

The Effect of Assistance Quiz Team Model with Lectora Inspire Media on Biology Learning Outcomes and Student Activity

Fauziah Nur Hasanah^{a,1}, Aulia Novitasari^{a,2,*}, Bambang Sri Anggoro^{a,3}

^a Biology Education Departement, Faculty of Tarbiyah and Teacher Training, Universitas Islam Negeri Raden Intan Lampung, Indonesia

¹ fauziahnurhasanah@gmail.com; ² aulianovitasari@radenintan.ac.id *; ³ bambangsrianggoro@radenintan.ac.id

* Corresponding Author



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ABSTRACT

Learning outcomes are indicators of success in learning, learning outcomes are closely related to activity, namely if student learning activities are good then learning outcomes will be good, so that activeness and learning outcomes are important to have, but the reality in school learning outcomes and student activity is low, this is because the model and the media used does not facilitate active students in learning which has an effect on learning outcomes, one solution to the problem of the media and the module is the use of the quiz team model assisted by the lectora inspire. The purpose of this study was to determine the effect of the Quiz Team model with the help of Lectora Inspire on learning outcomes and activeness of class X. The design of this study was a pretest - posttest control group design with a quasi-experimental type. The sampling technique using cluster random sampling was obtained X MIA 1 as the experimental class and X MIA 2 as the control class. Hypothesis testing using MANOVA obtained sig 0.00 < 0.05, meaning that there is an effect of the Quiz Team model assisted by the Lectora Inspire media on learning outcomes and student activity.

KEYWORDS

Quiz Team Model
Biology Learning

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1. Introduction

Education has a goal to grow abilities, skills in thinking, broad knowledge, attitudes, and good skills, one of which is through the learning process (Rusman 2013). The success of the learning process is shown through learning outcomes, good learning outcomes are an indicator of success in the learning process (Muhammad 2017; Trisnaning, dkk 2017). Learning outcomes are closely related to student activity, learning is said to be of high quality and successful if some or all students are actively involved in the learning process (Asmuni 2018; Winarti 2013)

The activeness of students in learning activities is able to foster interaction between teachers and students or with other students, this causes the atmosphere in the classroom to be more pleasant, students can involve their abilities to the maximum which will affect the formation of knowledge and skills so that learning outcomes are good (Priyanto and Kock 2021), but the fact that it was found that cognitive learning outcomes on all indicators was low at 32.67%.

The low learning outcomes are supported by the results of teacher interviews at SMA N 1 Way Pengubuan which state that students do not participate in learning, another fact found by researchers, teachers use the lecture method which does not facilitate students to learn to solve problems independently because students tend to depend on what they do. given by the teacher so that they are slow to understand the learning material, one solution to overcome this problem is to use a quiz team model assisted by the media Lectora inspire. The quiz team model can increase student responsibility and activity through question and answer so that students are enthusiastic and eager to learn, easy to understand the material, practice communication and express opinions (Parnayathi 2020; Tarigan, et al 2016), the learning model will be more optimal if combined with good learning media, one of which is Lectora inspire media which is able to make interactive learning, visualize abstract material, there are questions or quizzes accompanied by scores at the end of the evaluation, and do not depend on internet media so as to increase learning activities that have an impact on student learning outcomes (Firmansyah 2019). Biology learning with

technology-based media can make students active and improve their learning outcomes (Rudiawan, Hanik & Nugroho, 2021).

2. Method

The research was conducted in April 2022, even semester 2021/2022 at SMAN 1 Way Pengubuan, Central Lampung. This type of research is a Quasi Experiment with a pretest-posttest control group design. This study uses two classes, namely the experimental class which is given treatment using a quiz team model assisted by Lectora inspire media, and the control class is given a direct instruction model. The population in this study were all students of class X which amounted to 104 students, with cluster random sampling technique obtained X MIA 1 as the experimental class and class X MIA 2 as the control class.

The independent variable in this study is the Quiz team model assisted by the media Lectora inspire and the dependent variable is the learning outcomes of biology and student activity. The analysis of the instrument trials carried out in this study used validity tests, reliability tests, difficulty level tests, and discriminatory tests with the help of the SPSS version 25 program. Data analysis used a prerequisite test, namely the normality test using the Kolmogorov - Smirnov test on the test criteria if sig value > 0.05 the data is normally distributed, and the homogeneity test uses the F test on the test criteria if the sig value > 0.05 the data is homogeneous. Hypothesis testing using MANOVA (Multivariate Analysis of Variance) test with the help of SPSS version 25 (Purba et al. 2021)

3. Results and Discussion

The research data were tested using the MANOVA test to see whether or not the quiz team model assisted by the Lectora inspire media on learning outcomes and student activity was carried out. Prerequisite tests were first carried out, namely the normality and homogeneity test of the data, the following results were obtained.

