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## APPLICATION OF THE INTERACTIVE APPROACH IN IMPROVING LEARNING PROCESS BIOLOGY CLASS XI SMAN 1 GUNUNGSITOLI

Natalia Kristiani Lase<sup>1,2</sup>

<sup>1</sup>Biology Department, IKIP Gunungsitoli, Jln. Yos Sudarso No. 118. E/S, Gunungsitoli, 22812, Indonesia

<sup>2</sup>Biology Department, Post Graduate UNIMED, Jl. Willem Iskandar, Pasar V Medan Estate No.1, Medan, 20221, Indonesia  
E-mail: natalialase@yahoo.com

### Abstract

Biology as a science provides direct experience learning. Students must be active involved in teaching and learning. Based on these idea, learning approach need to be developed to emphasize active learning. Teaching and learning focused on student active participation. This study aim to improve the learning process biology by applying Interactive Learning Approach for subject matter of the Human Reproductive System of class XI SMA Negeri 1 Gunungsitoli 2009/2010 school year in order to increase student learning outcomes. Learning outcomes were measured by the cognitive aspects consisting of knowledge (C1), comprehension (C2), application (C3), analysis (C4), synthesis (C5), and evaluation (C6). This research is a classroom action research (PTK). The subjects were students of class XI-4 Natural Sciences program SMA Negeri 1 Gunungsitoli 2009/2010 school year totaling 36 people. Data collection tools in this study were the observation sheet for teachers and students filled by the observer during the learning process and cognitive test. Instrument was validated by three senior teacher with triangulation, then tested to another school to determine validity, reliability, difficulty index, and discriminant item. Based on the data interpretation can be seen that: 1) the learning process in the first cycle increased in the second cycle; 2) Student learning outcomes of Class XI IA-4 SMA Negeri 1 Gunungsitoli in the first cycle in the human reproductive system of learning have an average about 66.25 and in the second cycle learning outcomes of students with an average of 74.03; 3) interactive learning approach can improve the learning process on student learning outcomes in the cognitive aspects or mastery of concepts. This is indicated by the increasing average score of test result . The average score 66.25 in the first cycle increase to 74.03 in the second cycle. Student learning score gain about 7.78.

**Keywords** : Interactive approach learning process, learning outcomes.

### A. INTRODUCTION

The learning process is one form of activity that directs learners to be able to achieve meaningful learning. Learning refers to all efforts how to make a group / person learns. Learning activities have a purpose in the end the students are expected to undergo changes in knowledge (cognitive), a change in attitude (affective), and changes in behaviour (psychomotor).

Lessons need to empower all potential learners to master the competencies and specific behaviour so that each individual can become lifelong learners and to create a society of learning (Sanjaya, 2006: 80). In carrying out the study, teachers must be smart to adjust teaching methods or approaches that will be used on the subject matter presented so that students can follow the lesson well.

Reality on the ground a lot of students have difficulty learning, bored, lazy and eager to learn which adversely affects the average value of learning outcomes, especially biology. This is because the teaching that teachers have always monotonous, in the sense that at the time of the more active learning is the teacher. Guru established itself as the sole source of learning so that students made the object of a receiver that just sit, silent, listening and taking notes. Learning that there is more centered on the teacher, not the student. It can not be left alone, especially with the implementation of the curriculum which implies learning should be able to develop all the potential of the students. This can be achieved if student performance improved, so that the teacher only acts as a facilitator, motivator and organizer.

One approach that focuses on learning to students and students are active in participating in learning activities is the interactive approach. Interactive approach is known as a child's questions, provide an opportunity for students to ask questions and then proceed with an investigation related to their questions. One of the goodness of an interactive approach is that students learn to ask questions, try to formulate questions, and try to find an answer to his own question by observation or observation. In this way students become critical and active learning.

Interactive approach known as approach to the question of children, giving students the chance to ask questions to then conduct an investigation related to their questions (Faire and Cosgrove, 1988 in Rustaman, 2003: 97). Interactive approach detailing these measures and displays a structure for a biology that involves the collection and consideration of the questions the student center.

Amiruddin (2009) says that: In accordance with the characteristics of interactive learning approach, known as the approach to the question of children, which gives students the opportunity to conduct an investigation with regard to their questions. Asking questions can lead students to explore an issue or a stage of understanding possessed by the student. By asking the question will pique the curiosity of the material to be learned. By involving the student activity means giving students the opportunity to think for themselves, so as to develop the ideas that they have. Active learning that engages students in learning the knowledge that they can survive long in their memories, have a

better transfer effect and can enhance reasoning so that students can improve student learning outcomes.

