The Effect Of Learning Model Logan Avenue Problem Solving Heuristic To The Student's Learning Activity

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Abstract- This research aims to know how the effect of learning model logan avenue problem solving heuristic to the student's learning activity of the social programme X.I at SMAN 1 Bukit Tinggi, West Sumatera. The methodology of the research which is used in this research is experimental research. The population of this research amounts 151 students. The sample used in this research is cluster random sampling. So that the sample of social programme XI class is 30 studends. The technique of data analysis is observaion data analysis, pretest and hypothesis test. Based on the research done , it consists of significant effect of using learning model logan avenue problem solving heuristic to the student's learning activity of social programme X.I at SMAN 1 Bukit Tinggi, West Sumatera.

Keywords : Model logan avenue problem solving heuristic, learning activity

I. INTRODUCTION

Learning is one try from education with the applying which is done purposely with the goal which has been determined before with the controlled doing process (Amin, 2018). Therefore, the components of the learning process includes : learning goal, learning material, teaching method, and evaluation applying (Umar, Bala and Ladu, 2016). The four things must be focussed on by the teacher in selection of teaching method and learning model which will be used in learning process. That's why, the teachers must make well-managed plan in learning process, one of them determine which learning model will be applied (Perdue, Milkman, and Marcis n.d, 2016)

Well-managed learning is proved because of the reaching in target of learning goals. One of them has mutual relationship among the teacher and studends, it means that the interaction between the stimulus applied by teacher to make good respond from students (Marinov and Fraszczyk, 2014). Based on the fact, a teacher must try how a studends is able to be active in learning process which is applied. Widespreading the potency of the studends through learning activity is very important to be applied by the teacher, because the learning activity of students determine one of success of learning which is applied. (Belabes, Belouafi, and Daoudi, 2015). The activity of students in learning process is the physical and non-physical activity in teaching-learning process which is applied optimally which has a goal to create active and condusive classroom atmosphere (Widodo n.d, 2018).

Unfortunately, we can see the fact that in education at now has many problematical ones found in learning process. One of them is the applying of learning process does not suit with the curriculum. Many teacher applied speech-method, in order to make the students do not have the chance to be able to be active directly and active in learning process because the students only get become information accepter. Besides that, the using the model and the strategy of learning which are applied by the teachers do not suit with

the real wish of the students. The factor being is not suitting in using the method and the learning model (Intan and Gunawan, 2012). The model of learning is one of learning planning which shows the certain learning cyclus, in that cyclus,it seems that the teacher's and student's activity systematically to support the learning to give the learning experience for the students in reaching the aims of learning (Hanrison, 2014).

Teacher must apply the accurate learning model which suit with the students' characteristics. The selection of learning model which is applied by the teacher must increase the students' activity, so the well-managed, accurate learning model will produce effective learning. To increase the students' activity, a teacher must have variatif learning, in order to make the students involve directly in learning process applied. There is a must for teacher to choose accurate learning model to make the students' activity. One of the learning model which is able to be applied to create the students, activity atmosphere is the learning model Logan Avenue Problem Solving Heuristic. The indicators which are visual activity, spoken, listening, moving, and writing (Bilgin, 2015). The learning model of Logan Avenue Problem Solving Heuristic is not only listening but also finding the solution to problem solving which have the question words : what's the problem? Is the alternative way? Is it valueable ? What's the solution? And how the students do better? (Gujjar and Malik, 2007). With this model, the students will become active and motived to do a thinking activity (Abrahamson and kapur, 2017).

The research about the learning model Logan Avenue Problem Solving Heuristic has ever done by some researchers. The research which is done by (Arifah, 2017) said that learning model Logan Avenue Problem Solving Heuristic affects significantly the thinking ability critically of students (Anggrianto, Churiyah, and Arief, 2016).

The learning process of SMAN 1 Bukit Tinggi uses the speech-method and the asking-answering method with Power Point media, the teachers serve the learning material's directly and the students accept the materials. From the interview done by the teachers at SMAN 1 Bukit Tinggi, shows that the level of the student's activity in economy subject is still less with the percentage 25% or 30% of the students are categorized active, it means that 75% or 91 students are still less active in economy subject, so the researcher need to see the student's activity as applying the learning model LAPSH.

