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Investigating the Everyone Is Teacher Here (ETH) Learning Model on Biology Learning Outcomes

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Abstract: The purpose of this research is to prove whether there is an effect of using the Everyone Is A Teacher Here (ETH) learning model on the learning outcomes of class X students at SMA Buah Kemuning. This research is a quantitative study using true experimental design posttest only control design. Sampling using the Cluster Random Sampling technique in order to obtain class XI IPA 1 as the experimental class and class XI IPA 2 as the control class. The data collection instrument used a multiple choice test. Based on the analysis of data calculations, the average value of student learning outcomes in the experimental class was 80.8, while for the control class the average student learning outcomes were 70.24. Based on the results of data analysis, it was found that student learning outcomes with a value of $t_0 \geq t_i$ were $2.01 < 3.91 > 2.68$ with a large effect size of 1.15 or 86%. So, it can be concluded that there is an effect of using the ETH model on the learning outcomes of class XI students at SMA Buah Kemuning. The results of this study suggest that teachers apply the ETH model as a learning model for further material.

INTRODUCTION

Natural Sciences (IPA) is part of the science of science which initially came from the English language "science". The word "science" itself comes from the Latin word "Scientia", which means I know (Defrianti & Iskandar, 2022). Science is a systematic collection of theories, and its application is generally limited to natural phenomena, born and developed through scientific methods such as observation and experimentation, and demands scientific attitudes such as curiosity, openness, honesty, and so on (Trianto, 2014, p. 34). In general, Natural Sciences (IPA) is divided into several parts, one of which is biology. Biology is the study of phenomena in everyday life related to nature and living things.

Teachers have difficulty generating student learning activities due to the subject matter that is memorized a lot. The lack of student learning activities in the classroom causes students to get bored, so student learning outcomes are low. To address this, the teacher must be creative in choosing the learning methods in the classroom so that students do not get bored and are interested in biology lessons. In addition, a teacher should be able to carry out school administration and peer development in the school

environment and similar teaching professions. The scope of competencies to be achieved in learning are aspects of knowledge (knowledge), skills (skills), values and attitudes (Values), as well as their participation in social life (social participation). The four elements are interconnected units (Syaikhudin, 2015, p. 3).

The achievement of educational goals cannot be separated from the role of the teacher as an educator. Teachers are the key to the success of an educational institution. Teachers must have sufficient knowledge about learning principles to design teaching and learning activities (Slameto, 2003, p. 98). To improve student learning outcomes, teachers must manage the teaching and learning process that stimulates students to play an active role, not passively only listening to lectures from the teacher or transferring notes from the blackboard into their respective books. Students should be encouraged to take an active role in the learning process.

The teacher's role in the learning process is teaching and having to think about the model used to explain the learning material. The learning model is vital in the learning process (Effendi & Siregar, 2018, p. 126). This is because each teacher chooses the suitable learning model for all the material to be delivered so that the learning process goes well, creates a pleasant learning atmosphere and develops students' potential so that learning objectives are achieved (Sanjaya, 2015, p. 15). Learning that is not boring can trigger interactions between students and teachers, between students and students, and between students and subject matter (multi-interaction).

Based on the initial observations made by the researcher, it was found that the teacher of class XI SMA Tuah Kemuning in learning biology still applies the lecture learning method with the help of biology textbooks. The application of the lecture learning method causes the focus of learning to rest on the teacher. This causes a lack of student learning activities. Learning activities are significant in learning activities, and if they are not created, they will impact student learning outcomes. This resulted in many students experiencing remedial or obtaining scores below the Minimum Completeness Criteria (KKM) in Biology subjects, which is 70.

Based on daily test data, the average score obtained by students is below the KKM. This is evidenced by the data of students who have not reached the expected maximum learning target.

Table 1. Average grades of odd-semester students in 2020/2021

No	Class	Average
1	XI IPA 1	61,67
2	XI IPA 2	61,83

Source: Tuah Kemuning High School Teacher

Based on these data, the teacher must be good at processing the class and choosing the suitable learning model that is more interesting and fun. This is done so that students are more active and can improve the quality of student learning outcomes. The learning process will be successful when students have the motivation to learn. Therefore, teachers need to foster student learning motivation. To obtain optimal learning outcomes, teachers are required to be creative in the use of learning models. (Suprihatin, 2015:17).

