

Application Of Connected Type Of Integrated Learning Model To Increase Learning Outcome Of XI Class Students In SMA Surya Buana

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Abstract (English)

The implementation of learning for high school biology subjects in the Kurikulum Merdeka still often encounters obstacles. This study aims to analyze the application of the connected integrated learning model to improve learning outcomes. This research involved all 8 class XI Science students at SMA Surya Buana who were positioned as research subjects. Learning outcome data was collected using pre-test and post-test instruments. The results of this research show that there is an increase in the learning outcomes of class XI Science students by implementing the connected integrated learning model. Following up on the findings in this research, the connected integrated learning model is recommended with certain specific characteristics.

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Key Words

Learning Outcomes, Connected Type, CAR, SMA Surya Buana

INTRODUCTION

The Kurikulum Merdeka changes the teaching concept of several subjects taught to students, one of which is biology (Urba, et al., 2024). The Kurikulum Merdeka has significant differences compared to the previous curriculum, namely the 2013 curriculum (Rahmayumita & Hiidayati, 2023). The 2013 curriculum requires students to play an active role in obtaining and compiling information obtained from various sources. While the Kurikulum Merdeka requires students to learn essential biological concepts more broadly, students have the opportunity to explore concepts in depth as their learning stage develops (Rahmayumita & Hiidayati, 2023). In reality, the implementation of high school biology subject learning in the Kurikulum Merdeka still often encounters obstacles (Arviansyah & Shagena, 2022). Researchers also found various problems in the implementation of the Kurikulum Merdeka in learning reproductive system material at SMA Surya Buana Class XI IPA.

The conditions and characteristics of students in class XI IPA SMA Surya Buana are not many students. Class XI IPA has a total of 8 students with details of 4 students and 4 female students, based on observations in class XI IPA the author realizes that class XI students are students who like discussions, students tend to look bored, less motivated with the usual learning, and relatively bored because there is too much material.

Based on the results of the observations made, several problems were found in the learning process, including the learning process still not formulated based on essential material, this causes almost all the material taught in the 2013 curriculum to be taught again without formulating essential material which causes students to be bored and stressful. The second problem is that students do not have high motivation to learn, they must always be guided and guided in order to do the assigned tasks, they do not have enough initiative. The third problem is the students' low mastery of the biology material taught by the teacher. This can be seen from the learning evaluation scores on the previous material, many students are not complete.

To deal with these problems, the author tries to apply a learning model that can connect a lot of essential material in a short learning and involve more active roles of students in discussions through a connected integrated learning model, a connected integrated learning model is a learning model that connects several subject concepts in one discussion (Muliani, 2021). This model links meaningful learning experiences that show more links to conceptual elements (Selvia, et al., 2022). This learning model is often studied in elementary school students who still use thematic learning (Fitriani, et al., 2023), (Sholikhah & Rochmania, 2023), (Avandra, et al., 2023). It is still rare to examine this model in high school students in biology subjects (Sadondang, et al., 2022). The author tries to innovate by using the help of PPT Pemantik media where in each subject matter there are lighter questions that can increase student curiosity and encourage students to be active in discussion. It is hoped that the application of this model can improve student learning outcomes at SMA Surya Buana Malang.

RESEARCH METHOD

This research was conducted at SMA Surya Buana on Jalan Candi VI No.2, Karangbesuki, Kec. Sukun, Malang City, East Java 65149.

Research Method

The research method used was Classroom Action Research (PTK) and was carried out in two cycles. Each cycle consists of two meetings that have been adjusted to the material and learning hours. In addition, each cycle consists of planning, implementation, and evaluation stages of learning.

Research Subjects

The subjects of this study were students of class XI IPA SMA Surya Buana, totaling 8 people with details of 4 students and 4 female students.

Data Analysis

After obtaining the data, from each cycle it will be calculated using the calculation of the percentage of students' learning completeness. Students are said to be "complete" if they have reached the Minimum Completeness Criteria (KKM), which is 75. The calculation of the percentage of students' learning completeness can be calculated as follows.

