

**THE IMPLEMENTATION OF SCIENTIFIC APPROACH
ON SPEAKING SKILL AT THE SECOND GRADE STUDENTS
BASED ON LEARNING STYLES IN SMAN 1 PRINGSEWU**

(A Script)

By

MARIA TYASTI G. C.



**ENGLISH EDUCATION STUDY PROGRAM
DEPARTMENT OF LANGUAGE AND ARTS EDUCATION
FACULTY OF TEACHER TRAINING AND EDUCATION
LAMPUNG UNIVERSITY
BANDAR LAMPUNG
2017**

ABSTRACT

THE IMPLEMENTATION OF SCIENTIFIC APPROACH ON SPEAKING SKILL AT THE SECOND GRADE STUDENTS BASED ON LEARNING STYLES IN SMAN 1 PRINGSEWU

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The objectives of this study were to find out i) how the implementation of scientific approach could affect students' speaking achievement, ii) what aspect(s) of speaking which will improve better in learning speaking through scientific approach, iii) in what stage of scientific approach the students learn speaking optimally and iv) whether students' learning style preferences affect the students' speaking capability. The research used pre-experimental design. The subjects were 28 second year science class students of SMAN 1 Pringsewu. Questionnaires were employed to collect the data of the students' learning style preferences and speaking tests were conducted to identify students' speaking achievement. The implementation of scientific approach could improve the students' speaking skill since the students actively participated in the learning process by speaking through drills and repetitions in meaningful context. This is confirmed by a significant improvement of the students' speaking achievement with significant level 0.05. Students' learning style preferences also affected their speaking ability. The results suggest that scientific approach facilitates the students to improve their English proficiency. In addition, learning style preferences also contributed to the students' success in acquiring language.

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CURRICULUM VITAE

The writer's name is Maria Tyasti Gilang Cahyani. She was born on April 5th, 1995 in Bandar Lampung. She is the third child of Bambang Cahyo Murad and Mustika Jati. She has two older brothers and one younger sister. Her brothers' names are Adrian Tyas Bangun and Albertus Tyas Graha. Her sister's name is Yuliana Cahya Mulyaningtyas.

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DEDICATIONS

Praise to the Lord, Jesus Christ, for Her wonderful blessing.

Ther script is fully dedicated to:

My beloved Mom and Dad: Mustika Jati and Bambang Cahyo

My beloved brothers and sister: Mas Adri, Mas Groho, Dik Lia.

My Almamater, English Education Study Program 2013, Lampung University.

MOTTO

“Be strong and courageous. Do not be terrified; do not be discouraged, for the LORD your God will be with you wherever you go.”

(Joshua 1:9)

*“Live as if you were to die tomorrow.
Learn as if you were to live forever.”*

(Mahatma Gandhi)

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Praise is merely to the Almighty God, Jesus Christ, for the gracious mercy and tremendous blessing that enables the writer to accomplish their bachelor thesis entitled: “The Implementation of Scientific Approach on Speaking Skill at Second Grade Students based on Learning Style in SMAN 1 Pringsewu” which is submitted as a compulsory fulfillment of the requirement for S-1 Degree at the Language and Arts Education Department of Teacher Training and Education Faculty of University of Lampung.

Gratitude and honor are addressed to all persons who have helped and supported the writer until the completion of their research. Since it is necessary to be known that their research will never have come into its existence without any supports, encouragements and assistances by several outstanding people. Therefore, in their occasion, the researcher would like to express her sincere gratitude and deep respect to Prof. Ag. Bambang Setiyadi, M.A., Ph.D., the first advisor who has contributed and given her invaluable evaluations, comments, and suggestions during the completion of their bachelor thesis. Her appreciation is also due to the second advisor Mahpul, M.A., Ph.D., who has given her assistance, ideas, guidance and carefulness in correcting the writer’s bachelor thesis. The researcher also would like to express her deep gratitude to her inspiring examiner, Hery Yufrizal, M.A., Ph.D., who has

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Hopefully, this script would give a positive contribution to the educational development or to those who want to carry out further research.

Bandar Lampung, 26 July 2017

Maria Tyasti G. C.

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I. INTRODUCTION

This chapter is concerned with the discussion on the background of the research, research question, objectives of the research, uses of the research, scope of the research, and definition of key terms.

1.1. Background

Speaking skill is important for students to master because language usually focuses more on oral production than on written production. Speaking ability also shows how capable students are on their language comprehension since speaking would engage all three important components of language; vocabulary, grammar, and pronunciation. If the students are able to speak well, it means that they comprehend those three linguistic components well.

However, as a matter of fact in Indonesia, many students do not feel confident to express their ideas. They are afraid of speaking English. This is because the students have not been provided with techniques that encourage them to keep speaking.

Nowadays, Indonesia Education Ministry is now developing an approach called Scientific Approach in 2013 curriculum for all subjects including English. This approach is a focused-on-student approach which aims to develop students' affective skill, cognitive skill, as well as performative skill. This approach has five

stages in whilst-activity; they are (1) observing, (2) questioning, (3) experimenting, (4) associating, and (5) communicating. This approach seems to be able to develop students' speaking skill since it encourages students to speak in the stages included.