It is necessary to take steps so that learning can encourage students to be active so as to improve student learning outcomes. In this case, the teacher's role is needed to create a learning atmosphere that is able to activate students so that student learning outcomes are maximized. Efforts that can be made by teachers are choosing and using appropriate learning strategies. One alternative learning strategy that is thought to be able to improve student learning outcomes is the everyone is a teacher here learning strategy. According to Sardjuli, the learning strategy Everyone Is Teacher Here is a learning strategy designed to facilitate students in obtaining large class participation and individual responsibility; this model provides an opportunity for each student to act as a teacher towards other students (Sulaiman, 2006, p. 154).

The Everyone Is Teacher Here (ETH) learning model has not been widely applied in education. This strategy is suitable for training students' confidence in their abilities and can cultivate courage, not inferiority, and not fear of making mistakes in students (Yeni & Putri, 2018, p. 336). One alternative that can be developed to help these problems is to use the Everyone Is Teacher Here Learning Model so that student learning activities run well and are no longer boring in the future. Based on this idea, the researcher wants to conduct research entitled "Investigating the Everyone Is Teacher Here (ETH) Learning Model on Biology Learning Outcomes."

METHOD

This research was conducted in class XI SMA Tuah Kemuning. The research time is adjusted to the Biology learning schedule in class XI. Researchers are interested in making this place a place of research because, based on the results of research observations, the teaching and learning process activities, namely the role of teachers in using learning models, are still not as effective as the habit of teachers who only use the lecture method so that the impression is that students are not active and interact less in the learning process.

The approach in this research is quantitative. The research design used in this study is a true experimental study. The research design used in this study is the Posttest-Only Control Design. The variables studied in this study were the independent variable and the dependent variable. The independent variable in this study is the Everyone Is Teacher Here learning model in the experimental class. In contrast, the dependent variable is the biology learning outcomes achieved by students after learning takes place within a certain time. This research was conducted by forming a control group and an experimental group, both of which were not chosen randomly (Sugiyono, 2016). The control class will use the conventional method (lecture method), while the experimental class will use the Everyone Is Teacher Here learning model. For more details, the research design used can be seen in Figure 1.

R	X	O1
R		O2

Figure 1. Research design (Sumber: Sugiyono, 2016)

The description of the research design symbol used above is the R symbol which means that there are two classes, each of which is randomly selected (experimental and control), then the X symbol is the treatment using the Everyone Is Teacher Here learning model, then O1 is the class posttest value. The experimental group was given treatment, and O2 was the posttest value of the control class that was not given any treatment.

The population is the entire research subject. In this study, the researchers used all students of class XI SMA Tuah Kemuning for the academic year 2020/2021 as the research population. Class XI students consist of classes, namely class XI IPA 1 and XI IPA 2. The number of students in each class is as follows: class XI IPA 1 has 25 students, and class XI IPA 2 has 25 students.

The sample is part of the number and characteristics of the population. The sample owned from the population must be truly representative or representative. The sample in this study was taken using the cluster random sampling technique. The sample taken is class XI SMA Tuah Kemuning, assuming two classes are selected the control class (XI IPA 1) and the experimental class (XI IPA 2). The instrument used in this study was a Biology learning outcome test. A learning outcomes test is a test used to measure the extent to which students understand the learning material.

RESULT AND DISCUSSION

Based on research that has been conducted in class XI IPA SMA Tuah Kemuning as an experimental class that learns using the ETH model for 2 (two) meetings, data is obtained from student learning outcomes through descriptive statistical analysis with a total of 40 multiple choice questions on the subject of the digestive system. The final test questions are instruments that match the criteria for learning outcomes that have been tested for validity, reliability tests, level of difficulty tests and tests of differentiating power as a test of the feasibility of the questions. Before being used for the posttest, the research questions were first tested on 30 people XII IPA 1 who had studied the material on the digestive system. The questions used in this study were 40 questions, these questions already met the existing learning outcomes indicators so that these questions could be used in research.

