
THE APPLICATION OF LEARNING MODEL STUDENT FACILITATOR & EXPLAINING FOR IMPROVING STUDY RESULT IN MATERIAL SUB OF EXCRETION SYSTEM FOR HUMAN IN CLASS OF XI IPA 2 SMA NEGERI 1 HINAI EDUCATION YEAR 2012/ 2013

Sailana Mira Rangkuty

Mathematics and Science Faculty, State University of Medan

E-mail : Sailanamhira@yahoo.co.id

Abstract

This research is aimed to improve Biology study result through the application of learning model Student Facilitator & Explaining (SFAE) in material sub of excretion system for human in class XI IPA 2 SMA Negeri 1 Hinai Education Year 2012/2013. Research methodology is action research method and the subject of research for one class which is totally 32 students. Instrument used to collect research data is study result test in multiple choice for 30 questions.

This research was started by pre-action activity, it is to do observation in teaching process, interview with biology teacher and the introduction of SFAE Model. Then in first and second cycle were started by planning phase, then action, observation and reflection. Reflection done in the first cycle is the reference which is used to arrange planning step in the second cycle. This research result showed that the application of teaching model, Student Facilitator And Explaining (SFAE) can improve student's result which is in first cycle got the average of pretest around 40,41 improved to 59,37. It is also in the second cycle, the improvement from 44,37 to 74,99. In this research achieved students master level to material applied based final test. From 32 students, there are 6,25% students who have very high of mastery level, 43,75% students with high mastery, 40,63% students with medium average mastery, 6,25% students with low mastery and 3,13% students with very low mastery. From the data of individual & classical study, there are 29 student of 32 student or 90,62% get scored 65 and 3 students or 9,38% get score 65. Thus it can be stated that this research has completed. Even 1 of 4 indicator is not achieved, but the indicator achievements which 75% so it is stated that totally indicators have been completed.

Keywords : Learning Model Student Facilitator and Explaining, Study Result.

A. INTRODUCTION

Student's failure to achieve education aim generally affected by many factors. Internal factor including physics, psychology & tiredness. External factor including family, school & society (Slameto,2003). In fact it is often found that students result of study which are less, it is caused by the weakness of educators knowledge in managing class where teaching pattern still centered to the teacher and educator who transfer concepts directly to students so the information changing could not run coordinately. It should be by two sides which have two way communication. It needs the cooperation which can help to achieve the teaching aim.

Teachers as educators are supposed to apply teaching strategy which is high quality to students to ease them to find concept. Teachers need to be creative in giving guidance to students and the way of teachers in presenting more meaningful information to the students. Based on interview result which is done by researcher to one of biology teacher, Mrs. Wahyuni S.Pt on March 16 th 2013 in Binjai. It is known that 10 students who can get study compliment through KKM score, it is 70 which is already considered by school. It will affect the class compliment presentation, which is only achieve 31%. Then it is stricted by the researcher's experience in doing Program Pengalaman Lapangan (PPL) in SMA N 1 Hinai, which showed that students result in teaching process in Biology is still low, it can be seen that students are just as recievers only.

Students just as participants in teacing process and many of them less pay attention to the material which is given by teachers. Students have less interest during teaching process, it can be seen that students are not quite brave to give opinion if teacher give opportunity to them to ask. It is caused by information source is still generally centered by teacher. One of alternative action to solve this problem is by using teaching model Student Facilitator and Explaining. This model is chosen because this model is supposed to give opportunity to student to develop the ability to be more active by making every students as facilitator & clarificator in every achievment of the previous competence by teacher.

According Istarani (2012), Student Facilitator & Explaining has some excess, including training students to be teacher because they are given an opportunity to review teacher's explanation which has been listened, encourage students to be the best to explain material and increase student's reserve power because teaching done by demonstration. This model places student to present other students idea, so every student can train speaking ability and give new idea from students who can train & increase student's study result.

