialogue and the teacher asked them to pay attention to the video because there would be some questions in the form of quiz related to the video that had been playing. Those questions would be in oral and should be answered orally. The students could take some notes if they thought it was necessary.

In the step of questioning, T1 always inviting students to ask. However, since there were no students who were brave enough to ask, teacher gave them stimulates in the form of question related to the video played. T2 and T3 also guided them to ask. He told them that the student who could answer his questions would get additional score in that meeting. It was quite successful since students competed with each other to answer the question. Still, there were several students who were reluctant to speak.

In the step of experimenting, T1 gave the material about recount text. What she asked were about main idea, specific information, and implicit information from the text given. The teacher also deeply assess their own opinion, their suggestion related to the theme given. After that the teacher showed them a video. The video was about recount text but it has different theme. Then she asked them the information they got from the video, then she start to make a list by writing on white board and differentiate each information based on implicit or explicit meaning. T2 showed some slides about passive voice. After the students read the presentation, the teacher explained the material. He explained the rule of making passive voice and asked some questions. Afterward, he explained the formula how to make passive voice and told the students what differences between passive and active sentence were. Meanwhile, T3 asked students to read another example of narrative text from another resource. He used this activity as their homework because the resource was limited in the classroom. The teacher permitted them to get the references from newspaper, internet, or magazine. For the next activity, the teacher gave a jumbled paragraph for them. The teacher gave these paragraph by using LCD. He those jumbled paragraphs and provide blank space to write their number. The teacher asked them to answer the questions by writing on their task book.

In the associating phase, T1 asked the students to get the main idea of the paragraph in recount text. They did this task in pair as they did previously. The text that were used had been provided from the teacher. She distributed one paper for each group. The students did this task on their task book. In the end of this session, the teacher would collect their task book and corrected their work. The teacher also asked them to analyze the words that has same meaning in each text to identify the language function of the words. Furthermore, she also asked them to make a list of difficulties words that they found and tried to find the meaning of each words. In doing this, the teacher permitted them to discuss with another group to make them faster in

finding the meaning because some of them did not bring their dictionary so they could not find the meaning faster. On the other hand, T2 divided the class members into two large groups. The students were asked to compare content and structure of the text from those texts that had been given in the beginning of teaching process. Likewise, the students were grouped by T3. Then, the teacher gave a jumbled paragraph for them. In arranging this jumbled paragraph, the students also had to pay attention on social function, structure of the text, and language function. The students did their task on a piece of paper. They should write their group name and the member of the group. In the end of group work, the teacher asked them to present their discussion result by presenting their answer in front of the class.

In the previous meeting, T1 had asked the students to arrange recount text then present their presentation by using power point as the media. The students could choose the theme freely. Before presenting the material, they had arranged draft of the material then consulted it to the teacher. The students were asked to present their presentation in front of the class. T2 asked students to make a short dialog that is contained with passive and active sentence. T3 asked students to present their opinion in front of the class.

## 2. Discussion

The study has shown that in preparing teaching and learning process, the teachers are willing to join and cooperate with other English teachers around Situbondo to learn and train how to master English Teaching and find a solution of every problems occurred in classroom context. It can be seen in the table below:

Teacher's Willingness to Implement the SA	
<b>Teacher 1</b>	<i>It is often, recently the new rules had been published about the new standard process of Senior High School, so, we, subject teachers, were asked to join the seminar or such a workshop for Curriculum 2013.</i>
<b>Teacher 2</b>	<i>In our school, there is an MGMP. In that group, we develop the demand of the Curriculum 2013 with teachers in school, sometimes with other school's teachers. MGMP is very essential to held a workshop C-2013 and the development of scientific approach in all majors.</i>
<b>Teacher 3</b>	<i>Sometimes, the government held seminar not only about the scientific approach but also the Curriculum 2013. So, the development of scientific approach is explored in seminar, or also MGMP in which I often joined.</i>

From the statements in the table, it can be concluded that teachers are willing to implement scientific approach in classroom. They are willing and eager to have a discussion, training, and education on how to implement the scientific approach. However, talking about the willingness of teachers in teaching English by implementing scientific approach in SMA, it requires them to look back into the important roles of scientific approach itself. It is understood that scientific approach promotes scientific process in learning that are observing, questioning, exploring or experimenting, associating, and communicating. It covers four steps of learning language process which are: building knowledge, modeling, joint construction, and independent construction (Kusumaningsih, 2013). If the teachers want to improve students' English ability, they can implement scientific approach because it integrates the language skills into two skills, oral and written competence, so that the material will be more contextual and more applicable for the students. It means by having willingness to implement scientific approach, the target of the teachers and the curriculum will be easier to acquire.

Moreover, the implementation of scientific approach is well-implemented in the classroom. It means that teachers are willing to implement scientific approach by following the procedure of scientific approach described by the government. The stages that had been arranged and applied in all the stages of scientific approach proved their willingness to reach the goal. It could be shown when all the stages in implementing the scientific approach in the classroom were applied well and students' participation were collaborated effectively. The teacher also could elaborate their English materials creatively so it made the students are enthusiastic in learning English. It could be seen in the resource and media that the teacher used in applying scientific approach were easily understood and applicable in teaching learning process. In addition, as one of scientific approach characteristic, the use of technology in the learning process had an important role and all teachers also had used and applied appropriate technology to improve the efficiency and effectiveness along their learning process.

#### D. Conclusion

Teacher's willingness towards the implementation of scientific approach had a significant influence to their teaching learning process. The influences could be discovered and shown in the implementation of scientific approach. Based on findings, all the teachers showed some willingness in their scientific approach implementation. Those teachers' willingness also gave influences to some aspects. Those aspects were found in the material development, teaching stages, media that the teacher used in teaching process, students' participation, and the students' self – employed. For the English teachers, the findings of this study can be used as a reference to wisely implement scientific approach in the classroom. By comprehending it, the quality of the teaching process will be significantly upgraded. Additionally, the relationship between the successfulness of the application of scientific approach with the teachers' willingness will inspire English teachers to be more enthusiastic in teaching English by using scientific approach.

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