



## The Implementation of Discovery Learning and Scientific Learning Approaches and Students Perspective in Curriculum 2013: A Study at 11<sup>th</sup> Grade Student of IPA, SMAN 1 Bima, 2017/2018 Academic Year



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### Abstract

This study deals with the Implementation of Discovery Learning and Scientific Learning Approaches and Students' Perspective in Curriculum 2013. In this study, the writer would like to know how was description the Implementation of Discovery Learning and Scientific Learning approaches and students' perspective in Curriculum 2013. The population of this study was the 11<sup>th</sup> Grade Students of IPA at SMAN 1 Bima in the Academic year 2017-2018. The writer used a descriptive qualitative. Data were collected from observation, interview, and questionnaires which had been obtained from a video recording of the naturally occurring English classroom. Then data were transcribed. In addition, the data were also gathered through teachers' interview and questionnaires for students. The result of a study in research question for number 1 showed that teachers did not use Discovery Learning and Scientific Learning Approaches optimally in the classrooms. Therefore, this study recommended that teachers should pay attention to increase their comprehension of DLA and SLA in Curriculum 2013. While, the result of a study in research question for number 2 showed that number 1, there were 6 students chose "CA", 12 students chose "A", 4 student's chose "N", 4 students chose "LA" and there were 4 students chose "DA" or 61.33%. The second, there were 4 students chose "DA", 5 students chose "LA", 4 students chose "N", 5 students chose "A" and there were 12 students chose "CA" or 49.33%. the third, there were 15 students chose "CA", 4 students chose "A" 4 students chose "N", 5 students chose "LA" and 2 students chose "DA" 76.66%. The fourth, there were 4 students chose "DA" or 76.66%, 3 students chose "LA" 6 students chose "N" 12 students chose "A" and 5 students chose "CA" or 52.66%. Fifth, there were 3 students chose "DA", 5 students chose "LA", 5 students chose "N", 15 students chose "A" and only 2 students chose "CA" or 52.66%. Sixth, there were 8 students chose "CA", 9 students chose "A", 5 students chose "N", 4 students chose "LA" and 4 students chose "DA" or 68.66%. Seventh, there were 3 students chose "DA", 7 students chose "LA", 3 students chose "N", 7 students chose "A" and 10 students chose "CA" or 60 %. Eighth, there were 13 students chose "CA", 4 students chose "A", 4 students chose "N", 2 students chose

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“LA” and 7 students chose “DA” or 69.33%. Ninth, there were 6 students chose “DA”, 4 students chose “LA”, 3 students chose “N”, 13 students chose “A” and 4 students chose “CA” or 56.66%. And the last one, there were 10 students chose “CA”, 8 students chose “A”, 3 students chose “N”, 5 students chose “LA” and 4 students chose “DA” or 70%.

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## 1. Introduction

The curriculum is a set of the lesson plan and educational programs which are given by an education organizer board that contains lesson material designed and presented to the learners in one period and in all education level. In Indonesia, Curriculum had changed several times. They were such as the 1980 Curriculum; School-Based Curriculum was a modification of the genre-based curriculum which was initially introduced in the 2004 Curriculum, the 2006 Curriculum, and the 2013 Curriculum.

The newly advocated Curriculum is known as ‘K-2013’ or the 2013 Curriculum. K-2013 is so designed that reflects a scientific approach to learning. Theoretically, K-2013 is supposedly meant to minimize the SBC’s drawbacks by (1) refining it with relevant competency, (2) organizing it with essential learning materials, (3) implementing students’ active learning, (4) providing contextual learning paradigm, (5) designing textbooks which contain content and process of learning, (6) administering authentic assessment to learning process and outcome. (Abruscato, J., 1999).

K-2013 brings a different way of teaching English as a foreign language. In this case, applied of competency, learning materials, approaches/ methods/ techniques, and evaluation procedures are organized in a slightly different sequence of the framework (Buchari, 2010).

Maba, W., Perdata, I. B. K., Astawa, I. N., & Mantra, I. B. N. (2018), the English teachers unable to understand comprehensively the learning process of this curriculum. They were not able to know the learning target or character values. When conducting the learning process, English teachers unable to implement it optimally in the learning activity, and need a lot of time for assessing the students’ achievement (Wiles, 1989).

Therefore, change of curriculum with a variety of approaches was hoped to improve output and outcome of National Education System. Teacher’s quality has to increase the student’s competency and improve their cognitive, social aspect, affective and psychomotor. Both discovery learning and scientific learning were important approaches in applying to the secondary students (Bruner, J.S, 2009); Richard, Jack, and S. Rodgers, Theodore. (2001).