Teaching model has ever been researched by Langgeng on 2012 for students on grade X in SMA 1 Mertoyudan 2011/ 2012. Based on the data analysis of research result, shows the average on control class from 58,44 and next 67,8 while in the last experimental class applied around 59,03% and after it 75,97%. It can be concluded that study result score in experimental class is more than control class. The aim in this research is to improve students result score by applying teaching model student facilitator % explaining in sub material unit in excretion for human in XI class IPA 2 SMA Negeri 1 Hinai Education year 2012/2013.

B. THEORITICAL FRAME

Study result is a change of behaviour overall and not only to one aspect of human potency only (Suprijono, 2010). The study result can be stated as result which is gotten by student from teaching process on biology lesson by evaluation score done by teacher to the faced test. Basicly the cooperative teaching is in constructive theory. This teaching appears from the concept that student can be more easily to find and understand the difficult concept if they discuss one to another (Trianto, 2011). In deciding group member it is efforted to the capability of students is heterogen and the capality to other group is homogen relative.

In a teaching study, studying activity use a way so students do not feel boring by teacher's explanation. It is aimed to increase students participation in teaching process to improve study result. Teaching model Student Facilitator and Explaining (SFAE) is a teaching model which students learn to present idea or opinion to the other participants this teaching model is effective to train student to speak to share idea or their own opinion. This teaching model will be relevant if students join actively in designing teaching material which will be presented (Aqib, 2013).

Student can be as subtituted teacher but not for overall. Students become speaker after teacher to share competency which will be achieved. The teaching steps Student Facilitator and Explaining, according to Istarani (2012) are:

- a. Teacher shares things to achieve, explain the competency in the meeting. Teacher must be explain as much as possible to students so they can understand it later.
- b. Teacher presents the material, after the competency has been considered so sub competency must be presented to students. Teacher's explanation is not a long material totally, but the material just as points. Later, based on poin, the students can be explained by their each creation.
- c. Giving opportunity to participant to explain to the others participant by the map or mind map and even presentation from students which is shared by their own creativity
- d. Teacher concludes idea or opinion from students, after they have shared the material which is presented by students without giving any critic. After concluding presented material by students, so teacher called again students randomly to explain next point.
- e. Teacher explain all material which is presented, if the competency which want to be achieved by some students so teacher explain again all presented points
- f. Closing, after teacher explain material so teacher gives critic and suggestion for improvement for students who have not gotten challenge to perform in front of the

class giving their opinion. Teacher shares how important to use this model because it can open mind and suggestion which is creative from students.

Every model has plus and minus. There are plus side from this method use according to Istarani (2012) including :

- Teaching material will be clearly & concretely presented
- Can increase students reserve power because it is done by demonstration
- Trains students to be teacher, because they are given the opportunity to review teacher explanation
- Encourage student's motivation to be the best in explaining teaching material
- Know students ability in giving idea or opinion