Table1. Normality Test Results Pretest Learning Outcomes

Number	Class		Conclusion
	Experiment	Control	
1	0,37	0,84	Normal Distribution

Table 1 shows the results of the normality test of the data on the pretest of learning outcomes using the komlogorov – smirnov test. obtained a significance of 0.37 > 0.05 in the experimental class and 0.84 sig > 0.05 in the control class, so that the data is normally distributed.

Table2. Posttest Normality Test Results Learning Outcomes

Number	Class		Conclusion
	Experiment	Control	
1	0,40	0,16	Normal Distribution

Table 2 shows the results of the posttest normality test of learning outcomes, obtained significant 0.40 > 0.05 in the experimental class and significant 0.16 > 0.05 in the control class, so that the data is normally distributed.

Table3. Student Activity Normality Test Results

Number	Class		Conclusion
	Experiment	Control	
1	0,70	0,81	Normal Distribution

Table 3 shows the results of the student activity normality test, significant 0.70 > 0.05 in the experimental class and significant 0.81 > 0.05 in the control class, so that the data is normally distributed, then the homogeneity test is carried out to obtain the following results:

Table 4. Homogeneity Test Results Learning Outcomes and Student Activity

Variable	Test		Conclusion
	Pretest	Posttest	
Learning Outcomes	0,98	0,29	Homogen
Student Activity	-	0,18	

Table 4 shows the results of the homogeneity test of learning outcomes and student activity, obtained a significance of $0.98 > 0.05$ on the pretest of learning outcomes, a significance of $0.29 > 0.05$ on the post-test of learning outcomes, and a significance of $0.18 > 0.05$ on the activity. students, so that the data is declared homogeneous, then it can be continued with hypothesis testing with the m-test MANOVA.

Table 5. Result of Manova Learning Outcomes and student activity

Variable	Class	Test	Sig
Learning Outcomes	Experiment	Pretest	0,00
	Contol		
	Experiment	Posttest	0,00
	Contol		
Student Activity	Experiment	Posttest	0,00
	Contol		

Table 5 shows the results of the Manova test using the Tests of Between-Subjects Effect on cognitive learning outcomes, obtained a significance of $0.00 < 0.05$, which means H1A is accepted, it can be concluded that there is an effect of the quiz team learning model assisted by Lectora Inspire on cognitive learning outcomes, on student activity. obtained a significance of $0.00 < 0.05$ which means H1 is accepted, it can be concluded that there is an effect of the quiz team learning model assisted by the Lectora Inspire media on student activity, this is reinforced by data on the acquisition of indicators of cognitive learning outcomes, student activity, and also student worksheets

Table 6. Cognitive Learning Outcome Indicator Data

No	Indikator	Kelas Eksperimen (%)	Kelas Kontrol (%)
1	C1	93	69
2	C2	100	96
3	C3	89	65
4	C4	89	88
5	C5	63	46
6	C6	81	58

Table 6 shows the percentage results of each indicator of class cognitive learning outcomes. Those who use the quiz team model with the help of Lectora Inspire media are higher than classes that use direct instruction, this is supported by the percentage gain per student worksheet indicator in both classes.

Table 7. Student Worksheet Indicator Analysis

No	Indikator	Kelas Eksperimen (%)	Kelas Kontrol (%)
1	C1	100	76
2	C2	78	65
3	C3	89	63
4	C4	67	47
5	C5	78	54
6	C6	89	54

Table 7 shows the results of the percentage of student worksheets for each indicator of cognitive learning outcomes that use the quiz team model assisted by Lectora Inspire media which is higher than the class that uses direct instruction.

Table 8. Student Activity Indicator Data

No	Indikator	Kelas Eksperimen (%)	Kelas Kontrol (%)
1	Visual	91	70
2	Lisan	85	53
3	Mendengarkan	94	76
4	Menulis	86	70
5	Mental	68	64
6	Emosional	78	52

Table 8 shows the results of the percentage of each indicator of student activity in the class that uses the quiz team model assisted by Lectora Inspire media which is higher than the class that uses direct instruction.

The analysis of each indicator of class cognitive learning outcomes using the quiz team model assisted by Lectora inspire media on the C1 indicator gets a very high percentage, this indicator is empowered through the student learning process with groups related to the parts of the material that have been given by the teacher to make quizzes / questions, students learn to identify, mention, and explain through a supported discussion process based on the results of the Lectora Inspire worksheet, obtaining good criteria. Lectora inspire has an attractive material design, there are animated images and videos so that learning is meaningful and fun that can affect the improvement of learning achievement, in line with research conducted by Haya on the application of the c1 indicator quiz team model (remembering) that it gets the highest percentage (Haya and Yohanita, 2018).