Qualitative data analysis

Qualitative data analysis was carried out using observations after the initial reproductive system material. This is done to analyze what is lacking during teaching and learning activities in cycle 1. The evaluation results will be a reference for the implementation of the next cycle, if the previous cycle has not reached the expected value.

RESULTS AND DISCUSSION

Results

Based on the results of the research that has been carried out, the learning outcomes of grade XI biology students in the reproductive system material during the pretest and posttest are as follows:

Table 1 The value of student learning outcomes in reproductive system material for class XI IPA students at SMA Surya Buana in the academic year 2023/2024 (Cycle 1 and Cycle 2).

No.	Student Name	Gender	Biology Learning Outcomes Reproductive System Material			
			Cycle 1		Cycle 2	
			Pre Test	Post Test	Pre Test	Post Test
1	BPAW	L	76,5	95	40	90
2	HRR	L	7,5	20	0	100
3	HH	L	61,5	82,5	80	95
4	UFA	L	87,5	90	60	100
5	NM	P	52,5	97,5	60	100
6	NNA	P	43	95	55	100
7	SNCW	P	60	92,5	60	100
8	SKR	P	81,5	100	80	100
Number of Samples			8			
Mean			58,75	84,06	54,37	98,12
Standard Deviation						
Maximum Value			87,5	100	80	100
Minimum Value			7,5	20	0	90
Total			3	7	2	8
Completion			37,5%	87,5%	25%	100%

Based on the results of the pretest and posttest in the first cycle of 8 class XI students, the average scores were 58.75 and 84.06 for cycle 1 and 54.37 and 98.12 in cycle 2. The maximum scores obtained during cycle 1 were 87.5 on the pretest and 100 on the posttest while in cycle 2, 80 for the pretest and 100 for the posttest. Table 1 shows that there was an increase in learning outcomes from pretest to posttest in cycles 1 and 2. Then in the aspect of completeness, the percentage of complete students in cycle 1 was 37.5% (3 students) in the pretest and 87.5% (5 students) in the posttest. Cycle 1 showed an increase in student completeness by 50% (2 students).

Table 2 shows that in the pretest in cycle 1 the highest range of scores was in the range of 60-69.99 and 90-89.99 as many as 2 students (50%) each. Whereas in the posttest

in cycle 2 the highest range of scores was in the range of 90-99.99 as many as 5 students (62.5%).

Table 2 The results of the analysis of cycle 1 of the completeness of learning outcomes of reproductive system material for students in class XI IPA at SMA Surya Buana in the 2023/2024 academic year.

No	Score Range	Pretest Frequency	%	Post Test Frequency	%
1	0-9.99	1	12,5	-	-
2	10-19.99	-	-	-	-
3	20-29.99	-	-	1	12,5
4	30-39.99	-	-	-	-
5	40-49.99	1	12,5	-	-
6	50-59.99	1	12,5	-	-
7	60-69.99	2	25	-	-
8	70-79.99	1	12,5	-	-
9	80-89.99	2	25	1	12,5
10	90-99.99	-	-	5	62,5
11	100	-	-	1	12,5
	Number of Learners	8	100%	8	100%
	Number of Completers	3		7	
	Number Not Completed	5		1	
	Average Completion	37,5%		87,5%	
	Average Not Completed	62,5%		12,5%	
	KKM		75		

Based on the results of the first cycle analysis in table 2, the number of students who completed the first cycle was only 37.5% (3 students) in the pretest. This shows that students' initial understanding of the reproductive system material is still very poor. This is also the basis for the author to make innovations in learning by applying a connected integrated learning model in order to improve student learning outcomes. The number of students completed after using the connected integrated learning model increased by 50% (4 students) which indicates the success of the application of this method in the first cycle with an increase of 50% in the completeness indicator.

Table 3 The results of the analysis of cycle 2 of the completeness of learning outcomes of reproductive system material for students in class XI IPA at SMA Surya Buana for the 2023/2024 academic year.