Discovery learning is characterized by as stimulation, problem statement, data collection, data processing, verification, and generalization. While, scientific learning consists of some steps like observation, questioning, exploration, association and communicating. On the other hand, scientific learning is one of learning approach which takes the scientific way of building knowledge through the scientific approach. Its approach refers to the possibility in the creation of scientific thinking, developing ‘sense of inquiry’ and to have an ability in creatively thinking of students and discovery learning and scientific learning have some procedures in their applications.

Those approaches have been using at the school of SMAN 1 Bima for 2 years. But it was no easier. Based on the first observation, the writer found some problems that faced by English teacher during teaching and learning (Daryanto, 2014); (Hosnan, 2014).

Anita, D., Mbete, A. M., & Mandala, H. (2018), some teachers felt difficult to be the real facilitator, unable to design the interesting classroom and creatively to encourage the students’ motivation. Besides that, students still kept on the old mindset where they assumed that teachers had to present and gave them about the material lesson. So that, they tended to wait what teachers did (Gunawan Imam, 2014); Hamalik Oemar, 2009). Based on the explanation

above, the writer interested to do the investigated “The Implementation of Discovery Learning and Scientific Learning Approach and Students’ Perspective in Curriculum 2013”.

## 2. Research Methods

In this study, the researcher used a descriptive qualitative. Descriptive qualitative is an approach to social science research that emphasizes collecting descriptive data in natural settings, uses inductive thinking, and emphasizes understanding the subject point of view. In this case, the writer will describe the real phenomenon during the research (Arikunto, 2010).

This research was conducted on at SMAN 1 Bima and the observation was held in the eleventh Grade students in the classrooms. It was during amount from November to December 2017. The subjects of this research were the English teachers named Mrs. Eni, S.Pd, Mrs. Khusnul, S.Pd, and Mrs. Dian, S.Pd. The researcher took 30 students in three different classes namely IPA1, IPA2, and IPA4. There were 10 students in each of the classes. The object of the research was the implementation of discovery learning and scientific learning approaches and students’ perspective in Curriculum 2013 at the Eleventh Grade of IPA of SMAN 1 Bima in 2016/2017 academic year.

The data were taken from observation, interview, and questionnaires. The data consisted of the activity of a teaching-learning process, the result of an interview with the English teachers and students’ respond to questionnaires. The technique for analyzing data was used descriptive qualitative analysis (B. Miles, Matthew, and Huberman, A. Michael. (1994); (Setiawan, I., & Laksana, I. K. D., 2018).

## 3. Results and Analysis

Based on the data observation, there were three English teachers applied a discovery learning. In conducting the discovery learning, the first teacher used stimulation; a teacher gave the students’ motivation and instructed to read some books. Then, she collected the data. In this case, a teacher gave the students’ chance to collect information based on the topics. Furthermore, the first teacher used data processing. A teacher analyzed the data based on the students understanding of the material.

The second teacher is closely similar with the first teacher. It was shown that, at teacher stimulation, data collection and data processing. In this case, a teacher gave the students motivation by asking the questions and read some books. Then, a teacher collected some information to support the topics discussed. After that, a teacher analyzed the student’s data based on the teaching and material observation. Furthermore, there was a difference among teacher, first and a second teacher, and the third teacher. The teacher applied the stimulation and data collection by instructing the students to read, stimulate the students’ motivation and asking the questions. Then, a teacher gave the students’ chance to collect some information.

Secondly, based on the data interview, there were arguments in applying the discovery learning by the English teachers. For conducting the learning process, the first teacher usually tried to give them chances to read, search the data which can support the students to find out of suitable information in completing the topic discussed. Then, the second teacher said that they had been directed to handle the tasks. The teacher should give them chances for reading, gathering and so on to get the knowledge of English materials or topic discussed.

They had to be given freely in finishing their concept. But the third teacher gave the students chances to be independent in preparing their concept by learning the topic in English materials. They also got valuable interaction with other students to support their concept. Furthermore, the first teacher believed that discovery learning could increase the students’ motivation. So that, it made them actively in teaching-learning involved.

The second teacher argued that discovery learning approach made students discover by themselves about the materials. So, they could learn independently for making their concept. But the third teacher supposed that discovery learning approach could make strengthen for students and it also supported or motivated students to do the best for everything they want.