The C2 indicator gets a very good category, this is because the quiz team learning model helps students become more creative when asking questions and ideas that can train students to explain the material they have learned, besides that students learn to be responsible for the information they have heard. The quizzes in the Quiz Team learning model make students interested and challenged to participate in the learning process which can increase competition between groups and even between students, this is supported by the results of student worksheets on Lectora Inspire that get a good category, meaning that the C2 indicator has started to increase during the learning process. This is in line with research conducted by anggara that the quality of learning can be improved through the quiz team model by proving the completeness of learning outcomes > 75% (Anggara 2021).

In the C3 indicator, classes using the quiz team model assisted by Lectora inspire obtain very high criteria, this is because the problem solving process in the classroom is more optimal because students have good concepts so that they are easy to relate or apply to everyday life, students and groups discuss conduct peer tutoring who makes students dare to ask questions related to material that has not been understood, and at the end of the lesson the teacher and students discuss the quiz that has just been carried out and straighten understanding so that misconceptions do not occur, this is in line with Sulistyowati's research that the quiz team model provides a significant increase in c3 learning outcomes indicators (Sulistyowati 2018)

In the C4 indicator, classes that use the Quiz Team model with the help of Lectora Inspire get very high criteria, this is because this model is able to make students active in learning, motivate, and stimulate students who can ask questions, take notes, analyze, answer, discuss, give opinions, and conclusions. In addition, the quiz team model can also fully involve students in learning so as to increase seriousness in learning. The use of Lectora inspire media contributes to visualizing abstract material, and displays objects that can only be seen using tools, this is in line with research that the use of the quiz team model can improve students' analytical skills (Royani and Muslim 2014).

The C5 indicator obtained sufficient criteria, this is because in the class that uses the quiz team model assisted by the Lectora inspire media, each student in the group is responsible for preparing short answer quizzes, while other groups check notes, after completion the teacher gives the material classically then all students study the material, give each other direction, give each other questions and answers, discuss and argue with each other so that students are accustomed to evaluating material or questions in quizzes. The

quiz team model makes students more actively competitive and motivated, so they can practice critical thinking skills and memory in the learning process. Obtaining the lowest criteria compared to other indicators because students can evaluate material or problems when expressed directly or criticize other students' opinions, but have not been able to evaluate in the form of questions, this can be seen from the results of indicators on student worksheets C5 obtaining good criteria, but on average – the average class that uses the Quiz Team model with the help of Lectora Inspire media is higher on the C5 indicator than the control class, this is in line with the results of Taqwim's research, namely that there is a significant difference in learning outcomes on the ability to evaluate (higher) in the Quiz Team model class compared to the control class (Taqwim 2019).

The C6 indicator gets very high criteria, the indicator is empowered through the quiz team syntax that can build creativity, eliminate boredom, learn through experience by involving the five senses, and focus students as learning subjects, so that students develop ideas or ideas in problem solving, make their own decisions through the discussion process, this is supported by the percentage of student worksheets, which is 87%, this is in line with Rosalina's research, namely classes that use the quiz team model have a very good learning outcome category (Rosalina et al 2017).

The high achievement of each indicator of student activity shows the effectiveness of the quiz team model assisted by the media Lectora inspire. Student learning activity is directly proportional to learning outcomes, this is according to Sriyono's question in the material presentation technique book, namely: "If students during the learning process only listen, they get low scores, while if students during the learning process only listen and focus on the teacher when explaining the material then gets a moderate value, while students who during the learning process listen, see, do their own assignments and think to solve problems then get high scores" (Kurniawati et al 2017). Learning with the Quiz Team model assisted by the Lectora Inspire media makes students excited and enthusiastic, more active, able to develop ideas or ideas, and train students to solve problems and be able to work together between groups. Activity can provide more value, namely students gain experience, cooperative attitude, develop critical thinking, and understanding (Kanza et al 2020). Student activities can be seen from the ongoing discussions, namely the submission of opinions in groups and the delivery of results through presentations in front of the class (Hidayat 2021).

4. Conclusion

Based on the results of data analysis, it can be concluded that there is an effect of the Quiz Team model assisted by Lectora inspire on learning outcomes and student activity. The use of the Quiz Team model assisted by Lectora inspire in biology learning has a positive impact so that biology learning outcomes can increase. Besides that, Quiz Team model assisted by the Lectora Inspire media makes students excited and enthusiastic, more active, able to develop ideas or ideas, and train students to solve problems and be able to work together between groups.

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