Interactive approach is an approach that refers to the constructivist view that focuses on student questions as a central feature of the way of multiplying student questions. Through this learning students are given the opportunity to engage the curiosity of the object to be studied, then conduct an investigation on their own questions

This study aims to: (1) describe the application of an interactive approach in the learning process in the subject matter of biology of human reproduction system of class XI SMA Negeri 1 Gunungsitoli 2009/2010 school year; (2) describe student learning outcomes through the implementation of an interactive approach in the learning process in the subject matter of biology of human reproduction system of class XI SMA Negeri 1 Gunungsitoli 2009/2010 school year.

## **B. METHODS**

This research is a classroom action research. The object studied in this research is the implementation of an interactive approach in correcting the biological process of learning and student learning outcomes in the subject matter of human reproductive system XI 2nd half SMA Negeri 1 Gunungsitoli 2009/2010 school year. The subjects were students of class XI IA-4 as many as 36 people. The number of class XI student of Natural Sciences program at SMA Negeri 1 Gunungsitoli as many as 250 people, divided in seven classes. The duration of action at this 4-week study conducted in two cycles, with each cycle consisting of 3 times and 1 times the provision of learning tests.

Actions or phases of classroom action research as follows: (1) Planning include (a) preparing teaching materials and lesson plans for 3 meetings, (b) determine the role of subject teachers as an observer, (c) plan learning by applying interactive approach, (d) preparing a test of learning outcomes based grating tests each end of the cycle; (2) Action. Guided planning, the researchers carry out the action applying interactive approach to learning in accordance with the planning; (3) Observation and Data Collection. During the process of learning activities (cycle 1), subject teachers and observers pay attention to the suitability of the steps of learning with interactive approach application and fill out the observation sheet; (4) Reflection. Once the data is collected, the researchers will describe the implementation of the outcome data in cycle 1. From the data processing in cycle 1 is determined whether the target has been reached. If the target has not been reached then proceed with the next cycle. The instruments used are (1) the observation sheet prepared on implementation measures of learning using interactive approach, (2) copies of the

questionnaire to see the response of students, and (3) multiple choice test to determine student learning outcomes.

### C. RESULT

Based on the data obtained in this study in the first cycle, understood a few things: learning conducted in the first cycle is not successful. It is known based on data collected in this study, namely: (1) Results of observations at the time the teacher doing the learning. In observation of the students during the teaching and learning takes place, is not sufficient to expect researchers to realize the activity in the following study. While the observation of teachers is adequate to the criteria of the lesson, the structure and the learning approach with the implementation of an interactive approach; (2) Results of the test. At the end of the first cycle there still 55.56% of students who have difficulty in work on the problems. This may be caused by a lack of students' understanding of matter, or the condition of the students at the time to follow the lessons less indicates a sense of seriousness. This value is not in accordance with the expected goals. Achievement scores obtained in the first cycle lows of 60, the highest score of 85, the average value of 66.25 and reached 44.44% completeness. It is not yet reached complete learn classical, so the study continued in the second cycle.

In the second cycle, the data obtained as follows: (1) Results of teacher observation turns out that things are neglected its implementation in the first cycle are no longer found in the second cycle. Where all the components are the subject of observation for teachers already performing well. Starting from number 1 to 15; (2) Results of observation of students, all students actively in learning, are asked to multiply, so too are responding, at the time of the investigation or observation, cooperation and interaction between the students have been good and the students look more skilled, creative and meticulous in carry out investigations; (3) The results obtained student learning is the average value of 74.03 with both categories; (4) Because there is an increase in the learning process and learning outcomes between the first cycle to the second cycle, this research was discontinued.

Based on the research that has been conducted by researchers, that study with the application of an interactive approach can improve the learning process so that the biology student learning outcomes in the cognitive aspect or concept mastery increases. This is indicated by the increased value of the average test student learning outcomes. The average value of 66.25 in the first cycle and the second cycle of the average value of 74.03.

In addition to improving learning outcomes in the mastery of concepts, interactive approach also increases the interest and motivation of students to learn so as to make students actively ask and to investigation and critical thinking. In accordance with the characteristics of interactive learning approach known as an approach to the question of children, provide opportunities for students to then conduct an investigation related to their questions. Asking can lead students to explore the problem or stage of understanding possessed by the student. By asking the question will pique the curiosity of the material being studied.

#### **D. CONCLUSIONS**

Interactive learning approach can improve the learning process so that student learning outcomes in the cognitive aspect or concept mastery increases. This is indicated by the increased value of the average test student learning outcomes. The average value of 66.25 students in the first cycle increased in the second cycle into 74.03.

Interactive approach can improve the cognitive aspects of learning outcomes as indicated by the rising average value of one cycle to the second cycle. Interactive learning approaches in addition to improve learning outcomes can also improve the cognitive aspects of student learning outcomes in psychomotor aspects or process skills such as the ability to ask questions, think critically and investigation.

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