Based on the data analysis obtained from the calculation of student test results using the ETH learning model, the average student obtained is 80.8, with the lowest score of 60 and the highest score of 92. This is because the ETH learning model is a model that provides opportunities for students to act as a teacher for their friends. With this model, students who have not wanted to be involved will actively participate in learning.

According to Silberman (2009, p. 95), learning Everyone Is Teacher Here is learning that is used to obtain large class participation and individual responsibility. This learning also provides opportunities for each student to act as a "teacher" to other students. This ETH Medal allows students to act as teachers for their friends. Everyone Is Teacher Here, learning is learning used to obtain large class participation by maximizing students' activeness in the learning process.

Each student is explored for his potential to be able to ask questions and express opinions about an existing problem. According to Silberman (2009, p. 89), active learning is a unified source of a collection of comprehensive learning strategies. Active learning includes various ways to make students active in teaching and learning. Among them are constructive activities, such as group work, that can make students think about the subject matter. There are also techniques for leading learning for the whole class, for small groups, stimulating discussion and debate, practising skills, encouraging questions, and even allowing students to teach one another.

Learning by applying the ETH model makes students more active because each student can ask questions according to their level of thinking about the material being taught. The necessity to make questions for students during the learning process will be a stimulus for students to actively ask questions during the learning process. With the child's ability to ask questions, questions with simple answers will then develop into difficult questions according to the child's level of experience in learning.

Based on the results of learning conducted by researchers on students during the teaching and learning process, there are differences, namely: students think more to make questions, answer, issue ideas and account for the results of their discussions, in discussions they will always exchange opinions so that students Those with low ability will understand more about the material being studied. Then after that, they will present it in front of the class. This certainly makes students more active and excited because they can exchange ideas and teach each other between friends. This is in line with the intent of the Everyone is a Teacher Here model, which is designed to provide opportunities for each student to act as a teacher towards other participants (Sulaiman, 2016, p. 158).

Based on the results of data analysis obtained from the calculation of the test results of students who did not use the ETH learning model, the average student was 70.24 with the lowest score of 56, and the highest score of 88. In contrast to the learning process in the experimental class, the control class used conventional learning. During the learning process, there was a lack of student activity. Students tend to be passive because the interaction only takes place in one direction and the learning process only occurs in providing information that must be accepted by students, which must be remembered and memorized. This kind of learning causes students to become bored, so students do not listen to the teacher's explanation and quickly forget about the learning material that has just been studied. According to Sanjaya (2012: 191), stating that more strategies are given through lectures, it will be difficult to develop students' abilities in terms of socialization and critical thinking skills, this strategy is only possible for students who have the ability to hear and remember well.

The lecture method is an explanation and verbal narration by the teacher to his students; in this method, the teacher's role is more dominant than the teacher's (Sanjaya, 2012, p. 147). In comparison, the role of students is only to listen and take notes on the subject raised by the teacher. This is because the teacher conveys the material as a whole, including the provision of sample questions. To avoid student boredom, the teacher conducts questions and answers with students. In this case, the visible role of students is only to receive lessons from what is conveyed by the teacher.

Learning using the lecture model in the control class shows that students are less enthusiastic, and many still look passive because, in the learning process, the teacher provides more theories or materials directly to students and lacks reciprocal communication (Sulman et al., 2022; Zb, Novalian, Rozal, et al., 2021). Researchers dominate learning in class, while students only hear and receive information. Learning using the lecture method applied to the control class does not show the three components of science as a process, product and creative, which makes it difficult for students to come up with and find ideas. Learning by using the lecture model in the control class shows that students are less enthusiastic. Many still look passive because, in the learning process, the teacher provides more theories or materials directly to students and lacks reciprocal communication. Researchers dominate learning in class, while students only hear and receive information. Learning using the lecture method applied to the control class does not show the three components of science as a process, product and creativity, which makes it difficult for students to come up with and find new ideas that they have so that student learning outcomes are low.