There have been several studies concerning the implementation of scientific approach and speaking skill. Utami (2016) implements scientific approach to teach speaking to junior high school students, and she found out the facts that many students got high score (87,93% are above passing grade). Related research was done by Henelawati (2015). She implemented scientific approach to help Arjuna Vocational School Students in mastering speaking skill. The finding of her research shows that the students made an improvement in the post-test, comparing to the pre-test.

However, curriculum is not the only one factor affecting students' capability in English. As the development of the technology, teachers nowadays could use many different kinds of methods, techniques, materials, as well as media to teach speaking. Government is also supporting teachers by obligating some training to develop teachers' professionalism. Teachers are trained to have better understanding about language approaches, broader knowledge about methods and techniques, more interesting and relevant English materials, as well as wider preferences for teaching speaking media.

Being focused on teachers' professionalism is not totally wrong; however there are still many factors that could increase students' achievement. According to Reid (1987), educational study has recognized a number of factors for some of the

differences in how students learn. Dunn and Griggs (1989) add that one of these factors, that is learning style, is of widespread interest in the education area. For addition, Ellis (2005) also lists seven factors while explaining individual learner differences, namely beliefs, affective state, age, aptitude, learning style, motivation, and personality.

We cannot say that learning style is ability; it is more likely how people prefer to use their ability. Learning style has been referred to as “...the biologically and developmentally imposed set of characteristics that make the same teaching method wonderful for some and terrible for others” (Dunn & Griggs, 1988). While Keefe (1982) defines learning styles as “cognitive, affective and physiological traits that serve as relatively stable indicators of how learners perceive, interact with, and respond to the learning environment’ and which ‘reflect genetic coding, personality development, and environmental adaptation”.

Language learning styles and strategies emerge to be among the most important variables affecting performance in a second language; this statement is suggested by Moenikia and Zahed-Babelan (2010). Lindsay (1999) also states that “the harmony between learning style and teaching style increased academic achievement and satisfaction with learning”. As the researcher has mentioned, teachers now are concerning with only teaching style (methods, techniques, media), yet they are unaware of how their students learn. Thus, it is important to pay attention on the students’ learning style.

There have been several studies related to students’ learning styles and their English performance. The first study was done by Jhaish (2010), who conducted a

research entitled *The Relationship among Learning Styles, Language Learning Strategies, and the Academic Achievement among the English Majors at Al-Aqsa University*, and found that there was a presence of correlation between students' learning style and the academic achievement. It was found that there is statistically significant correlation coefficient between the academic achievement and auditory learners.

The second research was conducted by Chavosh and Davoudi (2016). They were going to find out the relationship between perceptual learning styles and reading comprehension performance of 60 Iranian EFL learners. The result of this study revealed that tactile and kinesthetic learning styles had a significant relationship with L2 reading comprehension performance.

A more complex research was also carried out by Moenikia and Babelan (2010) which investigated the role of learning styles in second language learning. They used TOEFL examination including four sections (listening, writing, structure, and reading) as a criterion for second language learning. The result discovered that the average scores of students with different learning styles were significantly different.

Based on those researches, the researcher believes that the understanding of students' learning style is fundamental to consider approaches, methods, as well as techniques to use in teaching our students. It is in line with the research done by Montgomery and Groat (1998) entitled *Student Learning Styles and Their Implication for Teaching*. They believe that there are many reasons to incorporate an understanding of learning styles in teaching; among others are making teaching

more rewarding and communicating our message well. Those reasons imply that recognizing our students' learning styles can lead them to be successful learners.

There have been many researches relating to the implementation of scientific approach in improving students' speaking skill; even though there are still many mistakes and error in the application of each step, scientific approach is proven able to improve students' speaking performances. However, there has been no research intending to find out the implementation of the approach with concerning students' learning styles. Thus, the researcher would like to find out the improvement of students' speaking ability after the implementation of scientific approach, and the effect of learning style preferences on students' speaking skill.

1.2. Research Questions

In line with the background above, the research questions are formulated as:

- 1) How could scientific approach affect students' speaking ability?
- 2) What aspect(s) of speaking will improve better in learning speaking through scientific approach?
- 3) In what stage of scientific approach do the students learn speaking optimally?
- 4) Do learning style preferences affect students' speaking achievement?

1.3. Objectives of the Research

The objectives of this research are to find out:

- 1) How scientific approach could affect students' speaking ability
- 2) What aspect(s) of speaking which will improve better in learning speaking through scientific approach
- 3) In what stage of scientific approach the students learn speaking optimally
- 4) Whether learning style preferences affect students' speaking achievement

1.4. Uses of the Research

The result of this research can have following uses:

- 1) Theoretically, the finding of this research could complete and give contribution to the previous researches and the existing theory. This research will also emphasize the importance of understanding students' learning styles in learning English, especially speaking skill. It could also be useful for further research.
- 2) Practically, the result of this research could inform English instructors to pay more attention to students' learning styles, and hopefully teachers could use suitable method and media for better English achievement.

1.5. Scope of the Research

This is a quantitative study which is focused on the impact of students' learning styles on their speaking ability through the implementation of scientific approach.

