

**THE EFFECT OF DEDUCTIVE AND INDUCTIVE
INSTRUCTION ON STUDENTS' GRAMMAR MASTERY
OF SIMPLE PRESENT TENSE
(A Comparative Study)**

THESIS

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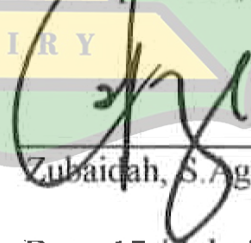
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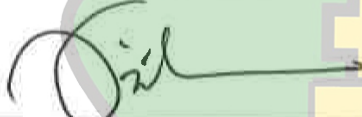
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**The Effect of Deductive and Inductive Instructions on
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adalah benar karya saya, **kecuali semua kutipan dan referensi yang disebutkan sumbernya**. Apabila terdapat kesalahan dan kekeliruan di dalamnya, maka akan sepenuhnya menjadi tanggung jawab saya. Demikianlah surat pernyataan ini saya buat dengan sesungguhnya.

Banda Aceh, 10 Juli 2019

Saya yang membuat surat pernyataan



Cut Ruhul Muthmainnah

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Finally, the writer would be glad to receive any constructive criticism and suggestion to make this thesis better. I expect that this thesis will be useful for the readers.

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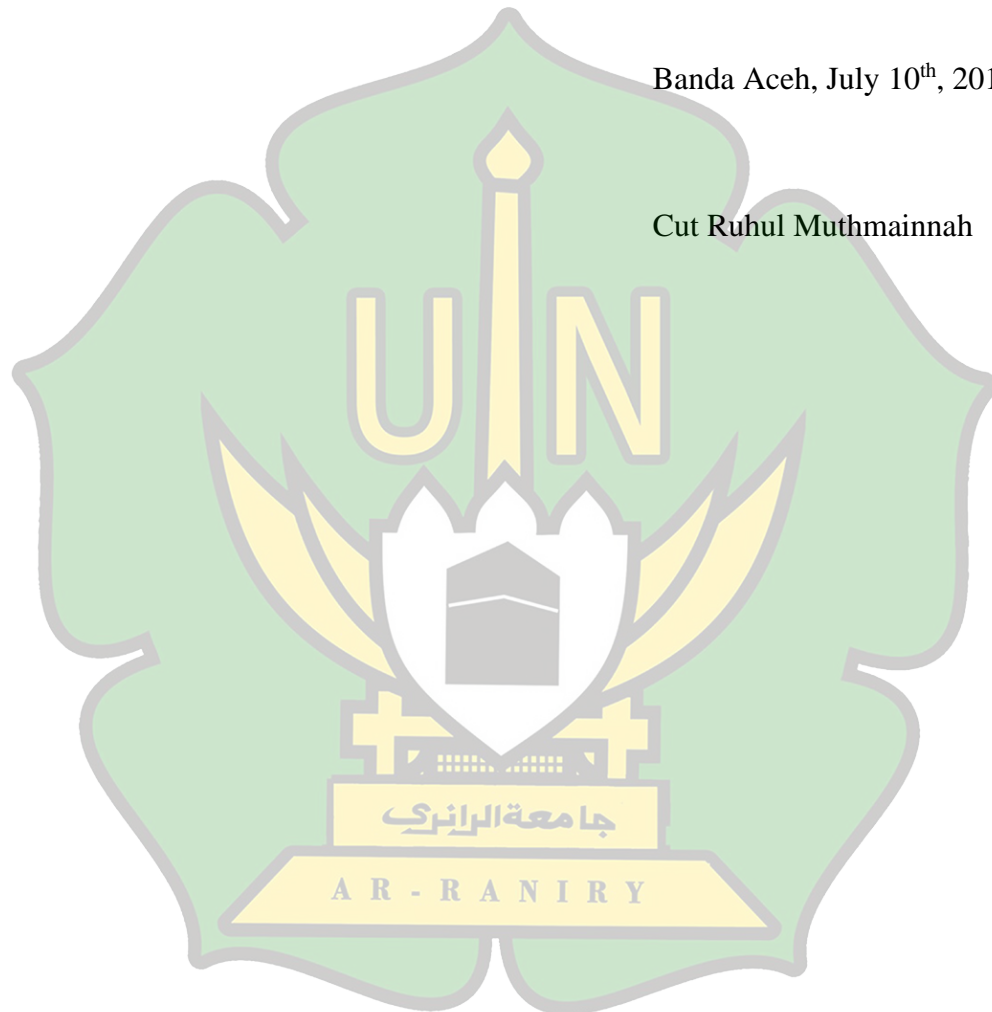


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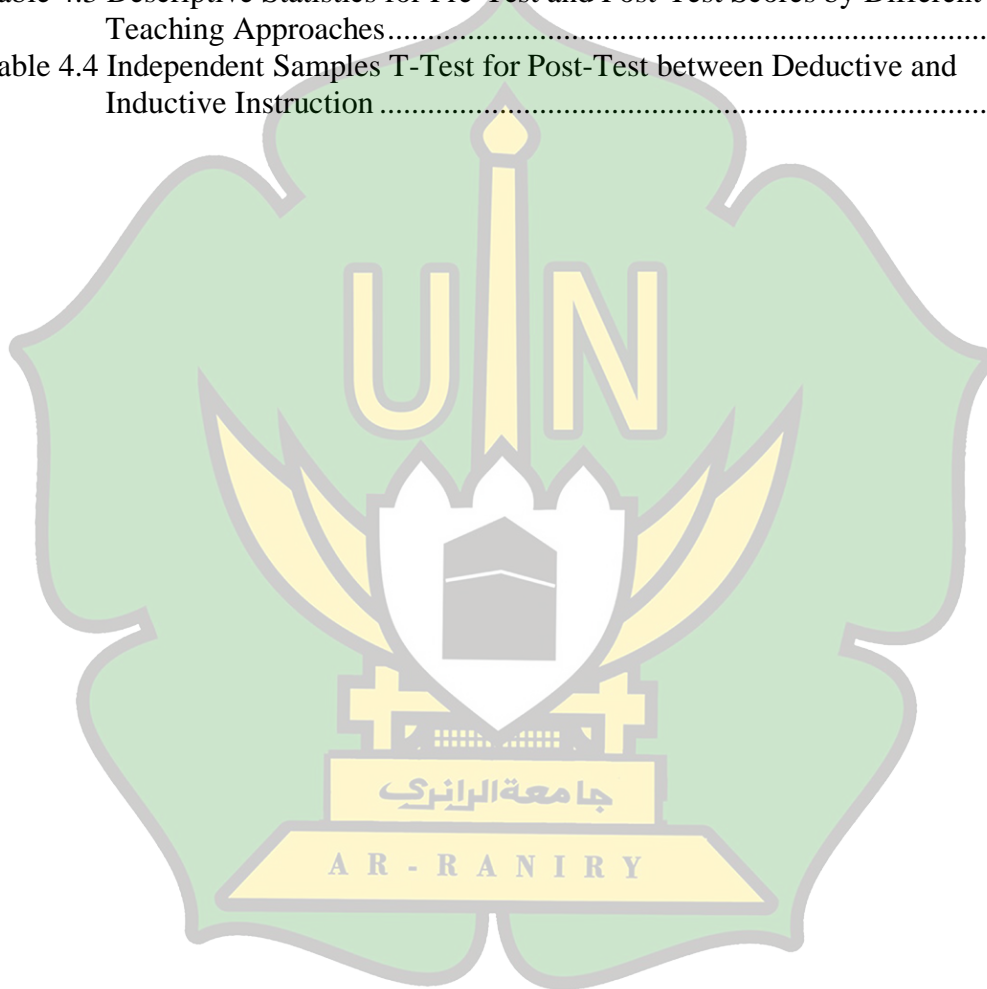
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ABSTRACT

