

ANALYSING THE IMPLEMENTATION OF DISCOVERY LEARNING MODEL IN SANITATION, HYGIENE, AND OCCUPATIONAL SAFETY SUBJECT

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ABSTRACT: The aim of this study is to analyze the implementation of discovery learning model in Sanitation, Hygiene, And Occupational Safety subject in Vocational High School No. 3 Solok, in Hotel Study Program Class X at the second semester. This study was held from January to February 2020. The research was conducted using descriptive qualitative method. There were 3 respondents, the first one was the teacher who taught this subject and the rest were 2 students from different competency level. From the result of the research, it was found that the teachers had implemented the model by using correct steps suggested by the experts. The teachers expected that this method could make the students think critically, work independently, able to work in groups, examine ongoing events, solve problems that are being faced and find the solutions. The teacher hoped that by implementing the Discovery Learning model, students would get better grades. However, the students were not ready to use this model. Students were used to receive explanations from the teacher and were not used to study independently. So that when students were asked to find solutions to the problems, the students tend to talk about other things during group discussions. The teachers should find the way to implement this model which fits with the students' ability and preferences.

Keywords: Discovery Learning, Implementation

A. INTRODUCTION

In educational world, human resources who have the ability and good quality to prepare for the development of an increasingly advanced era are needed. Improving the quality of education is expected to be able to improve the ability and quality of human resources in Indonesia because improving the quality of human resources cannot be separated from the learning aspect.

This is in accordance with the objectives of education as stated in Law No. 20 of 2003 concerning the National Education System explaining that National Education functions to develop capabilities and shape the character and civilization of the nation. National education aims to develop the students to become human beings who believe and are devoted to God Almighty, have noble character, healthy, knowledgeable, capable, creative, independent, and become democratic and responsible citizens. It is clear that in order to increase the quality of human resources both physically and mentally it is necessary to develop a good education sector.

Improving the quality of education can be actualized in learning that is directed to assist students in mastering knowledge, skills and attitude in order to achieve the expected goals. This quality improvement effort is not only for general education but must also be carried out at the vocational education level.

However, based on an initial survey conducted in class X second semester in Hotel Study Program at Vocational High School No. 3 Solok West Sumatera, it turned out that there were a lot of problems encountered in the field. One of them was that the number of teachers complained that many students seemed not care about their learning. According to some teachers, students often seemed not care about the teacher who spoke in front of them and preferred to be busy with other activities so that student learning outcomes declined and student achievement did not reach the target set by the school. This also occurred in the Sanitation,

Hygiene and Occupational Safety subjects for class X second semester at Vocational High School No. 3 Solok.

Based on the results of interviews with the teachers in Sanitation, Hygiene and Occupational Safety subjects for class X second semester for the 2019/ 2020 academic year, it was known that the final score of students who had reached the minimum score limit in class X PHT 1 and X PHT 2 were only 15 people. Meanwhile, those who had not reached the minimum score limit for class X IPM 1 and X PHT 2 were 32 people. Thus, it could be seen that the score that reached the minimum score limit was much lower than the score below the minimum score limit.

Meanwhile, according to the teacher in Sanitation, Hygiene and Occupational Safety subjects, the Vocational High School No. 3 Solok had implemented the Discovery Learning model. According to this teacher, teachers did not directly provide final results or conclusions from the material presented in the class. The students were given the opportunity to think and find results from the material discussed on that day. But from the scores of students in this subject, this method still could not improve student achievement. It could be seen in student scores which had not yet reached the minimum score limit. Therefore, researchers conducted an analysis of the implementation of the Discovery Learning model in Sanitation, Hygiene, and Occupational Safety Subjects in Class X second semester in Hotel Study Program at Vocational High School No. 3 Solok.

B. REVIEW OF RELATED LITERATURE

In implementing the 2013 curriculum, the Minister of Education and Culture of the Republic of Indonesia strongly recommends the discovery learning model to develop attitudes, knowledge and skills. This is emphasized in strengthening the learning process in which the students are directed to find out or to discover. This is in accordance with what is stated by Suryosubroto (2002) that the discovery method is a component of educational practice which includes teaching methods that promote active learning, process-oriented, self-directing, self-seeking, and reflective.