The research was conducted in SMA N 1 Pringsewu. The researcher chose second

graders for subject because they have learned English for quite long time, so their ability is good enough. The classification used by the researcher is Willing's classification (Willing as cited in Yufrizal, 2007), which divides learning styles preferences into four main styles: *communicative*, *concrete*, *authority oriented*, and *analytical* learning style. The topic for the speaking test was offering helps since it is not very difficult yet not very easy, and according to 2013 curriculum. Students performed a conversation and were scored in pair. During the conversation, the researcher took recording.

1.6. Definition of Key Terms

There are some terms which are used by the writer to give basic understanding that is related to the concepts, they are stated below:

1) Speaking skill

Speaking skill is an ability to express idea by uttering and producing meaningful sound which is involving nonverbal signs as aids in delivering meaning.

2) Learning style

Learning style is simply different approach or way of learning. It is a way in which an individual acquires, learns, or obtains information.

There are some models of different learning styles as summarized by Sabatova (2008):

- The Myers-Briggs type indicator (MBTI)
- Kolb's learning style model

- Felder-Silverman learning style model
- Visual, Auditory, Kinesthetic
- Deductive and inductive learning
- The Dunn and Dunn model

In addition, there is a type of learning style concerning language learners, which proposed by Willing (cited in Yufrizal, 2007), called Willing's learning style inventory.

3) Scientific Approach

Scientific approach is a learning approach to solve problems through the systematic procedural sequence. The procedures of scientific approach are observing, questioning, experimenting, associating, and communicating.

II. REVIEW OF LITERATURE

This chapter is concerned with the discussion on the concept of speaking, concept of learning styles, types of learning styles, concept of scientific approach, advantages and disadvantages of scientific approach, procedure of teaching through scientific approach, theoretical assumption, and hypothesis.

2.1. Concept of Speaking

There are two parts of this sub-chapter: first part explains the definition of speaking and the second part describes the component of speaking.

2.1.1. Definition of Speaking

To speak a language is somehow difficult for foreign language learners because effective oral communication demands an ability to use the language acceptably in social interactions. According to Shumin in Richards and Renandya (2002), speaking is one of the fundamentals of communication. *Webster New World Dictionary* defines speaking as uttering words orally, talking; to communicate as by talking; to make a request; to make a speech.

Nunan (1995) states that speaking is a skill which requires attention as much as literary skills, in both first and second language. To most of people, mastering the speaking skill is the most important aspect of learning a second or foreign

language, and success is measured in terms of the ability to accomplish an understandable conversation in the language.

In line with it, Clark and Clark (1997) assert that speaking is primary and instrumental act. Speakers talk in order to have some effect on their listeners. They ask them questions to get them to provide information. They request things to get them to do things for them. They promise, warn, and exclaim to affect them in still other ways. The nature of the speech act should therefore play a control role in the process of speech production. Speakers begin with the intention of affecting their listeners in a particular way. They select and utter a sentence they will bring just this affect.

Bailey (2005) also adds that speaking is a process of interaction where speakers propose to build meaning through producing, receiving and processing information. So speaking is somehow a complex process which requires not only linguistic knowledge of the speakers, but it also demands the speakers to have social and interpersonal competence.

Brown (2000) draws two types of spoken language, which was adapted from Nunan (1991). Spoken language is divided into two types: monologue and dialogue. Monologue is divided into planned monologue (such as speeches and other prewritten material) and unplanned monologue (as impromptu lectures or long stories in conversations). Meanwhile, dialogue which involves two or more speakers could be divided into interpersonal dialogue (develops social relationship) and transactional dialogue (deliver factual piece of information).

Brown (2001: 271) adds in teaching oral communication, micro skills are very important. One implication is the importance of focusing on both the forms of language and the functions of the language. He also mentions that the pieces of language should be given attention for more that make up to the whole. Additionally he mentions micro skills of oral communication:

- 1) Produce chunks of language of different lengths.
- 2) Orally produces differences among the English phonemes and allophonic variants.
- 3) Produce English patterns, words in stressed and unstressed positions rhythmic structure, and into national contours.
- 4) Produce reduced forms if words and phrases.
- 5) Use an adequate number of lexical units (words) in order to accomplish pragmatic purpose.
- 6) Produce fluent speech at different rates of delivery.
- 7) Monitor your own oral production and use various strategic devices – pauses, fillers, self-corrections, backtracking – to enhance the clarity of the message.
- 8) Use grammatical word classes (nouns, verbs, etc.), system (e.g. tense, agreement, and pluralization), word order, patterns, rules, and elliptical forms.
- 9) Produce speech in natural constituent in appropriate phrases, pause groups, breath groups, and sentences.

- 10) Express a particular meaning in different grammatical forms.
- 11) Use cohesive devices in spoken discourse.
- 12) Accomplish appropriately communicative functions according to the situation, participants and goals.
- 13) Use appropriate registers, implicative, pragmatic conventions, and other sociolinguistics features in face to face conversations.
- 14) Convey links and connections between events and communicate such relations as main idea, supporting idea, new information, given information, generalization, and exemplification.
- 15) Use facial features, kinesics, body language, and other nonverbal cues along with verbal language to convey meaning
- 16) Develop and use a battery of speaking strategies.