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Teaching grammar needs an appropriate approach to make sure that grammar rules is easily understood by students. There are different approaches of teaching grammar. Deductive and inductive instructions are two common approaches for teaching English grammar. The objective of this study was to find out which instruction (inductive or deductive) gives better effect to improve students' ability in grammar. The population of this study was first year students (115 students) of MTsS Lam Ujong, Aceh Besar in academic year 2018-2019, while the sample was 42 students in two different classes. Both classes were taught simple present tense using inductive and deductive approaches separately. Pre-test and post-test were administrated to gain the data. The collected data then compared and calculated using T-test in significance level 0,05. The result showed that inductive instruction gave better effect on students' grammar ability compared to deductive instruction. However, statistical examination indicated that there was no significant difference between these two instructions (P-value = 0.619). This finding suggested that teacher could be free to use both deductive and inductive approaches to teach simple present tense.

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A R - R A N I R Y

CHAPTER I

INTRODUCTION

A. Background of Study

English become the most widely languageused in the world. There are many benefits of learning English for students. First, in terms of academia, English is the language most commonly spoken by academics worldwide. Many books and learning sources are presented in English. On the other hand, English is often used as standardized test (TOEFL) for academic and professional institutions. For example, some domestic and foreign state and private universities require certain TOEFL scores as entry requirements. Like the college entry requirements, some universities also require prospective graduates to have a specific TOEFL target score. In addition, scholarship institutions also require prospective scholarship applicants to have a certain TOEFL score. Second, English proficiency enables students to adapt to computers and technology. Most software programs are written in English. The study of English can provide them with useful benefits and knowledge. Third, learning English may lead students to have more career options when they become adults. They can make links with other countries in almost every job sector, since English is commonly a pre-requisite for many jobs. Fourth, as the result of having studied English, opportunities to travel and explore different parts of the world are more available for students. Through the study of English, a range of advantages is available. Quality courses offer candidates the opportunity to improve job prospects,

the capacity to communicate with others and access to information right across the world.

Basic subject of English taught by teachers in schools is grammar. Grammar is one of important materials because grammatical excellence is needed to prepare students for communication, college and careers. To a school student, knowledge of grammar helps the student in the correction of mistakes and improvement of written work.

Teaching grammar needs an appropriate approach to make sure that grammar material is easily understood by students. There are different approaches of teaching grammar. Deductive and inductive instructions are two common approaches for teaching English grammar. Akar (2005) points out that deductive teaching is explained by given general rules directly about the subject that needs to be taught. The teacher provides grammar rules and explanations, then the students are asked to establish their own examples. The inductive approach of teaching grammar involves presenting several examples that illustrate a rule and expecting students to notice how the rule works from these examples. The expectation is that students learn to recognize the rules of grammar in a more natural way during their own reading and writing. Male (2018) added that the deductive approach may begin with the arrangement of rules or structures and then followed by examples in which rules are implemented.

A study related to deductive teaching approach had been carried out by Berendse (2012) who examined two groups of Dutch secondary school students. They were taught the English simple past and present perfect tenses over the course of

three sessions. After which they were given two grammaticality judgment tasks: the first one shortly after instruction and the second one six weeks later. The results indicated that while there was little difference between the two groups on the former, the latter illustrated a greater degree of discrepancy, with the students who had received deductive instruction scoring higher than their peers who had been taught inductively. It was suggested that deductive is considered as better teaching approach because it is time-saving to explain complex grammar rules, it increase the students' confident for examination, and it is suitable for many students' expectations about classroom learning.

Male (2018) stated that in inductive approach, the students tend to be more active as they were also introduced with grammar rules simultaneously. On the other hand, the aim of grammar teaching is to help the students find the rules themselves from the provided examples. In a study conducted by Kuder (2009), two groups of intermediate learners were given instruction on Spanish direct object pronouns. It was concluded that those taught inductively did slightly better than the learners who had received deductive instruction, though the difference was not significant. The former also expressed a higher level of satisfaction in comparison with their deductively-instructed counterparts. Sun and Wang (2007) studied the relative effectiveness of inductive and deductive approaches to learn collocations. The results showed that the inductive group improved significantly better than the deductive group in the performance of collocation learning and easy collocations seem to be more suitable. That is to say, the advantages of inductive teaching for students are it inspires

students' thinking activities, motivates students' learning interests, and taught a lot of new information by the time arriving general rule.

An interview with English teacher of MTS Lam Ujong, Aceh Besar indicated that their students have low grammar ability. In that school, grammar taught in both deductive and inductive approaches, but which approaches gives better effect on students' ability in grammar is still unknown.

Taking into account the problem above, this paper aimed to investigate the effectiveness of inductive and deductive teaching approach to teach grammar for student. The reason why grammar ability is chosen because grammar is the most important part in English that will be test in students' national exam.