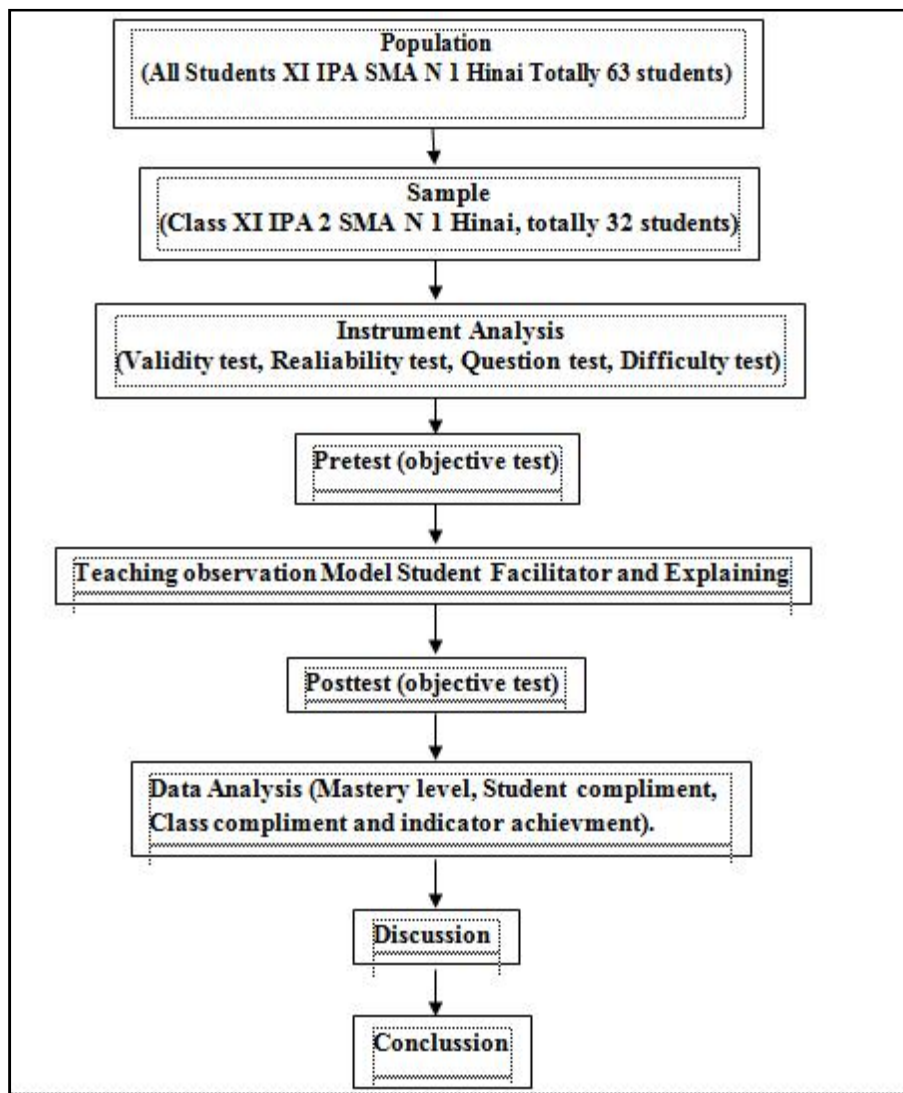
In other hand, the weaknesses of this method are :

- Shy students do not want to demonstrate what the teacher ask to them
- Not all students have the same opportunity to do it
- It is not easy for students to make mind map or material presentation simply

Because very model has plus and minus side, the teacher's participation is supposed to consider the most effective model to use and how to maximize the plus side & minimize the minus side of that model.

C. RESEARCH METODOLOGY

This research was done in SMA Negeri 1 Hinai, Langkat, Sumatera Utara. It was held on April to May 2013. Population in this research is the students of grade XI SMA N 1 Hinai Education Year 2012/2013 including 2 classes with totally student of XI IPA 1 for 31 students and students of IPA 2 for 32 student, so totally 63 students for population. The technic of getting sample in this research is by purposive sampling, it means the researcher has particular reasons suitable with the taken sample. Because it has the same character for the used sample with the purpose of research model, it is that less students who speak in front of the class. So the selected class became the sample, it is XI IPA 2 including 32 students there are 9 boys and 23 girls. Free variable of this research is the application of cooperative teaching type Student Facilitator and Explaining. Even the current variable here is the result of student XI IPA SMA N 1 Hinai Education Year 2012/2013. The research is kind of classroom action research. The action in cycle was started from planning, action, observation, reflection and back to planning for the next cycle.