From many definition of speaking above, the researcher concludes that speaking is an ability to express idea by uttering and producing meaningful sound which is involving nonverbal signs as aids in delivering meaning.

2.1.2. Component of Speaking

Speaking is a complex skill; someone needs to comprehend several linguistic aspects to be able to master speaking ability. What makes speaking different with other skills is particularly in pronunciation, which is sometimes very difficult for EFL or ESL students. Harris (1974) states that there are five components of speaking; they are pronunciation, grammar, vocabulary, fluency, and comprehension.

a) Comprehension

For oral communication, it certainly requires a subject to respond, to speech as well as to initiate it.

b) Grammar

It is needed for students to arrange a correct sentence in conversation. It is in line with explanation suggested by Heaton (1978: 5) that students' ability to manipulate structure and to distinguish appropriate grammatical form in appropriateness. The utility of grammar is also to learn the correct way to gain expertise in a language in oral and written form.

c) Vocabulary

Vocabulary means the appropriate diction which is used in communication. Without having a sufficient vocabulary, one cannot communicate effectively or express their ideas both oral and written form. Having limited vocabulary is also a barrier that precludes learners from learning a language. Without grammar very little can be conveyed, without vocabulary nothing can be conveyed. So, based on this explanation, the researcher concluded that without mastering vocabulary sufficiently is English learners will not be able to speak English or write English properly.

d) Pronunciation

Pronunciation is the way for students to produce clearer language when they speak. It deals with the phonological process that refers to the component of a grammar made up of the elements and principles that determine how sounds vary and pattern in a language.

There are two features of pronunciation; phonemes and supra segmental features. From the statement above, the researcher concluded that pronunciation is the knowledge of studying about how the words in a particular language are produced clearly when people speak. In speaking, pronunciation plays a vital role in order to make the process of communication easy to understand.

e) Fluency

Fluency can be defined as the ability to speak fluently and accurately. Fluency in speaking is the aim of many language learners. Signs of fluency include a reasonably fast speed of speaking and only a small number of pauses and “ums” or “errs”. These signs indicate that the speaker does not have spent a lot of time searching for the language items needed to express the message. From the ideas above, the researcher concluded that another important component is fluency.

While Vanderkevent (1990) states three different components in speaking:

a. The Speakers

Speakers are people who produce the sound. They are functioning as the tool to utter views, ideas, or feelings to the listeners.

b. The Listeners

Listeners are people who receive or get the speaker’s opinion or feeling. If there are no listeners, speakers will express their opinion by writing.

c. The Utterances

The utterances are words or sentences, which are produced by the speakers to state the opinion. If there is no utterance, both of the speakers and the listeners will use sign.

2.2. Concept of Learning Styles

In order to understand the theory of learning styles it appears to be logical to start from individual differences. Of course, the history of learning styles is closely connected with the history of individual differences or individualities. More precisely, the term “learning style” could have been subsequently developed from the term “individual difference”. Thus, we can say that the individual difference could be a basis of today’s concept of learning style.

Learning styles are simply different approaches or ways of learning. It is probably the simplest definition but it does not explain precisely what we need to. More deeply, Felder and Henriques (1995:21) explain the meaning of “learning style” as “the ways in which an individual characteristically acquires, retains and retrieves information”. Moreover, they define several dimensions of learning style thought to be particularly relevant to foreign and second language education, outlines ways in which certain learning styles are favored by the teaching styles of most language instructors, and suggests steps to address the educational needs of all students in foreign language classes. The authors (Felder & Henriques) summarize that students learn in many ways – by seeing and hearing which is sometimes called modality model, reflecting and acting that is in some sources named as model of behavior or exposing with time, reasoning logically and intuitively which is connected with the way we receive information and lastly memorizing and visualizing.

A learning style could be described as a student's consistent way of responding to and using stimuli in the context of learning. This definition deals with a biological

point of view and Keefe (1979) defines learning styles as the "composite of characteristic cognitive, affective, and physiological factors that serve as relatively stable indicators of how a learner perceives, interacts with, and responds to the learning environment."

“Learning styles have been intensively discussed in the educational psychology literature and specifically in the context of language learning by Oxford and her colleagues and over 30 learning styles assessment instruments have been developed in the past three decades ” (Felder & Henriques, 1995: 21)

So based on many explanations above, the researcher defines learning styles as different approaches or ways in which an individual learns, acquires, or obtains any information.

2.3. Types of Learning Styles

Many researchers have been studying and identifying learning styles. Each expert has his own perception about the types of learning styles possessed by people, especially students. Types of learning styles have been being developed very widely that it is possible to have new classification of learning styles. Šabatová (2008) summarized learning styles into six types:

- 1) The Myers-Briggs type indicator (MBTI)
- 2) Kolb's learning style model
- 3) Felder-Silverman learning style model
- 4) Visual, Auditory, Kinesthetic
- 5) Deductive and inductive learning
- 6) The Dunn and Dunn model

Beside those learning style classification in general, there is a classification that is used specifically in English teaching. This classification is proposed by Willing in 1988 as cited in Yufrizal (2007). Since this category is the most appropriate to use in this research, the researcher will use this classification.