B. Research Question

According to the issues mentioned above, a research question has been made: which instruction (inductive or deductive) gives better effect on students' grammar ability?.

C. Objective of Study

The objective of this study is to find out which instruction (inductive or deductive) gives better effect to improve students' ability in grammar.

D. Significance of Study

There are theoretical and practical significances in this study:

1. Theoretical significance

The theoretical significance of this study is to support the existing theories of approaches in teaching grammar, especially by applying inductive and deductive instruction.

2. Practical significance

The practical significance of this study is to give some insights and information on the use of deductive and inductive approach in teaching grammar and to provide English teacher a better approach to teach grammar for students.

E. Research Terminologies

To avoid misunderstanding in this study, the explanation of terminology in this research are provided below:

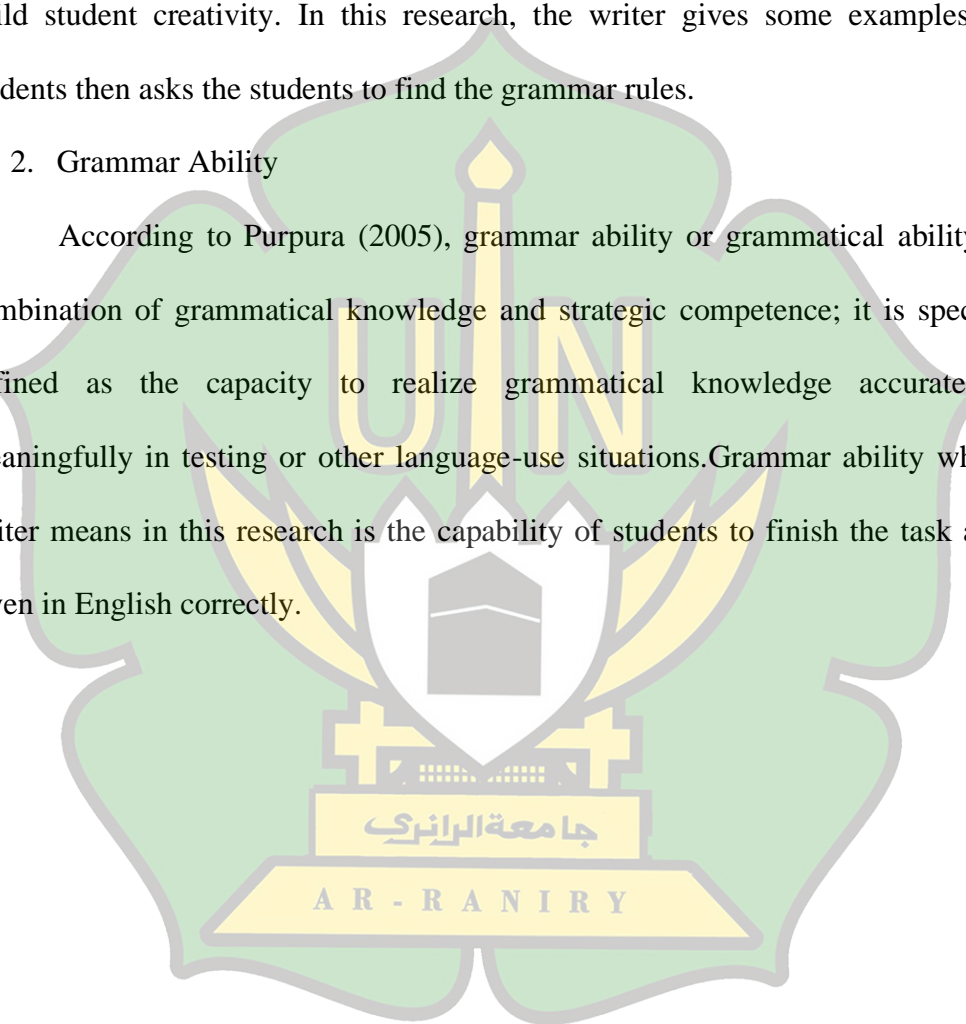
1. Deductive and Inductive Instruction

Limris (2013) said that deductive approach of teaching English grammar refers to the style of teaching students by introducing the grammatical rules first, and then applying example for the students. Deductive instruction in this research is applied by presenting the rules first, then the writer give some examples. Next, the writer asks student to make other examples based on the rules has been taught.

Mautone (2004) said that in inductive approach, teachers show their students a series of examples, then guide them toward noticing a pattern and coming up with the generalization or concept rule. In this research, inductive instruction is expected to build student creativity. In this research, the writer gives some examples to the students then asks the students to find the grammar rules.

2. Grammar Ability

According to Purpura (2005), grammar ability or grammatical ability is the combination of grammatical knowledge and strategic competence; it is specifically defined as the capacity to realize grammatical knowledge accurately and meaningfully in testing or other language-use situations. Grammar ability which the writer means in this research is the capability of students to finish the task and test given in English correctly.



CHAPTER II

LITERATURE REVIEW

This chapter presents the review of related literature about deductive and inductive approach on students' grammar ability.

A. **Methods in Teaching Grammar**

Grammar has always held a central role in EFL classrooms but the ways of teaching it have varied significantly (Takala, 2016). Hall (2011) suggests that the changing teaching methods reflect the spirit of the times and contemporary ideas, such as social values and interests in linguistics, hence they are context-dependent. According to Takala (2016), the method of teaching grammar have changed according to what the current view of language and its role has been like, as well as whether the goal of teaching has been, for instance, being grammatically correct or being able to communicate fluently. Dulul (2010) in his paper mentioned some methods to teach English grammar:

1. Grammar Translation Method (GTM)

This method is also referred to as explicit grammar teaching. Lists of words and grammar rules were typically used in the classroom. The point of departure in grammar was the sentence. Larsen-Freeman (2000) has revealed that the GTM claimed that grammar rules are presented with examples. Once students understand a rule, they are asked to apply it to some different examples. The aim of this method is

that abstract grammar rules were taught deductively, i.e. the rules were presented before practical examples of the rules were given.

Berendse (2012) explained that the grammar translation method is one of the most traditional second language teaching methods that dates back to the late nineteenth and early twentieth century. It was originally used to teach extinct languages such as Greek and Latin, which explains why students were taught grammar and vocabulary through decontextualised translations, thus focusing on the written language and neglecting spoken language.