Based on the setting above, the researcher is interesting in doing the research entitled "The Effect of Learning Model Logan Avenue Problem Solving Heuristic to The Student's Activity in Economy Subject at SMAN 1 Bukit Tinggi, West Sumatera. Learning is one try from education with the applying which is done purposely with the goal which has been determined before with the controlled doing process (Amin, 2018). Therefore, the components of the learning process includes : learning goal, learning material, teaching method, and evaluation applying (Umar, Bala and Ladu, 2016). The four things must be focussed on by the teacher in selection of teaching method and learning model which will be used in learning process. That's why, the teachers must make well-managed plan in learning process, one of them determine which learning model will be applied (Perdue, Milkman, and Marcis n.d, 2016)

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information accepter. Besides that, the using the model and the strategy of learning which are applied by the teachers do not suit with the real wish of the students. The factor being is not suitting in using the method and the learning model (Intan and Gunawan, 2012). The model of learning is one of learning planning which shows the certain learning cyclus, in that cyclus,it seems that the teacher's and student's activity systematically to support the learning to give the learning experience for the students in reaching the aims of learning (Hanrison, 2014).

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II. METHODS

This research is such an experimental research. The research variable consists of free variable and unfree variable. Free variable (X) in this research is the learning model Logan Avenue Problem Solving Heuristic. Meanwhile, unfree variable (y) in this research is the Student's Activity. The place of this research is done in SMAN 1 Bukit Tinggi, West Sumatera Province. The population is all classes X of Sosial Programme at SMAN 1 Bukit Tinggi, West Sumatera amount 151 students. The sample is Cluster Random Sampling, namely X IPS_2 amount 30 students. This research is done for four meetings. The technique of data input is used in this research uses observation technique. The technique of data analysis which is used in this research is Data Analysis Observation by using the pattern from the book (Sugiyono, 2012 : 139) then it will be scored with the scale which is used is Gutman Scale, and than the score will be marked in the form of the percentage based on book (Arikunto, 2013 : 266). Further, the percentage of the score from the research result will be categorized as the student's activity (Arikunto, 2010). Next it uses the analysis data technique pretest, and hypothesis test.

III. Result and Discussion

This research is done at SMAN 1 Bukit Tinggi, West Sumatera. The observation is done to see the student's activity in mastering the materials especially in economy subject. The observation is helped by an observer namely peer-friend who has a duty to observe and value the student's activity in every learning process at the first experiment class and the second experiment class. The observation consists of the indicators namely visual, spoken, listening, writing and moving activity.

The Result of Experiment Class Observation, the first experiment class

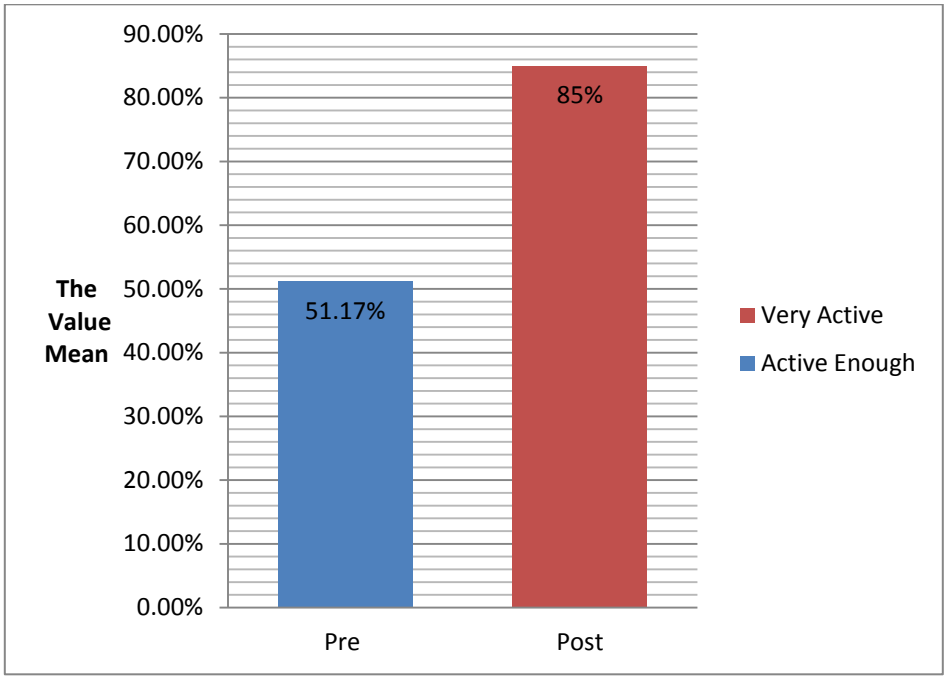
Table 1. The distribution of the student's activity of the first experiment class

Data	The indicators of the student's activity					Mean
	Visual	Spoken	Listening	Moving	Writing	
Pre	30	14.17	63.33	66.67	81.67	51.17%
Post	96.67	38.33	92.22	97.78	100	85%

Source : Primer Data 2018

Based on the table 1 above, it concludes that the mean of the student's activity pre and post of student's test at the first experiment class is different. For the score of pre, the indicator score shows the visual 30, spoken 14.17, listening 63.33, moving 66.67, and writing 81.67 with the mean 51.17%, it means that the student's activity in the category : active enough.