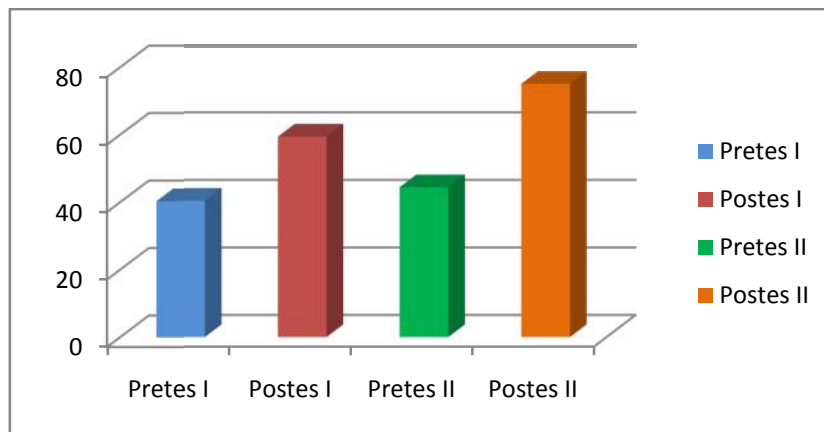
In this data including quantitative data, it is student's result for material unit about Human Excretion System. To get the data, it is used study result including pretest and posttest. Study result test used is multiple choice including 30 question. Every right answer will get score 1 and false answer get score 0.

D. RESEARCH RESULT

Before teaching and learning process by applying cooperative type SFAE done, students were given pretest to know the basic knowledge of students. Improvement presentation of student's result study in cycle I is 46,88%, are while in cycle I to cycle II had an improvement for 69%.

Table 1. Pretest and Posttest Result Cycle I and II

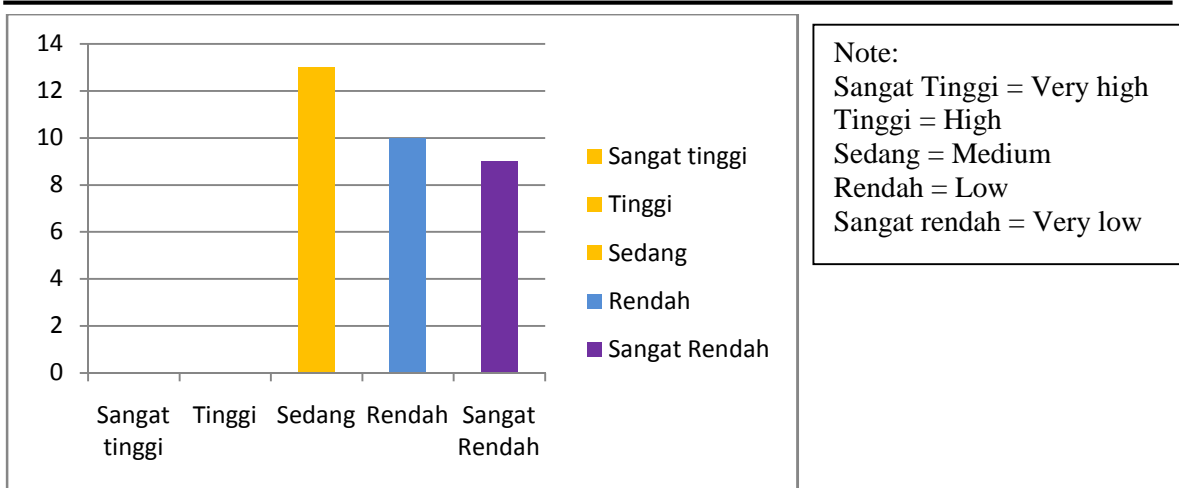
NO	Study Result Test	Average Score
1	Pretest I	40,41
2	Posttest I	59,37
3	Pretest II	44,37
4	Posttest I	74,99



It can be seen that there is an improvement from study result test pretest and posttest in cycle I and cycle II.