Willing categorized second language learners into four types of learning style:

- a. **Concrete learners.** This type of learners prefer to learning English by playing games, seeing pictures and video, listening to cassettes, talking in pairs and practicing English outside the class.
- b. **Analytic learners.** These learners enjoy studying grammar, English books and newspapers. They prefer study alone, find their own mistakes, and solve problems from teachers.
- c. **Communicative learners.** These classifications of learners love to watch and listen to native speakers and English programs. They like to learn by talking to friends, making conversations, and learning new vocabulary by listening to it.
- d. **Authority-oriented learners.** These learners tend to learn English by listening to teachers' explanation, writing on their note book, studying grammar by reading, and learning new words by seeing them. (Willing and Nunan in Yufrizal, 2007).

2.4. Concept of Scientific Approach

There are two parts of this sub-chapter: first part explains the definition of scientific approach, and the second part describes its procedure.

2.4.1. Definition of Scientific Approach

Scientific approach is a new language teaching. Scientific approach is learning process that guides students to solve problems based on planning, accurate data collection and data analysis to construct a conclusion. This approach requires the students to act like a scientist (Abidin, 2014:125). According to the regulation of minister of education and culture regarding curriculum 2013 number 81A attachment IV scientific approach is study experience based on systematic and logic learning steps consist of observing, questioning, collecting information, associating, and communicating (Depdiknas: 2013).

Based on all explanations above, it can be inferred that scientific approach is a learning approach to solve problems through the systematic procedural sequence. The procedures of scientific approach are observing, questioning, collecting information, associating, and communicating.

2.4.2. Procedure of Scientific Approach

As stated in previous sub-sub-chapter, what makes scientific approach different with others is its procedure. There are five stages in the whilst-activity that must be done so that students will be able to learn and think more scientifically and critically. Abidin (2014:133) explain the detail procedures as follow:

1. Observing

Observing is learning activity such as listening, reading, and seeing (with or without tools). Besides, observing is meaningful learning. Through observation the students are supposed to find out a fact of correlation between the object

being observed and learning material. The activities in doing observing phase were described below:

- a. Deciding the object that will be observed.
- b. Making observation guidance.
- c. Deciding the way to do observation in collecting data result.

2. Questioning

Questioning is asking information that cannot be understood based on what being observed (from factual to hypothetic questions). In this step a teacher is supposed to inspire the students to ask questions. The teacher can use a technique to encourage the students in questioning section.

3. Experimenting

Experimenting is doing experiment, reading other resources, observing object, event, or activity, and interview with informant. A teacher needs to provide interesting media to interact the students in experimenting.

4. Associating/Reasoning

Associating is learning activity such as processing the information that has been collected from the result of observing and collecting information. In this case, the students try to apply the information. They have to answer the questions based on the observation result or do other tasks.

5. Communicating

Communicating is presenting the result of observation and conclusion based on analysis result by spoken, written, or other media. In communicating, the students should be able to communicate effectively in conveying their idea.

2.5. Advantages and Disadvantages of Scientific Approach

Every teaching approach or method has advantages and disadvantages. Even have been used widely in Indonesia, scientific approach also has benefits and losses. According to Abidin (2014:148) the advantages and disadvantages of scientific approach can be seen below.

The advantages of scientific approach are:

- a. Improving students' ability in mastering the learning material.
- b. Developing students' ability in solving problems.
- c. Building students' sensibility of the life context.
- d. Improving students' ability in communication.

The disadvantages of scientific approach are:

- a. The time to prepare learning material and learning activities is quite long.
- b. The implementation of scientific approach requires more energy and cost.
- c. The creativity of both the teacher and the students are required in applying scientific approach.

2.6. Procedure of Teaching Speaking with Scientific Approach

As explained before, there are five steps in the procedure of scientific approach especially in the whilst-activity; they are observing, questioning, experimenting, reasoning, and communicating. In this sub-chapter, there will be drawn an example of complete procedure of teaching speaking with scientific approach; not only in the whilst-activity, but pre-activity and post-activity are included.

Pre-Activity:

- Teacher greets the students.
- Teacher activates background knowledge by connecting with previous materials.
- Teacher introduces the topic.

Whilst-Activity:

a. Observing

- Teacher asks the students to make a group consisting of 4-5 students.
- Teacher distributes worksheet containing several questions to each group.
- Teacher shows a video related to the topic.
- Teacher asks the students to pay attention on the video, on the pronunciation and the grammar of what the people on video.

b. Questioning

- Teacher asks the students to answer the questions that have been distributed before.
- Teacher asks about the expressions used in asking for and giving opinions, then explains to the students. In this phase, teacher asks the students to study about vocabulary.

c. Reasoning

- Teacher asks the students associate what they have learnt by making their own written sentences related to the material.

- Teacher facilitates the students by correcting their work particularly on vocabulary, grammar, and their comprehension.

d. Experimenting

- Teacher divides the class into big groups, small groups, or pairs depending on the need of the material. Each group will be given a topic to discuss.
- Each group should make conversation from the topic related to the materials. Because they work in group or pair, they could do peer correction especially on their pronunciation, vocabulary, grammar, and fluency.

e. Communicating

- Students present their work result in front of the class.
- Teacher gives feedback to the students.