2. Direct Method

Direct method came into existence as a response to the Grammar-Translation Method as it integrated more use of the target language in the classroom. Students had to speak and think solely in the target language. This method attempted to imitate the conditions under which a first language is most effectively learned: by means of total immersion (Berendse, 2012).

Larsen-Freeman (2000) indicates that one principle of the direct method is that 'grammar should be taught inductively. There may never be an explicit grammar rule given'. In supporting this point of view, Mohammed Aslam (2008) points out that some objectives of the Direct Method are the use of every day vocabulary and structures and grammar is taught inductively.

3. Audio-lingual Method

Berendse (2012) reveals that the audiolingual method emphasised repetition and was influenced by the principles of Behaviourism: proponents of this method viewed language learning as habit formation resulting from ‘Stimuli, Responses, and Reinforcement.’ Dialogues and drills were used to achieve accurate pronunciation and grammar. Thornbury (1999) concluded that audiolingualism derived its theoretical base from behaviourist psychology which considered language simply as a form of behaviour to be learned through the formation of correct habits. Larsen-Freeman (2000), the major objective of language teaching should be for students to acquire the structural patterns; students will learn vocabulary afterward. Sentences were put into substitution tables and practised over and over again, preferably in language laboratories, in order to let the learners listen to their own pronunciation as well. In a substitution table, learners could easily observe the grammatical functions of words after oral practice of the sentences.

Some features of this approach are (Brinton, Celce- Murcia & Snow, 2014):

- Lessons begin with dialogues.
- Grammatical structures are sequenced and rules are taught inductively.
- Skills are sequenced.
- A great effort is made to prevent learner errors.
- Vocabulary is severely controlled and limited in the initial stages.

4. Communicative Method

Thornbury (1999) explains that the development of the Communicative Language Teaching in 1970s was motivated by developments in the new science and sociolinguistics, and the belief that communication competence consists of more than simply the knowledge of the rules of grammar. Thornbury (ibid) adds that in fact, grammar was still the main component of the syllabus of the CLT courses, even if it was addressed up in functional labels.

Teachers' transform their technical knowledge to practice may vary significantly. There are modernist or traditional approaches in grammar teaching. Lecturers may talk about many advantages and disadvantages of these traditional and modernist approaches. According to some researchers the main shortcoming of the traditional approach is lack of context (Petrovitz, 1997) while others argue that traditional approaches are more successful (Robinson, 1996). In grammar teaching modern approaches are labeled as inductive approach and traditional approaches are described as deductive approach. جامعة الرانري

According to Nunan (2005), there are two basic ways to introduce new grammar item, deductively and inductively. In inductive approach, the teacher presents the grammar rule and then gives student exercise in which they apply the rule. In inductive approach, the teacher presents sample of language, and the student have to come to an intuitive understanding of the rule.

Communicative Approach builds on the notion of language as means of real communication, and its goal is to achieve 'communicative competence' (Berendse,

2012). The approach is built on the belief that linguistic theory need to be seen as part of a more general theory incorporating communication and culture. This method promoted learning activities that engaged students in meaningful and authentic use of language rather than activities that only mechanically practised language structures. Consequently, classroom activities were designed to focus on “completing tasks that are mediated through language or involve negotiation of information and information sharing (Richards and Rodgers, 2001).

B. Deductive Instruction

Deductive teaching is a traditional technique in which information about target language and rules are driven at the beginning of the class and continued with examples. The principles of this technique are generally used in the classes where the main target is to teach grammar structures. For instance, these principles are convenient for the classes that grammar translation approach is applied (Nunan, 1991). According to Thornbury’s three basic principles, a deductive lesson starts with presentation of the rules by the teacher. Secondly, teacher gives examples by highlighting the grammar structures. Then students make practise with the rules and produce their own examples at the end of the lesson (Thornbury, 1999).

Widodo (2006) says that the deductive method is derived from the notion that deductive reasoning from general to specific. That means rules, principles, concepts or theories are presented first, and then their application is treated. In this method,

learners study grammar rules before applying the rules in doing exercises. That means the learners work from the general to the particular (Fortune, 1992).

Erlam (2003) defines the deductive method as a process that moves from general to specific. The learners are exposed to the general use, and then they apply the rule to particular instances of language use. And this method is most close with the Grammar-Translation approach (Gollin, 1998). The deductive method is related to conscious learning. This method tries to place a great emphasis on error correction and presentation of explicit rules. The deductive method is often used with adult learners. The teacher in this method teaches the rule explicitly to learners, and they are ready to cope with exercises given (Krashen, 2002).

A deductive approach is based on the top-down theory which the presentation and explanation of grammar rules take the precedence over teaching. The language is taught from the whole to parts so learners understand the grammar rules and structures firstly. Next, they see the examples provided by teacher and finally they begin to produce their own examples. In contrast to this, an inductive teaching is based on the bottom-up theory which accepts the view that language learners tend to focus on parts rather than the whole. For this reason teaching process begins with a text, audio or visual in a context. Secondly learners work on the material to find the rules themselves. In the final stage, they give their own examples (Block, 2003). In a deductive approach learners are passive recipients when teacher elicits the rule on the board. However, in an inductive approach they are active as they are responsible for exploring the rules themselves.

C. Inductive Instruction

Nunan (1999) identifies inductive approach as a process where learners discover the grammarrules themselves by examining the examples. In a inductive approach it is also possible to use a context for grammar rules. Thornbury (1999) notes that in an inductive approach learners are provided with samples which include the target grammar that they will learn. Then learners work on the examples and try to discover the rules themselves. When students obtain the grammar rules, they practice the language by creating their own examples.

Inductive instruction emerged from “inductive reasoning, cognitive development and constructivist epistemology which was first used by Jean Piaget in 1967” (Yuen, 2009). It is generally defined in contrast with the traditional lecture-based, deductive instruction. Prince and Felder (2006) present inductive instruction as a preferable alternative, which starts with a set of observations or experimental data to interpret, a case study to analyze, or a complex real-world problem to solve. In inductive instruction, students are led to analyze the data or scenario and solve the problem, creating the need for facts, rules and principles, at which point they are either presented with the needed information or helped to discover it for themselves (Prince & Felder, 2006). However, it should be noted that an inductive approach does not eliminate the potential for frontal teaching or lectures. The teacher evaluates the learners’ knowledge, leads them to question and clarify it and enables the construction of new knowledge (Bransford et al., 1999). Rice (1945) suggests that the

teacher's primary role in inductive instruction is to help students learn, rather than "teach".