Based on the results of data analysis obtained from the calculation of student learning outcomes related to research that has been carried out at SMA Tuah Kemuning with a sample of the experimental class using the ETH model and the control class not using the ETH model. From the research in the field and the results of the calculations, the researchers found an effect of the ETH model on the learning outcomes of class XI science students at SMA Tuah Kemuning.

To see whether there is an effect of the ETH model on student learning outcomes in class XI IPA SMA Tuah Kemuning, data analysis was carried out using Hypothesis Testing. From the calculation results, it is obtained that $t_0 = 3.91$ is greater than t_{table} (either at a significant level of 5% or 1%), meaning that the null hypothesis is rejected, so it can be concluded that student learning outcomes using the ETH model are better than the average value of the results. Learning of students who do not use the ETH model. To see the magnitude of the influence of the variable, the effect size formula is used. From the calculation results, it is obtained that the effect size of the treatment given is 1.15 or 86%. These results indicate that there is a strong influence.

Based on the results of learning conducted by researchers on students during the teaching and learning process, it shows that student activity occurs because learning through the Everyone is a Teacher Here model is exciting and suitable for today's learning which provides opportunities for students to be more active in asking questions. with the teacher or ask with his friends. So those who are afraid or do not dare to ask the teacher can ask their seatmates because this strategy emphasizes that everyone can become a teacher and can share knowledge.

In contrast to learning through the lecture method that researchers use for the control class, learning in this class involves more of the teacher's role, so students are not so active. This learning is no less attractive because at the end of each lesson, the teacher immediately asks questions to students and can be answered directly with students, but does not provide more opportunities for students to ask questions and exchange opinions. So that students just accept the answers and information conveyed by the teacher. This is

certainly very different from a class that uses the Everyone is a Teacher Here model because teaching and learning activities occur in two directions, namely good communication between teachers and students.

Students are allowed to explore initial ideas by making direct observations in the field, such as meaningful learning, so as to make students more motivated in learning (Zb, Novalian, Ananda, et al., 2021; Zb, Setiawan, et al., 2021); there is a significant influence between motivation on student learning outcomes. This shows that if students have the motivation to learn, their learning achievement will improve (high); otherwise if students have bad habits in learning and their learning motivation is lacking, it can result in poor learning achievement.

In connection with the above, teaching and learning activities require fun, innovative, and active strategies. So that when all the learning activities are carried out properly and sustainably, it will have a positive influence on the development of students, be it cognitive, affective, and psychomotor. Therefore, researchers use an active learning model that will affect student outcomes (Reza, 2015, p. 296). It is also important to continue to be trained and developed, so the effects will be seen such as the learning motivation of students will be high, and this will certainly have a positive impact on the learning outcomes of these students.

Model Everyone Is A Teacher Here can make learning outcomes better. In its implementation, the Everyone Is A Teacher Here strategy learning activities with students are involved in every lesson, starting from planning, the learning process to the learning evaluation process so that learning does not run monotonously. Because the Everyone Is A Teacher Here model is a strategy that helps students understand as a basis for improving the teaching and learning process, guides students' efforts to acquire cognitive and social skills, gives students a sense of pleasure, stimulates and improves students' thinking skills, motivate students to be involved in interactions and practice the ability to express opinions (Fricelia, 2012, p. 57).

CONCLUSION

Based on the discussion of the results of the research carried out regarding the effect of using the Everyone Is A Teacher Here Model on the learning outcomes of class XI students at SMA Buah Kemuning, several conclusions were obtained, namely the learning outcomes of students who used the ETH Model at SMA Buah Kemuning obtained an average result of 80.8 the lowest score was 60, and the highest score was 92. The results of this study also showed that the learning outcomes of students who did not use the ETH model at SMA Buah Kemuning obtained an average result of 70.24 with the lowest score of 56, and the highest score of 88, and there was also an influence the effect of the use of the ETH Model on the learning outcomes of class X students at SMA Buah Kemuning, with a t count of 3.91 greater than $t_{table} 5\%$ which is 2,01 and $t_{table} 1\% = 2,68$ and *effect size* of 1,15 with a percentage of 86% high category.

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