Post-Activity:

- Teacher asks students to reflect the lesson together.
- Teacher concludes the lesson.

2.7. Theoretical Assumption

As many experts had studied, there are some factors influencing students' English ability, especially when it comes to second or foreign language acquisition. Those factors are including age, gender, and learning styles. Speaking skill, as one of English ability, might have the same factors influencing the success of language learners. In line, many researches proved that learning styles had something to do

with other skills. Different learning style possessed by someone could affect his achievement in English proficiency, in this case especially speaking ability.

The implication of scientific approach in this research is expected to give clearer picture at what extend learning style could impact students' speaking achievement. Since this approach is focusing on how students develop their perception and how students maximize their critical analysis, the researcher deems that it could give more benefits to students with accommodative and convergent learning styles. Therefore, the researcher believes that there is a positive correlation between students' learning styles and their speaking ability.

Furthermore, the researcher considers that analyzing and understanding students' learning styles could make positive effect in teaching learning activity. By knowing their learning styles, teachers can adapt what learning method which is most suitable for the majority of the class. Teachers could also use other learning methods which is proper for the rest of the students. By applying the most appropriate learning method, students will be able to learn faster and better, and it will make the teaching and learning process more effective.

2.8. Hypothesis

Based on the theoretical assumption above, the researcher formulated the hypothesis as follows:

- 1) a. H_0 . There is no significant difference between students' speaking skill before and after the implementation of scientific approach.

- b. H_1 . There is significant difference between students' speaking skill before and after the implementation of scientific approach.
-
- 2) a. H_0 . Learning style preferences does not affect students' speaking achievement.
 - b. H_1 . Learning style preferences affects students' speaking achievement.

III. RESEARCH METHODOLOGY

This chapter discusses the following points: research design, population and sample of the research, variables, instruments of the research, data collection technique, research procedures, data analysis, and hypothesis testing.

3.1. Research Design

This research used a pre-experimental research design that aims to find the impact of the implementation of scientific approach on students' speaking ability by involving their learning style preferences. The researcher used *the one-group pretest-post test* design; since the researcher gave pre-test at the beginning of the research, gave treatment in the middle, and gave post-test to know how far the improvement of the subject after the treatment. Before giving the pre-test, the researcher also distributed questionnaires to analyze what learning style each student has. The research design can be represented as follows:

T1 X T2

(Setiyadi, 2006)

Note:

T1 : Speaking Pre-Test

X : Treatment (Scientific Approach)

T2 : Speaking Post-Test

To answer the first research question, the researcher used observation to know in what stage of scientific approach the students learn speaking optimally. The researcher also used Paired Sample T-Test to analyze whether the improvement from pre-test to post-test was significant or not. To find the answer of the second research question, the researcher used Paired Sample T-Test, to compare the average of five components of speaking skill (pronunciation, vocabulary, grammar, fluency, and comprehension), and to know which component get the highest improvement statistically.

The third research question is intended to find out whether learning style preferences affect students' speaking ability after the implementation of scientific approach as the treatment. Furthermore, to analyze the improvement after the treatment, the researcher also used One-Way Analysis of Variance (ANOVA), since Setiyadi (2006) states that One-Way Anova is used to compare the average of three groups or more at the same time, and in this case there are four groups of learning styles. All the statistical analysis was using IBM SPSS (Statistical Package for Social Science) version 22.

3.2. Population and Sample

This research was conducted at the second grade of SMA Negeri 1 Pringsewu. There are nine classes of grade XI students in the year 2015/2016. One class was chosen to conduct the research. The sample was chosen by using purposive sampling. Therefore from the nine classes, each class had the same opportunity to be chosen as a subject. The chosen class was XI IPS 1 which consisted of 28 students.

3.3. Variables of the Research

The research consists of the following variables:

1. Students' speaking ability as dependent variable (Y). It means that the performance of students in speaking depends on each student' learning style.
2. Scientific approach as independent variable (X). It means that scientific approach does not depend on anything, but it could affect students' speaking ability.
3. Learning style preferences as moderator variable. A moderator variable, commonly denoted as just M, is a third variable that affects the strength of the relationship between a dependent and independent variable

3.4. Instruments of the Research

There are three kinds of instruments that would be used in this research. The first is questionnaire to identify students' learning styles. This questionnaire is consisting of 40 items and is adopted from Yufriзал (2007). There are four statements in each item, and students have to give marks according to how they agree to the statements. There are four columns for agreement; Strongly Agree (*SS/Sangat Setuju*), Agree (*S/ Setuju*), Disagree (*TS/Tidak Setuju*), and Strongly Disagree (*STS/Sangat Tidak Setuju*). The result of this questionnaire would be calculated and then would show what type of learning style preference possessed by a student.

The second instrument used in this research is speaking tests; which consist of pre-test and post-test. The researcher would administer the test in form of

transactional dialogue, which requires students to work in pair. This speaking test would score five components in speaking; they are pronunciation, grammar, fluency, vocabulary, and comprehension.