Mautone (2004) says that with an inductive approach, teachers show their students a series of examples and non-examples, then guide them toward noticing a pattern and coming up with the generalization or concept rule. The inductive approach refers to the style of introducing language context containing the target rules where students can induce such rules through the context and practical examples. In other words, the sequence in this approach goes from creating a situation and giving examples to the generalization where students should discover such generalization by themselves or with the teacher's help (Mohammed et al., 2008). Further, Paradowski (2007) stated that the inductive approach is student centered and allows learners to become deeply involved in the language they are writing and offers potential for reflection. In the process of learning to write (learning-and-doing) they feel more important, are less passive, and do not get bored so easily during the lesson.

D. Previous Study

In a study carried out by Erlam (2003) concluded that the benefits of deductive approaches outweigh those of inductive teaching approaches. Her study involved the teaching of direct object pronouns in French to a sample of 69 New Zealand high school students who were randomly assigned to deductive, inductive and control groups. For the deductively taught group, the usage of these pronouns was formally explained and accompanied by example sentences illustrating their use,

after which students did a pronoun replacement exercise. Those taught inductively, however, received no formal explanation of rules. Instead, a matching activity involving a series of illustrations and statements was used. The learners then saw some other pictures shown via a projector while simultaneously listening to a pair of statements describing each one. The students had to say which statement matched the picture being displayed. By contrast, the learners in the control group were subject to form-focused rather than target structure instruction. Two posttests were given to the learners, one immediately after the treatment phase and the other six weeks later. On both occasions, the deductive group achieved significantly higher marks than the inductive and control groups.

Rokni (2009) examined the impact of using explicit deductive and explicit-inductive teaching techniques on the acquisition of relative clauses in English. The participant was Persian learners of English. After receiving instruction, the participants took a posttest. This was later followed by a delayed posttest. The two tests consisted of sentence-combining activities as well as grammaticality judgments tests. On both occasions, those learners who had been given explicit-inductive instruction significantly outperformed their peers in the explicit-deductive group, suggesting that Iranian learners are more positively affected by inductive teaching approaches. In another study conducted by Kuder (2009), two groups of intermediate learners were given instruction on Spanish direct object pronouns. It was concluded that those taught inductively did slightly better than the learners who had received deductive instruction, though the difference was not significant. The former

also expressed a higher level of satisfaction in comparison with their deductively-instructed counterparts. Furthermore, Fahim and Azarniوشي (2011) conducted an investigation on the relationship between critical thinking ability and two approaches towards teaching grammar, namely rule-driven instruction and discovery learning. The study involved 73 language learners undergoing two instruction phases, the first deductive and the second inductive, comprising four sessions each, after which they were given a grammar test. The findings showed that induction contributes to the learning of students with a high critical thinking ability, yet no relationship was found between deduction and high or low critical thinking abilities.

Nazari (2012) studied the impact of implicit and explicit grammar instruction on Iranian language learners' mastery of the present perfect tense. In order to measure this, a written test consisting of multiple-choice items and sentence making was employed, with the results indicating that teaching grammar explicitly leads to a more favorable outcome in comparison with implicit instruction.

Chalipa (2013) focused on the effects of inductive and deductive grammar teaching in an Iranian university. A sample population of 40 students were instructed inductively or deductively on ten chosen grammatical structures. The results of the pretest and post-test suggested that deductive approach was more effective on short-term learning. Their effects on long-term learning of the target structures were similar.

Gorat and Prijambodo (2013) tried to investigate the effect of using deductive and inductive approach in teaching English to students on their conditional sentence mastery. The study was a quasi-experimental study. The population of the study was 102 students in a vocational school. The sample was 64 students in the academic year 2012-2013. The instruments of this study were a pre-test, post-test, questionnaire and interview. This study found that there was a significant difference between the mastery on conditional sentences of the student taught using the deductive approach and those taught using the inductive approach. It was found that the inductive approach was more effective than the deductive approach to teach conditional sentences.

Berendse (2012) examined the effectiveness of inductive and deductive instruction when learning grammatical structures in an ESL (English Second Language) classroom with Dutch secondary school pupils. The participants in this study were 54 secondary school pupils who were divided into two groups: a deductively taught group (28 pupils) and an inductively taught group (26 pupils). The tools of this study were pre-post tests, which had three grammatical judgment tasks, post-test and retention task. This study found that both the inductive and deductive group performed significantly better in both, the past tense and the present perfect tense in the post-test, when compared to the pre-test.

As has been seen above, some previous studies show that students learned better by the deductive method, while other studies show the opposite. However, some other studies find out that the students performed better in the both methods which

are inductive and deductive such as Berendse's study which investigated the effect of inductive and deductive instruction when learning grammatical structures in an ESL classroom with Dutch secondary school pupils.

E. Grammar

Grammar is important in learning English as foreign language. In this case, grammar guides the students in constructing English sentence to communicate with other people. Grammar is bounded to other language skill like listening, speaking, reading, and writing (Muhsin, 2015).

Radford (1989) says grammar is a model of those linguistic abilities of native speakers of language which enable them to speak and their language fluently. The native speaker grammatical competence is reflected type of institution which speaker has about their native speaker. Grammar is defined as the way a language manipulates and combines words (or bits of words) in order to form longer units of meaning (Ur, 1996). According to Ur (2001), grammar may be roughly defined as the way a language manipulates and combines words (or bits of words) in order to form longer units of meaning. For example, in English the present form of the verb is in the third person has two distinct forms, and if the plural are is combined with a singular subject, the result is usually unacceptable or “ungrammatical”. There is a set of rules which govern how units of meaning may be constructed in any language: we may say that a learner who knows grammar is one who has mastered and can apply these rules to express him in what would be considered acceptable language forms.