Meanwhile the score of post got in the indicator score visual 96.67, spoke 38.33, listening 92.22, moving 97.78, and writing 100 with the mean 85% in the category : very active. This shows that the mean of post in the first experiment class is better. Further informasi, check the diagram below :



The picture 1. The diagram tree of the difference of pre and post of the Student's activity.

Based on the first diagram above, it concludes that the student's activity in the pretest with the mean 51,17% categorized as active enough and the student's activity at the post test increases till 85% categorized as very active.

Table 2. The category of the students' activity applied pre-test.

No	Presentation	Category	Amount	
			The Students	%
1	81 - 100	Very active	0	0
2	61 - 80	Active	4	13.3
3	41 - 60	Active enough	18	60
4	21 - 40	less active	8	26.7
5	0 - 20	Very less active	0	0
	Amount		30	100

Source : Primer data 2018

Table 2 shows us that 4 students (13.3%) are active, 18 students are active enough (60%), and 8 students (26.7%) are less active. Based on data, most of the X_1 class students before being applied the model learning Logan Avenue Problem Solving Heuristic are active enough.

Table 3. The category of the students after being given Post Test

No	Presentation	Category	Amount	
			The Students	%
1	81 - 100	Very active	18	60
2	61 - 80	Active	11	36.7
3	41 - 60	Active enough	1	0.3
4	21 - 40	Less active	0	0
5	0 - 20	Very less active	0	0
	Amount		30	100

Source : Primer data 2018

Based on the table 3, it concludes that 18 students (60%) are very active, 11 students (36.7%) are active, and 1 strudents (0.3%) is active enough. Based on the data most of the X_1 class after being applied the using of the model learning Logan Avenue Problem Solving Heuristic are very active.

Table 4. Mean of the percentage of observation result in the first Experimental Class

Meeting	Percentage (%)	Interprestige Criteria
1	89	Very well
2	89	Very well
3	100	Very well
4	100	Very well
Mean	93	Very well

Source : Primer data 2018

Based on the table 4 above, it can conclude that the observation result for the learning activity done by the researcher in the first experiment class by applying the learning model LAPSH for four times meeting. The percentage of the observation result at the first meeting is 89%, then at the second one is 89%, the third one is 100% and the fourth one is 100%.

Before doing hypothesis test, the data tested must have the normal qualification and homogen qualificatin. Based on the result of normality and homoginity of the test, the data with dk = n-1 and the significant level 5% for the test observation in normality test in pre at the first experiment is X.1 with using the formula chi kuadrat, it is gotten that $X_{hitung} \leq X_{tabel}$ or $1.96 \leq 11.070$. It means that X_{hitung} is smaller than X_{tabel}, so the data is distributed in normal and the normality test at the observation data in post at the first experiment class by using the formula chi kuadrat is is gotten that $X_{hitung} \leq X_{tabel}$ or $4.516 \leq 11.070$. It means that X_{hitung} is smaller than X_{tabel}, so the data is distributed in normal.

Based on the analysis of multiple regretion similarity is got that the value of the similarity is $Y = a+b_1X_1- b_2X_2 = 2.245 + 0.49 X_1 – 0.48X_2$. From this data, means that the activity score (Y) is affected by the variable of the learning model LAPSH at the Economy subject amounts 0.49.

The result of data analysis shows that the effect the learning model LAPSH to the students' activity is from the test result t (persial) with $t_{hitung} > t_{tabel}$, namely $5.777 > 2.045$ so that the hypothesis is of H_a ia accepted, it means H_0 is rejected, so there is the effect which is significant of the model learning LAPSH for the students' activity at the Economy subject is SMAN 1 Bukit Tinggi, West Sumatera.

IV. FINDINGS

This research entitled "The Effect of Learning Model LAPSH to the students' activity at the Economy subject in SMAN 1 Bukit Tinggi, West Sumatera. This research aims to know is there difference in the effect of learning model LAPSH to the students' activity at the Economy subject in SMAN 1 Bukit Tinggi, West Sumatera.

The technique of data input in this research is observation. The observation is used to identify the students' activity is learning process. It is in the first experiment class by using the observation sheet with the activity indicators : visual, spoken, listening, moving and writing.

As in research of identification, it uses the observation consisting of 14 statement which aims to collect the data about the students activity for the learning process done in the first experiment class by using the learning model LAPSH namely X IPS2 class. At the observation sheet, the statement is completed with the choice "Real" or "unreal" in each.