Validity and Reliability of the Tests

The test was considered as the valid one if the test measures the object to be measured and it was suitable with the criteria (Hatch and Farhady, 1982:250). According to the Hatch and Farhady (1982:281), there are two basic types of validity, such as content validity and construct validity. Therefore, to measure whether the test has a good validity, this research used content and construct validity. The validity of the instrument was presented as follows:

Content Validity

Content validity concerned with whether the test is sufficiently representative and comprehensive for the test. According to Hatch and Farhady (1982:251), since content validity is the extent to which a test measures a representative sample of the subject matter, the focus of content validity is adequacy of the sample of the appearance of the test. Therefore, since the test instrument is conducted to get the data of the students' speaking skill achievement, the content validity of the test items were conducted by including speaking materials which were arranged based on the materials from the indicators of *core competence* and *standard competence* that have been formulated before in syllabus based on 2013 curriculum of senior high school. Thus, if the measuring instrument has represented all the ideas that connected with the materials that were measured, that measuring instrument has fulfilled the aspect of content validity.

Construct Validity

Construct validity concerned with whether the test was actually in line with the theory of what it means to know the language that was being measured. To achieve the construct validity of the speaking test, the researcher relates to the theory of speaking that speaking needs to concern with some aspects such as grammar, vocabulary, pronunciation, fluency, and comprehension; while to complete the construct validity of the questionnaire, the researcher associates with the theory of learning style proposed by Willing and which had been adapted by Yufrizal (2007).

Reliability

Reliability of the test can be defined as the extent to which a test produces consistent result when administrated under similar conditions (Hatch and Farhady, 1982:243). In this research, to know the reliability of the speaking test, the writer would use inter-rater reliability. The researcher has two raters in order to score the students' speaking skill. The first rater is the researcher herself and the second rater is the English teacher in the class. To measure the inter-rater reliability, the researcher use *Pearson-Product Moment Correlation* in SPSS 22. While the reliability of the questionnaire would not be measured anymore since it is from the expert.

3.5. Scoring Criteria

In order to have a good result of students' scoring, the researcher use scoring criteria from the expert. In term of speaking test, scoring system which is proposed by Harris (1974) would be used.

Pronunciation

20	Speech is fluent and effortless as that of native speaker.
16	Always intelligible though on is conscious of definite accent.
12	Pronunciation problems necessitate concentrated listening and occasionally lead to misunderstanding.
8	Very hard to understand because of pronunciation problem must frequently be asked to repeat.
4	Pronunciation problems too severe as to make speech unintelligible.

Grammar

20	Make few (if any) noticeable errors of grammar or word order.
16	Occasionally makes grammatical and/ or word order errors which do not, however, obscure meaning.
12	Make frequent errors of grammar and word order, which obscure meaning.
8	Grammar and word orders make comprehension difficulty must often rephrase sentences and/or restrict him to basic patterns.
4	Errors in grammar and words order to severe as to make speech virtually unintelligible.

Fluency

20	Speech is fluent and effortless as that of native speaker problems.
16	Speed of speech seems to be slightly affected by language problems.
12	Speed and fluency are rather strongly affected by language problems.
8	Usually hesitant, often forced into silence by language problems
4	Speech is as halting and fragmentary as to make conversation virtually impossible.

Vocabulary

20	Use of vocabulary and idioms is virtually that of native speaker.
16	Sometimes uses inappropriate terms and/or must rephrase ideas because of lexical inadequacies.
12	Frequently uses the wrong words, conversation, somewhat limited because inadequate vocabulary.
8	Misuses of words and very limited vocabulary make comprehension quite difficult.
4	Vocabulary limitation to extreme as to make virtually impossible.

Comprehension

20	Appear to understand everything without difficulty
16	Understand nearly everything normal speed
12	Understands most of what s said at slower-than-normal speed with repetitions.
8	Has great difficult following what is said
4	Cannot be said to understand even simple conversation in English

3.6. Data Collecting Technique

In collecting the data, the researcher used three techniques. The researcher firstly distributed the questionnaires to get the identification of the students, then the researcher conducted pre-test. After doing three meetings of treatment, the researcher conducted pre-test.

3.6.1. Distributing Questionnaire

The questionnaires were distributed to all students in XI IPS 1. The researcher firstly explained what the students had to do with the questionnaires. The researcher gave 15 – 20 minutes for the students to fill in the questionnaires which consist of 40 questions. After that, the researcher analyzed what learning style had by each student, then grouped the students based on their learning styles.

3.6.2. Conducting Speaking Pre-Test

The pre-test was administered before the treatment of teaching speaking comprehension through Scientific Approach, and aimed to measure students' basic skill before the treatment. The form of the test was oral test, which demanded the students to have conversation in front of the class. The students were working in pair. The teacher gave 25-30 minutes for the students to make their dialogue based on the available pictures. The dialogue was about 2-3 minutes for each pair.

3.6.3. Conducting Speaking Post-Test

The post-test was administered after the treatment of teaching speaking comprehension through Scientific Approach. The post-test intended to measure the improvement of students' performance after the treatment. The result of the post-test would be compared with the result of the pre-test to analyze the improvement of the students' speaking skill.