F. Advantages and Disadvantages of Deductive and Inductive Instruction

1. Deductive approach

Chalipa (2013) summarized the advantages of deductive approach as follow:

- It gets straight to the point, and can therefore be time-saving. Many rules can be more simply and quickly explained than elicited from examples. This will allow more time for practice and application.
- It respects the intelligence and maturity of many students (specially adults), and acknowledges the role of cognitive processes in language acquisition.
- It confirms many students' expectations about classroom learning, particularly for those learners who have an analytical learning style.
- It allows the teacher to deal with language points as they come up, rather than having to anticipate them and prepare for them in advance.

Chalipa (2013) also explain some quite significant disadvantages that cannot be disregarded regarding to deductive approach. The most important one is lack of students' involvement and struggle for understanding, which may result in the lesson being teacher-centered and not demanding in terms of creativity and imagination. Teacher's incompetence may deteriorate the situation further; if he is unable to state the rule explicitly, back it up with relevant examples and adjust the use of met language to the needs of his students, then even the dimpliest grammar instruction can become ambiguous, and breed confusion and discouragement.

According to Widodo (2006), the deductive approach has its own advantages and disadvantages, which are in the following table:

Table 2.1 Advantages and Disadvantages of Deductive Teaching Approach

Advantages	The Deductive approach goes straight forwardly to the point and can, therefore, be time-saving.
	A number of rule aspects (for example, form) can be more simply and clearly explained than elicited from examples.
	The deductive approach respects the intelligence and maturity of many adult learners in particular and acknowledges the role of cognitive processes in language acquisition.
	A number of direct practice/application examples are immediately given.
	It confirms many learners' expectations about classroom learning, particularly for those who have an analytical style.
Disadvantages	Beginning the lesson with a grammar presentation may be off putting for some learners, especially younger ones.
	Younger learners may not be able to understand the concepts or encounter grammar terminology given.
	The explanation is seldom as memorable as other forms of presentation (for example, demonstration).
	Grammar explanation encourages a teacher-fronted, transmission style classroom, so it will hinder learners' involvement and interaction immediately.
	The deductive approach encourages the belief that learning a language is simply a case of knowing the rule.

2. Inductive approach

General the advantages of inductive approach summarized by Chalipa (2013) are provided as follow:

- Rules learners discover for themselves are more likely to fit their existing mental structures than rules they have been presented with. This in turn will make the rules more meaningful, memorable, and serviceable.
- The mental effort involved ensures a greater degree of cognitive depth which, again, ensures greater memo ability.
- Students are more actively involved in the learning process, rather than being simply passive recipients: they are therefore likely to be more attentive and more motivated.

While the general the disadvantages of inductive approach are: the time and energy spent in working out rules may mislead students into believing that rules are the objective of language learning, rather than a means; the time taken to work out a rule may be at the expense of time spent in putting the rule to some sort of productive practice; Students may hypothesis the wrong rule, or their version of the rule may be either too broad or too narrow in its application: this is especially a danger where there is no overt testing of their hypotheses, either through practice examples, or by eliciting an explicit statement of the rule; it can place heavy demands on teachers in planning a lesson because they need to select and organize the data carefully so as to

guide learners to an accurate formulation of the rule, while also ensuring the data is intelligible; an inductive approach frustrates students who, by dint of their personal learning style or their past learning experience (or both), would prefer simply to be told the rule Chalipa (2013). Kwakernaak (2009) conclude the disadvantages and advantages of inductive approach as can be seen below:

Table 2.2 Advantages and Disadvantages of Inductive Teaching Approach

<i>Disadvantages</i>	<i>Advantages</i>
The inductive approach is rather timeconsuming; the deductive approach is faster.	The inductive approach will bring about a greater learning outcome as students have been intensively working on the rule for a rather long time.
The inductive approach takes a lot of needless effort (students will think ‘just give us the rule’)	Students, however, are activated and become familiar with inductive reasoning, which is beneficial for future learning.
The teacher will make him or herself redundant in the long run when applying the inductive approach.	Induction stimulates an “active and independent” attitude towards grammar. Students will become less dependent on instruction and eventually will no longer think ‘grammar is hard, and only a teacher can tell me how to do it.’
Teachers constantly have to be aware of incorrect rules students can come up with inductively.	Making mistakes also occurs in learning a language naturally.

<p>Students are not familiarised with linguistic terms when using the inductive approach.</p>	<p>Students learn how to deal with linguistic concepts, though not specifically with the terms related to it. It is incorrect to think that the abstract form is 'the real rule.' Linguistic terms can be given after the induction process has been completed. The rule will then make sense to students.</p>
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CHAPTER III

RESEARCH METHODOLOGY

This chapter describes the methodology used in this research which consists of several components: research design, population and sample, technique of data collection, and data analysis.

A. Research Design

There are many kinds of research designed to conduct a research. In this research, the writer used experimental research design. According to Sugiyono (2010), experimental research divided into three forms such as pre-experimental design, true experimental design, dan quasi-experimental design.

In this research the writer selected quasi-experimental design to gain the data. Quasi-experimental design involve comparing the outcomes of one group receiving a treatment that is the focus of evaluation to one or more groups of clients who receive either nothing or an alternative real treatment (Thyer, 2012). The writer selected quasi-experimental research because it is most appropriate to measure the grammar ability from the object of research.

A pre-test and a post-test were employed in this study. There were two classes that were taught using inductive and deductive approaches separately. The independent variable was the treatments (inductive and deductive grammar teaching technique), while the dependent variable was students' grammar ability. This research covered a period of two weeks and include two sessions of both teaching and testing.

B. Population and Sample

1. Population

Population refers to all the members who meet the particular criterion specified for a research investigation (Alvi, 2016). Briefly, population means the whole subject of research. The population of this research was the first year students of MTsS Lam Ujong, Aceh Besar. There are 115 students in academic year 2018-2019 as the population.

2. Sample

According to Alvi (2016), a sample can be defined as a group of relatively smaller number of people selected from a population for investigation purpose. The sample of this research was two classes of first year student of MTsS Lam Ujong Aceh Besar. The samples were class VII-1 (20 students) and VII-2 (22 students). The classes were chosen using cluster random sampling. Cluster random sampling is a technique where the entire population is divided into groups or “clusters”, then the clusters are randomly selected (Chaturvedi, 2009). The researcher used lottery to choose the two classes of the sample. The steps as follows:

- a. Write all name classes of first year student on a small piece of paper,
- b. Enrol the papers,
- c. Put the rolled papers into a box,
- d. Shake the box and take two rolled papers.