This opinion is in line with Hanafiah et al. (2009) which states that the discovery method is a series of learning activities that involve all students' abilities maximally to search and investigate systematically, critically, and logically. With these activities the students can find their own knowledge, attitudes, and skills as a form of behavior change. Sardiman (2012) also agrees by stating that in the application of discovery learning, the teacher acts as a supervisor by providing opportunities for students to learn actively and independently. This is supported by Djamarah (2013) in which according to Djamarah by applying this discovery learning model, students learn to seek and find knowledge for themselves guided by their teacher.

Cahyo (2013) explains that in the application of the discovery learning model, students gain new knowledge that they previously did not know. They got it not by notification but they found it themselves. The discovery method is defined as a teaching procedure that emphasizes teaching, individuals, object manipulation and experimentation, before reaching generalizations. According to Siregar (2016), discovery learning is a process to find something new in teaching and learning activities. In the learning process the students can find the knowledge if the teacher prepares the material to be delivered in advance, then students can find out for themselves various things that are important in learning.

The discovery learning model is also commonly referred to as the discovery-based learning model. As stated by Slameto (2015), in learning the teacher does not need to present and explain clearly all the materials to the students. With the implementation of the discovery learning model, students must look for some important parts, identify themselves and find the answers. In the process of applying this method, students are faced with a problem or situation that

requires a solution so that students can find solutions individually or in groups. It is hoped that with the application of this method, the knowledge and understanding gained will be embedded and long-lasting in their memory.

According to Sani (2015), learning Discovery Learning is a cognitive learning method that requires educators to be more creative in creating situations that can make students learn actively to find their own knowledge. In the Discovery Learning model, teaching materials are not presented in the final form, students are required to carry out various activities to collect information, compare, categorize, analyze, integrate, reorganize materials and make conclusions. So, the researcher concludes from some of the opinions of the experts above, that the Discovery Learning model is a learning process that requires students to find a concept that has not been previously known by conducting an observation or research on the problem given by the teacher.

Roestiyah (2012) states that the discovery learning method has the advantage that it can hone students' cognitive so that the knowledge that students have learned lasts a long time. This method can also increase students' enthusiasm for learning, develop students' self-ability to think critically, increase student motivation and increase students' self-confidence. This method focuses on learning to students.

Bell in Hosnan (2014) states that the first characteristic of discovery learning is the teacher's role as a mentor. Second, students act as active learners as scientists. Third, teaching materials are presented in the form of information so that students who carry out activities collect, compare, categorize, analyze, and make conclusions. Hosnan (2014) himself states that the characteristics of discovery learning are first, exploring and solving problems to create, combine, and generalize knowledge. Second, student-centered. Third, activities to combine new knowledge and existing knowledge.

Kurniasih & Sani (2014) mention the steps of the discovery learning model. First, the teacher determines the learning objectives. Second, the teacher identifies the characteristics of students (initial abilities, interests, learning styles, and so on). Third, the teacher chooses the subject matter. Fourth, the teacher determines the topics that students must learn inductively. Fifth, students and teachers develop learning materials in the form of examples, illustrations, assignments and so on for students to learn.

According to Darmawan and Wahyudin (2018) the steps of the discovery learning model are stimulation (providing stimulation), problem statement (problem identification), data collection (data collection), data processing (data processing), verification (proof) and generalization (drawing conclusions).

While the steps of learning with the discovery learning model according to Syah (2014) the first is to provide a stimulus to students. Second, identify problems that are relevant to the lesson material, formulate the problem and then determine a provisional answer (hypothesis). Third, divide students for discussion activities. Fourth, facilitating students in data collection activities and processing hypotheses.

C. RESEARCH METHOD

In this study, the researcher used a qualitative descriptive research type. The definition of qualitative descriptive according to Sugiyono (2017) is a study aimed at describing and analyzing phenomena, events, social activities, attitudes, beliefs, perceptions, thoughts of people individually and in groups. The purpose of this research is to reveal how the facts, circumstances, phenomena, variables, and circumstances that occurred during the research took place.