Table 2. Students Mastery Persentation in cycle I

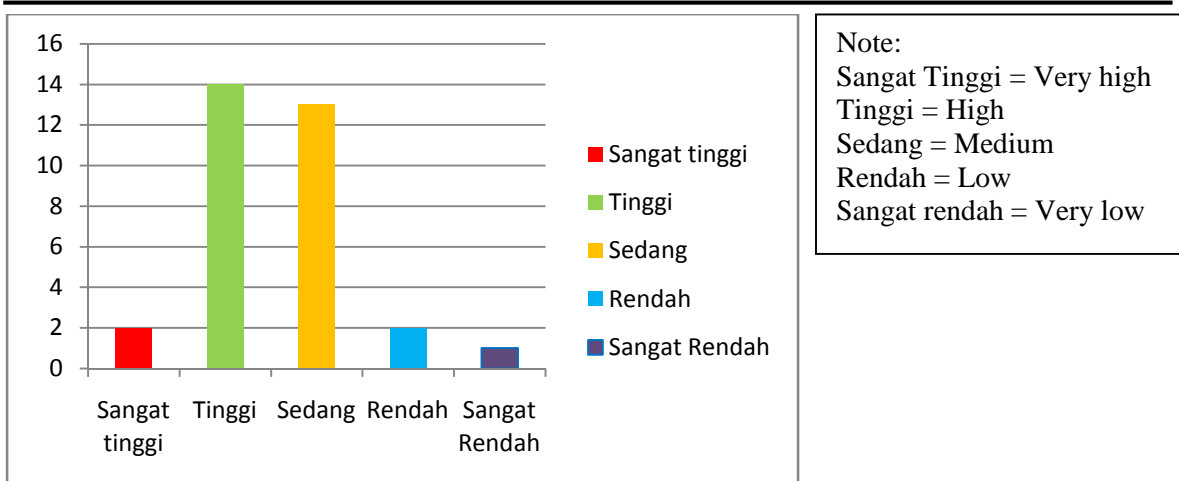
No	Mastery Persentation	Mastery level	Total Student	Student Total Persentation
1	85%-100%	Sangat tinggi	0	0%
2	75%-84%	Tinggi	0	0%
3	65%-74%	Sedang	13	41,94
4	55%-64%	Rendah	10	32,26
5	0%-54%	Sangat Rendah	9	29,03



From the grafik, it can be seen that student's mastery level. In cycle I known that no students got very high mastery level and high mastery level, 13 students (41,94%) got medium mastery level, 10 students (32,26%) got low mastery level, and 9 students (29,03%) got very low mastery level. In the las teaching process in cycle II, researcher gave post test to students. From the posttest result, it is described that the mastery level as drawn below

Table 3. Students Mastery Persentation in cycle II

No	Mastery Persentation	Mastery level	Total Student	Student Total Persentation
1	85%-100%	Very high	2	6,25%
2	75%-84%	High	14	43,75%
3	65%-74%	Medium	13	40,63%
4	55%-64%	Low	2	6,25%
5	0%-54%	Very low	1	3,13%