The first rolled paper received deductive instruction, while the second rolled paper received inductive instruction.

C. Technique of Data Collection

The data collection technique used in this research is tests. A pre-test and a post-test were given to the students to find out the effect of deductive and inductive instruction on students' grammar ability. This research was conducted within two meetings for each class. The allocation time for each meeting is 80 minutes. The grammar rule that taught was simple present tense. The researcher selected 'simple present tense' based on the syllabus of English course for grade VII.

D. Data Analysis

To determine the effectiveness of learning English grammar through inductive and deductive instruction, the scores of the pre-test and the post-test of two groups were compared to find out whether there was any significant difference between two different techniques. The collected data then analyzed using SPSS version 18. To calculate the significant effect of inductive and deductive instruction on students' academic performance, T-test were administrated in significance level 0,05.

CHAPTER IV

RESULT AND DISCUSSION

This chapter presents and discusses the results based on the data gained from the pre-test and post-test. It consists of the research findings as follows: 1) Process of Data Collection, 2) Result, 3) Data Analysis, and 4) Discussion.

A. Process of Data Collection

The process of data collection is explained below:

1. Deductive Instruction

In the first meeting, the researcher came to the class together with English teacher. After reciting do'a, the researcher introduced herself to students and explained the aims of teaching for two meetings. Then, the researcher checked students' attendance list and called their name one by one. After some minute, researcher asked students to take a pre-test. The pre-test took 30 minutes long. Next, the researcher asked students whether they familiar with the question on the pretest, but no body answer. The researcher wrote "SIMPLE PRESENT TENSE" on the white board, and started to explain its function. Researcher wrote the affirmative, negative, and interrogative pattern of simple present tense and their examples on the white board. The researcher then allowed the students to ask question related to the pattern. Next, researcher asked the students to mention some verbs. Then the researcher together with the students created new examples. After that, the researcher asked students to make an example of simple present tense together with their

deksmate. Next, researcher pointed some students randomly and asked them to present their work. The works were corrected by other students and researcher.

In second meeting, same as first meeting, the researcher greeted students, recited doa, checked the students' attendance list, and gave them motivations to learn English. The researcher asked students about materials that they had been learnt in previous week. Some students answered that subject I, You, We, and They did not need 's' in their verbs. The teacher then praised the students' answers. Next, researcher asked students to make examples of simple present tense. After some minutes, researcher asked representative students from each sitting row to presented the examples they had been made. Afterward, students together with researcher reviewed the materials that had been learnt. Researcher then gave the students some minutes to spent in order to help the students feel ease and reduce the potential impact of anxiety on their performance. Then a post-test was given.

2. Inductive Instruction

In the first meeting of inductive instruction, researcher introduced herself, checked students' attendance list, recited doa together with the students, and explained the purpose of teaching for two meetings. Then, researcher gave the students a pre-test. The pre-test took 30 minutes long. After pre-test, the researcher gave students an affirmative example of simple present tense. Then, the students were asked to analyze and find out the grammar rule in example given by researcher. No one can find the pattern, so the researcher asked students to categorize the words in the example. The students next tried to categorize 'subject', 'verb', and 'object/complement', and found

the pattern of the example. Students discussed about the pattern together with researcher. After some minutes, students were asked to make other examples from the pattern they had been found. Researcher then asked some students to present their work. The works were corrected by researcher and other students.

In second meeting, researcher greeted and checked students' attendance list. Next, researcher gave an example of negative and interrogative simple present tense. Researcher asked the students to find the grammar rule by categorizing the word. After the rule was found, students were asked to make other examples from the rule. Then the students were asked to present their work. As representative, two students from each sitting row presented their work. The work then checked and corrected together. Least, researcher gave the students some minutes to spent in order to help the students feel ease and reduce the potential impact of anxiety on their performance. Then a post-test was given.

B. The Result

The purpose of this research was to identify a comparative study between teaching students using deductive and inductive approaches to improve students' ability in grammar. This research was conducted in April 2019 at MTsS Lam Ujong in the academic year 2018/2019. The researcher took two classes as the sample. Those samples were class VII-1 whom received deductive instruction and class VII-2 whom received inductive instruction. After conducting pre-test and post-test, the

researcher obtained the desired data. The test result of students in deductive and inductive classes are presented in Table 4.1 and Table 4.2.

Table 4.1 Students' Test Score in Inductive Class

No	Name	Pre-Test	Post-Test
1	A	35	30
2	ARR	30	75
3	AF	40	90
4	AH	50	75
5	HM	40	75
6	H	35	95
7	IB	40	40
8	IM	45	90
9	MA	50	40
10	MKA	50	25
11	M	25	70
12	MH	45	80
13	MJ	30	45
14	NS	45	90
15	NB	35	85
16	RM	45	85
17	RPZ	30	100
18	SM	30	90
19	SSA	25	90
20	MAR	35	90
21	MSA	35	65
22	TJ	20	45
Mean Score		37.05	71.36

Inductive class (VII-2) had 22 students who took both pre-test and post-test. The pre-test of inductive class showed that there were three (3) students who got 50, and there were sixteen (16) students who got score more than 50 on the pot-test. Only one student who got perfect score after treatment. The mean score of pre-test was 37.05, and increased up to 71.30 on the post-test. It suggests that inductive instruction can increase students' grammar ability.

Table 4.2 Students' Test Score in Deductive Class

No	Name	Pre-Test	Post-Test
1	ARS	45	60
2	AU	35	80
3	A	35	35
4	CNS	35	65
5	DF	40	60
6	IT	25	75
7	K	30	70
8	KL	20	100
9	MAK	45	55
10	MAS	35	95
11	MLS	40	35
12	MQ	30	45
13	MR	55	65
14	NH	25	25
15	RJ	40	100
16	UF	25	100
17	YA	50	55
18	ZK	35	50
19	ZF	35	90
20	DA	30	95
Mean Score		35.50	67.75

There were 20 students in deductive class (VII-1). All students presented and took the pre-test and post-test. On the pre-test, there were only two students who got score more than 50. After the post-test, there were sixteen (16) students who got the score more than 50. There were three (3) students who got perfect score on the post-test. Overall, students' mean score increase from 35.50 on pre-test to 67.75 on the post-test. This result implied that deductive instruction also can increase students' ability in grammar.