3.7. Research Procedure

The procedures of this research as follows:

1. Determining the population and choosing the sample.
2. Distributing learning styles' questionnaires
3. Conducting speaking pre-test
4. Giving treatment through scientific approach
5. Conducting speaking post-test
6. Conducting interview
7. Analyzing the result of the questionnaires, grouping students based on their learning styles, and analyzing the result of the interview
8. Scoring and analyzing speaking pre-test and post-test
9. Measuring the improvement of speaking pre-test and post-test
10. Comparing the result for each learning style group.

3.8. Data Analysis

After conducting the test and classifying students by their learning styles, the researcher analyzed the data. In order to see whether there is a significant

difference of each learning style's speaking ability after the implementation of scientific approach, the researcher analyzed the data by using SPSS 22 with One-Way Analysis of Variance.

This parametric test was used because the researcher wants to compare the average score (mean) from each classification of learning styles. Setiyadi (2006) states that basic assumptions that should be fulfilled to use this parametric test are:

1. There is only one dependent variable and one independent variable that has three groups or more
2. The dependent variable should be in form of score or continuous ordinal data.

In this case, the dependent variable is students' speaking score, and the independent variable is students' learning styles which were consisting of four different groups. Thus, the condition to apply this parametric test is fulfilled.

3.9. Hypothesis Testing

The hypothesis testing was used to prove whether the hypothesis planned in this research was accepted or not. SPSS was used to know the improvement of treatment effect. The hypothesis is analyzed at significance level of 0.05 in which the hypothesis is approved if $\text{Sig} < .$ It means that probability of error in hypothesis is only about 5%. After collecting the data, the researcher recorded and analyzed them in order to find out whether there was an increasing in students' ability in speaking or not after the treatment.

For the first research question the researcher used Paired Sample T-test to know the level of significance of the treatment effect.

Notes:

H_0 = There is no significant difference between students' speaking skill before and after the implementation of scientific approach. The criteria is accepted if alpha level is higher than 0.05 (> 0.05).

H_1 = There is significant difference between students' speaking skill before and after the implementation of scientific approach. The criteria is accepted if alpha level is lower than 0.05 (< 0.05).

While for the fourth research question, the researcher used One Way Analysis of Variance (One Way ANOVA).

Notes:

H_0 = Learning style preferences does not affects students' speaking achievement.

The criteria is accepted if alpha level is higher than 0.05 (> 0.05)

H_1 = Learning style preferences affects students' speaking achievement. The criteria is accepted if alpha level is lower than 0.05 (< 0.05).

V. CONCLUSION AND SUGGESTIONS

This chapter discusses the conclusion of the study and the suggestion to further research. Additionally, the researcher also provides some suggestions for English teachers and learners related to the identification of students' learning style on their reading comprehension achievement.

5.1. Conclusion

This research was concerned with the implementation of scientific approach teaching speaking skill to second grade students based on learning style. In relation to the research findings and discussion, it could be concluded as follows:

1. The implementation of scientific approach has successfully engaged students' active participation in teaching and learning process. Scientific approach that has several steps demanded students to practice by drills and repetitions in meaningful contexts. Thus, by applying the right procedure, scientific approach can be implemented to significantly improve students' English proficiency especially in speaking ability.
2. Being able to improve three language aspects, the implementation of scientific approach is believed to have good outcome in teaching and learning process. This research has provided evidence that scientific approach can be implemented to advance students' pronunciation, expand

students' vocabulary, and enhance students' grammar. After having three language aspects improved, students are expected to have better self-confidence to use English in their daily life.

3. Causing different result of students' speaking achievement, learning style preference is believed to have significant effect on English language learning. It proves that what makes successful language learners is not only from external factors, such as methods and media, but also from internal factors; one of these is learning style preference.

5.2. Suggestions

In reference to the conclusion above, the researcher recommends some suggestions as follow:

a. For the teachers:

1. Since the government has established scientific approach as the main approach for teaching in 2013 Curriculum, teachers should learn this approach carefully before implementing it in the class. Teachers also should arrange the procedure of teaching carefully so all steps, including observing, questioning, associating, experimenting, and communicating, can be applied properly and competently. All steps should be able to elevate students' competency in all components of language. The most important thing is to prepare the method, material, and media which are suitable with the students. Rehearsing before teaching is also needed

especially for inexperienced teachers, so every steps could be implemented properly.

2. Understanding that learning style preference could significantly affect students' achievement, it is necessary for teachers to identify students' learning styles at the very first meeting. Teachers should understand their students well; what type of learners the students are. Then the teachers should be able to arrange good steps in teaching which could facilitate all the children properly. Since there will not be class with all same type of learners, the teachers should be creative and innovative in deciding the teaching methods as well as media. In consequence, all of the students with different types of learning style would be able to acquire English effectively.

b. For further research:

3. Since the subject of this research is very small, there should be conducted further research concerning in the implementation of scientific approach, speaking skill, and learning style preferences with larger number of samples. Further research regarding other skills in English is also needed since there are not yet researches observing scientific approach and learning style preferences with listening, reading, and writing capability.

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