The learning process is done for each in 4 times meeting with the detail : the first meeting of pre observation, the second one till the fourth one are continued by applying the post observation in the first experiment class by applying the learning model LAPSH. The competency standard uses in this research is understanding money and banking, the indicators are describing the definition of bank, identifying the function of sentral bank, public bank, syariah bank, peoples' credit bank, identifying the function of public bank, and the sentral bank, identifying the product of bank, identifying 5 C and identifying the adventages and disadventages of credit for the customer.

Observation result which is related to the teacher's activity at the learning process in the first experiment class using the model LAPSH based on the steps of APSH. The indicator in the observation are first, the teacher introduces new concept the topic "Money and Bank" through the question developing to the students' knowledge, second the teacher divides the students into group consisting 4-5 students, third the teacher asks each group finishes the problems given as metacognitive questions namely the questions supporting the students to understand the topic "Money and Bank", fourth the teacher asks the delegator from every group to present the result of discussion, the fifth the teacher asks other grouph to respond, the sicth the teacher gives review to chack again for the students' answer about the strength and the teacher givers a test as exercise to identify whether the students have understood the

materials all or not yet, the eighth the teacher gives the verification to identify the students categorized as having reached the level of passing grade and not yet, and the ninth the teacher has enrichment activity, remedial activity given to the not yet reached students, meanwhile the activity for those have reached the passing grade.

We see that at the first experiment class as 89% at the first meeting and the second , 100% at the third meeting and the fourth meaning 94.5%.

Before doing hypothesis test, the data tested must be qualified normal qualification and homogen qualification. Based on the result of normality test for observation data and homogenity data, with dk = n-1 and the level of significancy 5% for normality test Pre data observation at the first experiment class namely X.1 by using the formula chi kuadrat, it is taken the result Xhitung ≤ Xtabel or 1.96 ≤ 11.070. It means Xhitung is smaller than Xtabel, so the data is distributed as normal and normality test of post data observation at the first experiment class by using the formula chi kuadrat, it is taken the result of Xhitung ≤ Xtabel or 4.516 ≤ 11.070. It means Xhitung is smaller than Xtabel, so the data is distributed as normal, meanwhile normality test of pre data observation at the second experiment class namely X.2 by using the formula chi kuadrat, it is taken Xhitung ≤ Xtabel or 5.933 ≤ 11.070 it means Xhitung is smaller than Xtabel, so it is distributed as normal and the normality test of post data observation at the second experiment class by using the formula chi kuadrat it is taken Xhitung ≤ Xtabel or 4.95 ≤ 11.070. it means Xhitung is smaller than Xtabel, so the data is distributed as normal it concludes that pre and post data observation for the first and the second experiment class are distributed as normal. Next being tested homogenity test of pre and post data by using barlett test at the classes, it is taken Xhitung ≤ Xtabel or 6.003 ≤ 7.815, so this sample is stated as homogen so the analysis of hypothesis test can be continued.

Based on the similirity analysis of multiple regretion is taken that the value is : Y = a+b1X1- b2X2 = 2.245 + 0.49 X1 – 0.48X2. From this, it is said that the activity value (Y) is effected by the variable of learning model LAPSH at the Economy subject amounts 0.49.

The result of data analysis is stated that the effect of learning model LAPSH to the student's activity can be showed from the test result t(persial) with thitung > ttabel namely 5.777 > 2.045 so the hypothesis Ha is accepted and H0 is rejected, so there is the effect which is significant of learning model LAPSH to the students' activity at the Economy subject in SMAN 1 Bukit Tinggi, West Sumatera.

As the research time, it gets some problems in applying the learning model LAPSH by the researcher at the first experiment class such as the time for discussing to finish the students' problem in understanding the aims of the statement in working-team sheet which the researcher gives, furthermore, the problem faced as checking again the answers, not more students who ask to other group who is representing and there are also the students who do not followthe discussion si that the researcher has get difficulty in conditioning the grups.

V. CLONCLUSION

Analyze and understand all the provided review comments thoroughly. Now make the required amendments in your paper. If you are Based on the research done and from the data analysis that there is the effect of learning model LAPSH to the students' activity at the Economy subject in SMAN 1 Bukit Tinggi, West Sumatera Province. The learning model LAPSH can be one of the learning models which can be used by the teachers to increase the students' activity.

As the research time done, there are some problems faced by the researcher in applying the learning model LAPSH to the first experiment class namely as the discussion time to finish the students' problems to understand. The aims of the statement in the work-team sheet which the researcher gives, then the problem is as rechecking the answers, not more students ask the other group presenting and there are also the students who do not follow the discussion , so that the researcher gets difficulty in conditioning the class.

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