In this case, the English teachers were not maximally in applying the stages and instruction of discovery learning. The teachers used some point of the discovery learning. So, the implementation of discovery learning was not maximally because all of the teachers were not able to apply the steps of discovery learning.

Based on the data, there were three English teachers applied a discovery learning. In conducting the discovery learning, the first teacher used stimulation; a teacher gave the students’ motivation and instructed to read the book. Then, she collected the data. In this case, a teacher gave the students’ chance to collect information based on the topics. Furthermore, a teacher analyzed the data based on the students understanding of the material.

The second teacher is closely similar with the first teacher. It was shown that, at teacher stimulation, data collection and data processing. In this case, a teacher gave the students motivation by asking the questions and read the book. Then, a teacher collected some information to support the topics discussed. After that, a teacher analyzed the student's data based on the teaching and material observation. She was also taking communication and she could bring students to present their task in front of the classroom. Furthermore, there was a difference among teacher, first and a second teacher, and the third teacher. The teacher applied the stimulation by instructing the students to read, stimulate the students' motivation.

Secondly, based on the data interview, the first teacher by presenting the sources from where the material was taken. The students could see that it was the real one. The second teacher just prepared the material that was taken from the reliable sources. Therefore, they would be aware that it was true. The third teacher Usually, I just took the materials based on the topic of discussion in studying.

In conducting the learners, they had to be given stressing that they were a scientific people. So, they should be able to think based on the realism not only idealism. They had to be people who can think critically based on the fact. Secondly, there were some students not focused on learning materials. Based on the data above, the implementation of scientific learning was not maximally because all of the teachers were not able to apply the steps of scientific learning. Based on the questionnaire data, there were different responses by the students. It can be seen refers to the table below:

Based on the table above, the writer elaborated the students' perspectives on the use of discovery learning and scientific learning approach. In the first question, there were 6 students who respond completely agree, 12 students who respond agree and there were 4 students who respond into neutral, 4 students for less-agree and 4 students who completely disagree.

*For the second question*, there were 12 students who respond completely agree, 5 students who respond agree and there were 3 students who respond into neutral, 5 students for less-agree and 4 students who completely disagree. Then *the third question*, there were 15 students who respond completely agree, 4 students who respond agree and there were 4 students who respond into neutral, 5 students for less-agree and 2 students who completely disagree. *The fourth question*, there were 5 students who respond completely agree, 12 students who respond agree and there were 6 students who respond into neutral, 3 students for less-agree and 4 students who completely disagree.

Furthermore, the fifth question, there were 2 students who respond completely agree, 15 students who respond agree and there were 5 students who respond into neutral, 5 students for less-agree and 3 students who completely disagree. *The sixth question*, there were 8 students who respond completely agree, 9 students who respond agree and there were 5 students who respond into neutral, 4 students for less-agree and 4 students who completely disagreed. *The seventh question*, there were 10 students who respond completely agree, 7 students who respond agree and there were 3 students who respond into neutral, 7 students for less-agree and 3 students who completely disagree. *The eighth question*, there were 13 students who respond completely agree, 4 students who respond agree and there were students who respond into neutral, 2 students for less-agree and 7 students who completely disagree. *The ninth question*, there were 4 students who respond completely agree, 13 students who respond agree and there were 3 students who respond into neutral, 4 students for less-agree and 6 students who completely disagree. *The tenth question*, there were 10 students who respond completely agree, 8 students who respond agree and there were 3 students who respond into neutral, 5 students for less-agree and 4 students who completely disagree.

So, the conclusion of the students' perspective using discovery learning and scientific learning approaches could be counted into types namely Likert-scale positive and negative version. Therefore, the writer got number 1 was **61.3%**, number 2 was **49.3%**, number 3 was **76.66%**, number 4 was **52.6%**, number 5 was **52.6%**, number 6 was **68.6%**, number 7 was **60%**, number eight was **69.3%**, number nine was **56.6%** and number ten was **70%**.

#### 4. Conclusion

Having examined and discussed the findings on discovery learning and scientific learning and students' perspective in Curriculum 2013, this study comes with the following conclusions:

- 1) Based on the data observation and interview, the English teachers had implemented both of discovery learning and scientific learning approaches but they were not optimally used.
- 2) Based on the results of questionnaires indicated that a lot of students chose agree and completely agreed with the use of DLA and SLA. It means that the English teacher was able to applied discovery learning and scientific learning approaches.

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*Statement of authorship*

The authors have a responsibility for the conception and design of the study. The authors have approved the final article.



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