No	Score Range	Pretest Frequency	%	Post Test Frequency	%	No
1	0-9.99	1	12,5	-	-	-
2	10-19.99	-	-	-	-	-
3	20-29.99	-	-	-	-	-
4	30-39.99	-	-	-	-	-
5	40-49.99	1	12,5	-	-	-
6	50-59.99	1	12,5	-	-	-
7	60-69.99	3	37,5	-	-	-
8	70-79.99	-	-	-	-	-
9	80-89.99	2	25	-	-	-
10	90-99.99	-	-	2	25	25
11	100	-	-	6	75	75
	Number of Learners	8	100	8	100	
	Number of Completers	2		8		
	Number Not Completed	6		0		
	Average Completion	25%		100%		
	Average Not Completed	75%		0%		
	KKM			75		

Based on the results of the second cycle analysis in table 3, it is found that the average student completes 25% on the pretest with the average score of mostly 60-69.99 as many as 3 students and 100% on the posttest with the average score of mostly 100 as many as 6 people, this shows that the application of the connected type integrated learning model cycle 2 is effective in learning because it can learn essential material combined with other materials so that students' understanding of the reproductive system material becomes holistic as evidenced by the increase in student learning outcomes.

DISCUSSION

Based on the results of the study, it is known that the application of the Connected Integrated Learning Model affects the learning outcomes of students in class XI IPA at

SMA Surya Buana on reproductive system material. This can be seen from the completeness of the Pre Test and Post Test done by students of class XI IPA. Hasi

The percentage of cycle 1 completeness on the Pretest was 37.5%, Posttest 87.5% and cycle 2 completeness on the Pretest 25% and Posttest 100%. The data shows an increase in the mastery of material for students in class XI IPA. However, the increase in completeness between cycles 1 and 2 is quite different. This is due to several factors, including the material presented in cycle 1 is more complex than the material in cycle 2. Then, there is a process of student adaptation to the newly applied learning model. Thus, there were different improvements between cycle 1 and cycle 2 in the application of the Connected Integrated Learning Model.

The results in this study are reinforced by the results of previous relevant research, namely the results of research by Selvia Hermayenti et al. (2022) entitled “Application of the Connected Integrated Learning Model to Student Learning Outcomes in Social Studies Class VIII at SMP Negeri 4 Timpeh”. Based on the research analysis, it shows that students who are not complete in learning are 23 out of 28 people, because students tend to be passive in learning. Meanwhile, after getting this model, the learning outcomes of students reached 82.14% in the good category. Based on this, students are able to capture the learning material that has been taught by the teacher along with students who are more active when learning.

The results of research on students in class XI IPA reproductive system material increased when using the Connected Integrated Learning Model. The use of this model encourages students to be involved in learning actively, thus reducing student boredom that occurs during classroom learning (Ulya et al., 2024). In addition, there is a selection and incorporation of several essential materials that make students interested in what is delivered by the teacher. As a result, students become more initiative in working on assignments given by the teacher, and in line with the increased mastery of reproductive system material by students in class XI IPA.

Students who are actively involved are the advantages of this model, so that it can improve the learning outcomes of students in class XI IPA (Sadondang et al., 2022). Students who actively participate in learning are in line with behavioristic theory, namely there is a relationship between stimulus and response that occurs through interaction in an environment (Selvia Hermayenti et al., 2022). The stimulus provided by the teacher will affect the response given by students during learning. The relationship between stimulus and student response occurs through the Connected Integrated Learning Model carried out by the teacher, where there is a change in attitude as a student response in receiving material delivered by the teacher. Teachers who are able to provide stimulus appropriately see from the characteristics of students, then the response given by students is also good to the material delivered by the teacher. So that it will make students interested in participating in the learning process (Selvia Hermayenti et al., 2022).

CONCLUSIONS AND SUGGESTIONS

In this study, the effect of implementing a connected type integrated learning model on student learning outcomes was studied. The results showed that there was an increase in the percentage of completeness by 50% in cycle 1 and 75% in cycle 2. Therefore, the application of the connected type integrated learning model can improve the learning outcomes of students in class XI IPA biology subject matter of the reproductive system at SMA Surya Buana.

Through the findings obtained, the application of the connected type integrated learning model in high school is highly recommended under certain specific conditions. Training and dissemination of the benefits of this model need to be done especially in specific conditions as discussed in this study. In addition, further research on other subjects is needed to add information about the application of this model.

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