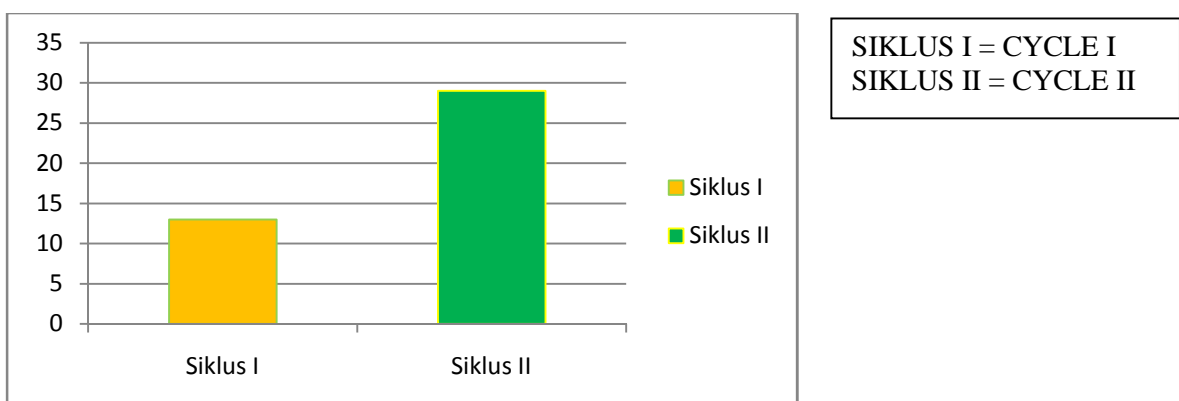


It's stated that students mastery level in cycle II including 2 student (6,25%) got very high mastery level, 14 student (43,74%) got high mastery level, 13 student (40,63%) got medium mastery level, 2 students (6,25%) got low mastery level and 1 student (3,13%) got very low mastery level.

In cycle I student's, completeness study persentation, there is 40,63% including students who had study completeness around 13 student and had and improvement in cycle II with students completeness study persentation for 90,62% including 29 students from 32 students. In fine the student's completeness study improvement can be seen from the table below

Table 4. Student's Completeness Study Improvement

No	Cycle	Study Completeness	% Study Completeness
1	I	13	40,63%
2	II	29	90,62%



It can be seen an improvement persentation of student's completeness study. In cycle I it got 40,63% and then in cycle II get an improvement become 90,62%. Indicator of completeness achievement can be seen from score achievement for each test.

Table 5. Indicator of achievement Persentation

NO	Indicator/ (Sub Material)	Question Number	Student whose answer is right	Indicator of Achievement Level	Average (%)	Category
1	Differ the definition excretion, secretion and defecation	1	32	100%	70,19%	Complete
		2	0	0 %		
		5	30	93,75%		
		11	28	87,%		
2	Describe kidney structure and process of urine formation	1	32	100%	76,25%	Complete
		2	32	100%		
		3	32	100%		
		4	29	90,63%		
		10	30	93,75%		
		11	29	90,63%		
		12	8	25%		
		13	16	50%		
		4	21	65,63%		
5	15	46,88%				
3	Identify disease excretion disosder of human	5	22	68,75%	73,13%	Complete
		6	9	28,13%		
		7	30	93,75%		
		8	32	100%		
		9	24	75%		
4	Describe the structure and function of skin as excretion organ.	3	19	59,38%	55,4%	Not Complete
		4	29	90,63%		
		6	25	78,13%		
		7	1	3,13%		
		8	7	21,88%		
		9	23	71,88%		
		10	28	87,5%		
		12	0	0%		
		13	26	81,25%		
		14	17	53,13%		
		15	20	62,5%		

Based on the table above, it can be seen that from 4 indicators, there are 3 indicators that has been achieved. Thus, it can be stated that indicator achievement reaches to 75%.

E. CONCLUSION

Based on research result from analysis result gotten, so it can be concluded that student's result on Biology lesson by applying cooperative learning model type SFAE in cycle I, it is stated that it is not complete with the average 59,37% so it can be continued to cycle II which is stated that it is complete with average 74,99%. Study completeness level persentation in cycle I is 40,63% and cycle II is 90,62%.

Student's result study on Biology lesson in cycle I can be stated that no students who have high and very high mastery level category (0%) and 13 students with medium mastery level category (41,94%), there 10 students with low mastery level category (32,26%) and 9 students with very low mastery level category (29,03%). While in cycle II students who got very high mastery level for 2 students (6,25%), high mastery level for 14 students (43,75%), medium mastery level for 13 students (40,63%), low mastery level for 2 students (6,25%) and very low mastery level for 1 students (3,13%).

From 4 indicators, there are 3 indicators which can be reached & 1 indicator which is not reached yet. Thus, it can be stated that by reaching 3 indicators shows that indicators achievement has reached 75%.

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