This research was conducted at Vocational High School No. 3 Solok, in Hotel Study Program Class X second semester from January to February 2020. There were 2 classes of hotel study program in this school: class 1 and class 2. The survey on the application of this method was carried out on Sanitation, Hygiene and Occupational Safety subject taught on Thursdays at 07.15 to 12.45. The informants of this study were 1 teacher teaching Sanitation, Hygiene, and Occupational Safety subjects in Class X Semester 2 and 2 students, the representatives from 42 students in class X semester 2 of Hotel Study Program. To obtain the expected data, this research used data collection techniques in the form of interviews, field observations and analyzing the improvement of student learning outcomes.

D. RESULTS AND DISCUSSION

Based on the syllabus of the Hotel Study Program, one basic competency in the tourism program especially hotel is Sanitation, Hygiene, and Occupational Safety. Therefore, competencies in the field of Sanitation, Hygiene and Occupational Safety are given in class X in the second semester.

The Discovery Learning model was used in both hotel class, class 1 and class 2. According to the teacher, the Discovery Learning model was the most appropriate method among the others because it could make the students think critically, work independently, able to work in groups, examine ongoing events, solve problems that are being faced and find solutions. The teacher hoped that with the implementation of the Discovery Learning model, students would get better grades.

From the results of an interview with one of the Sanitation, Hygiene and Occupational Safety subject teachers, she explained that before starting the lesson she told the students what would be learned on that day and how the process was going on. Then he also explained about the Discovery Learning model that would be used in learning activity by explaining the purpose of the learning model so that students were encouraged to seek results from the directions given. After that, students continued the activity with discussions or other kind of activities.

The steps taken by the teacher in applying the Discovery Learning model were first providing stimulation. Then she provided a problem statement (problem statement) followed by data collection (data collection), data processing (data processing), verification (verification), and ends with drawing conclusions. The resource person also gave an explanation of what activities he did at each of these steps.

In the first step, giving stimulation, the teacher explained that he or she first asked students questions about a problem or statement, for example about what are the risks if they do not use protective equipment at work. Then the teacher gave time and let students look for answers by suggesting reading books, discussing or other activities that lead to the results of solving the problems given. Then in the second step, the problem statement, the teacher gave students the opportunity to analyze the problem/statement he gave. This was useful so that students get used to finding a problem and could get a temporary answer to the problem.

In the third step, data collection, the teacher provided opportunities for students to find information and proved whether or not the temporary answers obtained previously. Thus, students were given the opportunity to collect various relevant information, by reading books or discussing. Then in the fourth step, data processing, the teacher also provided guidance to students when checking the answers obtained from books or other sources.

Then in the fifth step, the teacher's verification offered opportunities for students to find an understanding through examples they encounter in everyday life, then checked whether the answer was correct or not. Then in the sixth step, drawing conclusions, students must pay attention to the process from problem solving to find a temporary answer to prove the answer

whether the temporary answer was correct or not. Then they drew conclusions about the importance of mastering the problem so that the students could think well about the right solution to the problem.

Based on the steps taken by the Sanitation, Hygiene and Occupational Safety subject teacher, it can be concluded that the initial step taken in the discovery learning model is to provide a statement, or the teacher only conveys the key words. Furthermore, students are asked to discuss, look for references or see from everyday life to get temporary answers. Then, students prove whether the answer is correct or not by processing the data by paying attention to everyday life from the field of work and from what has been learned. After that, students draw conclusions so that any problems found in everyday life can be solved properly by finding the right solution to the problem.

Further data was obtained by interviewing 2 students, these students were from each hotel class. Students were also selected based on their academic ability based on information from the teacher. One female student had a fairly high academic score and the other student, a boy, had a poor academic score. The purpose of these interview was to find out how the teachers teach in the classroom and how the students perceived the application of discovery learning methods.

Based on the results of the interview, one of the students who had good academic grades said that at the beginning of the lesson the teacher delivered the syllabus to be studied and explained a little about the syllabus. Then the teacher told the students what they would do. Then students were asked questions about problems at work and asked to discuss to find answers. Students were asked to find answers to statements or problems given by the teacher. The student stated that if in the discussion they only joined their smart friends, they would only be able to focus and think calmly. But when discussing with lazy friends they would be difficult to think because most of them just talked while discussion.