C. Data Analysis of Test

The data analyzed in this research were pre-test and post-test scores of deductive and inductive class. The pre-test and post-test scores of both groups were compared using T-test formula with significance of 0.05. Descriptive statistics of different teaching approaches (Table 4.3) are presented below.

Table 4.3 Descriptive Statistics for Pre-Test and Post-Test Scores by Different Teaching Approaches

Approaches	N	Minimum	Maximum	Mean		Std. Deviation	
				Statistic	Std. Error		
Deductive	Pre-Test	20	20	55	35.50	1.983	8.870
	Post-Test	20	25	100	67.75	5.275	23.591
Inductive	Pre-Test	22	20	50	37.05	1.851	8.682
	Post-Test	22	25	100	71.36	4.926	23.103

Table 4.3 informs that the post-test scores in deductive and inductive class were increased after treatment. This finding suggests that both instructions can improve students' ability in grammar.

To determine if there was a statistically significant difference in the learning 'simple present tense' between deductive and inductive approaches, researcher calculated independent sample t-test on the post-test (Table 4.4).

Table 4.4 Independent Samples T-Test for Post-Test between Deductive and Inductive Instruction

	Levene's Test for Equality of Variances		t-test for Equality of Means						
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper
Equal variances assumed	.009	.927	-.501	40	.619	-3.614	7.210	-18.185	10.958
Equal variances not assumed			-.501	39.446	.619	-3.614	7.217	-18.207	10.979

Table 4.4 illustrates that the P-value (0.619) is more than $\alpha = 0.05$. It indicates that there was no significant difference between deductive and inductive instructions that found on the post-test ($P > 0.05$), which implies that both these two approaches, deductive and inductive, are similar on improving students' grammar ability.

D. Discussion

This discussion section provide the answer of the research questions of this study. The research question is “which instruction (inductive or deductive) gives better effect on students’ grammar ability?”.The results of this study showed that both inductive and deductive instruction performed better in the post-test when compared to the pre-test.Furthermore, the post-test score of inductive class had higher score than in deductive class.

There are several possible explanations for this result. First, the low score of pre-test in both instructions can be considered because students were not familiar with simple present tense.However, the students never taught how to use verb in simple present tense. Students’ text book only presents how to use to be ‘am’, ‘is’ and ‘are’. Thus, the teacher only teaches the materials based on text book. Second, the high score of post-test in deductive and inductive instruction may be caused of the fact the posttest was administered not long after the instruction session. Linguistic knowledge was, thus, still in students’ short-term memory (Berendse, 2012).

Third,the reasons for higher post-test score of deductive and inductive instruction may because the rules taught inductively are longer remembered by students. Kwakernaak (2009) claims that the inductive approach brings a greater learning outcome as students have been intensively working on the rule for a rather long time.Motha (2013) added that one reason may be that learners find it easier to retain rules that they have inferred themselves rather than rules presented to them.

Forth, inductive instruction may be preferred by students as explained by Brown (2007) that inductive approach is more suitable for young learner, while deductive approach is better applied for adult learners. Young learners are better at learning grammar structures from examples rather than learning them deductively. They prefer to learn by practicing because grammar rules are complicated for them to understand. In the contrary, deductive approach is really useful for adult in learning a language. This approach meets adult learners' expectations because grammar rules were presented at the beginning of the lesson. So they do not need to spend their time to analyze any rules.

Statistical examination, however, showed that there was no significant difference between inductive and deductive instructions. Both approaches seem effective to teach 'simple present tense' to first year students of MTsS Lam Ujong. This result is in line with Motha (2013) who found that the study of 90 participants showed minimal difference in the effectiveness of deductive and inductive approaches. In another study, Chalipa (2013) took a sample of 40 language learners in Iran to determine the effect of deductive and inductive grammar instruction. Two posttests were administered to measure the participants' short-term and long-term learning. The results showed neither test indicated a significant difference between these two approaches to teaching grammar. Other studies have also failed to establish which method of teaching grammar works best, such as those carried out by El-Banna and Ibrahim (1985), Shaffer (1989), and Xia (2005).

It is predicted that there are some reasons that caused the similar effect between deductive and inductive approach. One of them, the learners characteristics can interact with instructional conditions that affect learning performance. The same finding was carried out by Hwu and Sun (2012) who did not find a significant difference between deductive and inductive grammar instruction. Their results suggested equally explicit instructional approaches can have differential effects on different types of learners. This study confirms the importance of taking the linguistic background of the learner into account when designing instructional strategy. Even if no interaction between learning strategy and linguistic background was found, the findings suggest that learners exploit their existing knowledge in acquiring a second language, possibly through a process of linguistic hypotheses testing. The advantages and disadvantages of deductive and inductive approaches have been discussed in the literature chapter, but findings of previous studies regarding the effectiveness of one over the other have been inconclusive.

The statistic results of this study suggest that in practice, teachers could be free to use both deductive and inductive approaches. Nevertheless, based on the present findings it can be argued that if a choice must be made between the two, an inductive learning approach should be taken.

However, in order to acquire English tenses even better, students still need several additional and mixed instruction sessions. Brown (2007) suggested that some structures are simply best taught inductively while others are best taught deductively. It could be argued English tenses in general can best be learned deductively and the

inductive approach will most likely be effective in teaching other grammatical aspects of the English language (Berendse, 2012).



CHAPTER V

CONCLUSION AND SUGGESTION

This chapter provides the research conclusion and suggestions. The conclusions are drawn based on the research finding and its discussion. In addition, some suggestions are also made for teachers and future research.

A. Conclusion

Based on students' score after receiving deductive and inductive instruction, some conclusions can be drawn as follow:

1. Inductive instruction give better effect on students' grammar ability than deductive instruction,
2. There is no significant difference between both different approaches in improving students' grammar ability.

B. Suggestion

According to the conclusions above, there are some suggestions such as:

Teachers have several responsibilities in helping their students to understand grammar. Different background of students may need different approach of instruction. Then the collaboration between inductive and deductive instruction may lead better performance on students' grammar ability.

The researcher hopes that the finding of this study will be employed as a starting point of the future research studies on similar topics. The researcher believed that this research is still imperfect and still need further discussing by next researcher those who want to raise the similar case. Therefore, the writer would like to accept any constructive suggestion to make this research better.



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