Then from the results of interviews with students who represented low grades of their friends, he explained that they always had difficulties when doing assignments given by the teacher. The teacher only explained a little so that they did not understand. And after that the teacher immediately gave a statement or problem and they were asked to work in groups or discuss. While they felt they did not understand what would be done. They stated that they were also afraid to ask. So they preferred to talk to their friends in groups, played cellphones, leave and got permission and did not care about the assignments given by the teacher.

Then they explained that the activities carried out in the discussion and group work. After they seek the results of the statement from the teacher, they were required to have a provisional answer or appropriate information for the statement. They tried to get answers from discussions, reading books, from the internet or the results of their own thoughts. But most of them were guided by the teacher to get the results and found and collected all the information. They were also helped to look at everyday life to determine whether their tentative answer was right.

After that, the female students explained the results of their group discussions and work. After they worked in groups, discussed, looked for all the information to get the results of the statement/problem from the teacher, then the teacher helped them to determine what the real answer was. They said they knew whether their answer was right or wrong. That was when they understood how to complete all statements properly and not in a hurry. Students conveyed that they comprehended the topic after they found the final conclusion. Before finding the final result they were still confused about how to solve it because the teacher only give little explanation. Only because they were curious so they found out through books, the internet, and others.

Meanwhile, male students said that they only knew the initial problem and the results or answers to the problem. But they did not understand where the answer came from. They did not understand why the result was that way. According to them, this method only made them talk

and made noise in class. They were used to being explained one by one, guided by the teacher what to do and then given the task. Even then, they wanted their activities to be carried out with the help of the teacher. But in this method the teacher let them work alone, discussed or read books. In fact, they did not understand at all because there was less explanation about the theory. That was why they did not understand how to do the given task.

The final conclusion from the results of teacher and student interviews as well as tests conducted on students, the researchers concluded that the teacher had tried to apply the Discovery Learning model to the Sanitation, Hygiene and Occupational Safety subject. This method had been implemented in correct steps. But the problem lies in the unpreparedness of the students. The teacher assumed that students could complete the statements given by themselves and let students work on their own. Meanwhile, students had not been able to properly analyze the aims and objectives of the learning model provided by the teacher. Students had difficulties and were not able to use this learning method. And when the final assessment it was found that a lot of student scores did not reach the minimum score.

Students get used to learn by getting explanation in detail about what is discussed and about the lessons from the teachers. And when they were given the assignments, students wanted the teacher to guide them fully because students could not think quickly and students were afraid of giving the wrong answers. Therefore, each teacher complained a lot. It turns out that the teacher's expectations had not been accepted by students, most students still could not work independently, students still wanted to be fully guided and still could not think critically.

Based on discussions with teachers, teachers felt that they should be able to communicate more clearly to the students about the purpose of applying the method and explained that the purpose of giving the statement are to give the opportunity to the students to think critically. They also felt that they had to pay more attention to their students because each student had different abilities and experiences and had different learning preferences. But the teacher believed that this method could give students the freedom and habits to develop their thinking skills with initiative and creativity.

E. CONCLUSION

Based on the results of research that has been carried out by researchers in class X students of Hotel Program in Sanitation, Hygiene and Occupational Safety subject at Vocational High School No. 3 Solok about the discovery learning model used and applied by teachers, it can be concluded that the discovery learning model is not suitable for use and applied to these classes because it was not in accordance with the students' conditions. Students were used to get the materials from the teachers and they also could not think critically and could not work in groups well.

Based on the conclusions that have been stated above, the researchers can provide the following suggestions. First, the teachers are expected to be able to provide learning models that are suitable for students' situations, preference and knowledge. Then, the teachers must better understand the character of each student, because they have different level of intelligence. Third, the teachers must learn how to implement this model and fit with their students' ability and preferences so that students can understand quickly. On the other hand, the students also must be more self-motivated in order to change the way of learning and thinking, otherwise students will not be able to adapt well and cannot think critically.

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