The Effect of Integrated Model and Motivation Models on Learning Outcome of Students in Animal and Human Organ Order Material at Class V Elementary School/Paket A Program

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Abstract: This study aims to determine differences in learning results of animal organ circulation of animal and human blood between learners who learn through learning integrated models and learners who learn through conventional learning, differences in learning outcomes of learners who have high motivation with learning outcomes learners who have motivation low as well as the interaction between the integrated model and the motivation of the students learning outcomes in the class V SD/Paket A Program. This research type is quasi-experiment research with a 2x2 factorial design. The instrument used consisted of a questionnaire of learning motivation, observation sheet, and rubric as well as a test of learning result. Data were analyzed by two-way ANOVA test. From the analysis results obtained: (1) learning outcomes of learners who are taught with an integrated model is better than the learning outcomes of learners who were taught with conventional models; (2) learning outcomes of learners who have high motivation is better than the learning outcomes of learners who have low motivation; (3) there is no significant interaction between integrated model with motivation to learners learning result.

Keywords—Integrated Model, Learning Motivation, Conventional Model, Learning Outcomes

I. INTRODUCTION

Education is one of the decisive factors in an effort to improve human resources. It is very important that everyone needed to think forward in the modern era. The nation will be advanced if education is done well. Through the education will be able to express his thoughts and develop talents to gain a better life in the future.

The development of education in Indonesia is so rapidly, in line with the pace of developments in technology and science. A fairly rapid educational development is also supported by the government's efforts are constantly revamping and improving our education system that is oriented toward improving the quality of education. Quality education will produce the quality of human and noble.

The improvement and refinement of learning through curriculum changes by the government. Starting in 2013 the government implements a new curriculum as a refinement of the KTSP curriculum in 2006. 2013 curriculum uses an integrated thematic approach. Integrated thematic learning is a learning approach that integrates the various competencies from various subjects into themes [1].

Students in elementary/Paket A Program learn from the smallest thing to the widest, seeing itself as the center of the environment that is a whole not yet clear the elements [2]. Uncertainty about a topic itself can not manifest in the form of a good questioning ability. Ability to mingle with things more abstract has begun at elementary school/ Paket A Program age. Therefore the packaging of the learning experience will greatly affect the meaningfulness of the experience for them.

Thematic learning with a scientific approach to the curriculum in 2013 has been implemented in several primary designated, learning activities have been implemented in accordance with a teacher book and student, but learning that held still centered on the educator and less attention to the learner as a

unique individual. Educators feel obligated to complete the curriculum targets so that the lesson learned is more of a transfer of knowledge. Learning is successful when learners can answer all questions given correctly. As a result, there is learning that is more "drilling" problem-solving.

The involvement of students in the learning process less visible and more to receive information from educators, so that they lose their natural learning experience and direct experiences. Sensory experiences that form the basis of abstract learning ability of students to be untouched, it is the main characteristic of the development of primary school age children. Activities learners more answered the question on students' books, thus causing boredom and less motivated to learn. Educators should not focus on a single integrated learning model only. According to Daryanto [3], there are three models of integrated learning that can be used in elementary school/Paket A Program: (1) the model connected, (2) the model webbed (theme), and (3) integrated model (alignment).

Integrated learning model need to develop in an elementary school/Paket A Program because it allows the learners to understand a phenomenon in many ways. The integrated model is one of the learning models that can be used in the learning activities into the field of development, including cognitive, social-emotional, language, moral, and religious values, physical motor skills and art.

According to Fogarty [4], integrated learning model is a learning that combines four subjects in prioritizing the skills, concepts, and attitudes that overlap in four or several subjects.

In the implementation of integrated model learning can be combined with several different subjects but have the same essence, for example in reading texts that are part of the Indonesian language subject, can be included learning items that can be related to Mathematics, Natural Knowledge, and so on. In this case, required the arrangement of the contents area of a complete reading so that it can be used to convey various grains of learning from a variety of different subjects.

Motivation affects the success or failure of learning, and generally learning without motivation will be difficult to succeed. Therefore learning must be tailored to the needs, encouragement, motives, interests possessed by learners. Implementation of the right integrated model can be improved the learning motivation of learners, on the contrary learners who have high learning motivation eager to follow the learning and can improve optimal learning outcomes.

Based on the problems, the purpose of this study is to reveal and determine: 1) There is no difference in learning outcomes of students who are taught by a model integrated with the study of students taught by conventional learning models, 2) There is no difference in the outcome. Highly motivated learners with the low motivation of learners in materials circulatory organs of animals and humans, and 3) there is no interaction between the model integrated and motivation towards the study of students in the material circulatory organs of animals and humans.

II. REVIEW OF LITERATURE

Integrated learning is an interesting is using for learning to use themes that reflect the real world around learners and fits perfectly with the development of learners. Daryanto states that an integrated learning is an approach to learn that is deliberately linking some aspects of both intra and inter subjects [5].

According to Joni states that integrated learning is a learning system that allows the students, both individually and in groups, actively to seek, explore, and find the concept and principles of science holistically, meaningful and authentic [6]. Integrated learning will occur when authentic events or exploration of topics/themes become controllers in the learning activities.

The step that is passed in each learning model basically includes three stages: planning, implementation, and evaluation, including integrated learning steps. According to Daryanto general steps taken in implementing integrated learning include 3 stages of activities, namely (1) preliminary activities, (2) core activities, and (3) final activities [5].

According to Cohen et al there are three possible variations of integrated learning in relation to education conducted in a progressive educational setting of an integrated curriculum, integrated day, and integrated learning [7]. An integrated curriculum is an activity to organize the integration of various subject matter through a cross-cutting theme, forming a meaningful whole so that the boundaries between the various fields of study are not strict, or arguably none.

The integrated model is one of the best to be implemented in the learning process in elementary school/ Paket A Program. According to Fogarty that integrated learning is a learning approach that combines four or more subjects by prioritizing the concepts, skills or attitudes that can be combined

from each subject that departs from the central theme [4].

Integrated learning integrated model also has advantages. According to Fogarty the advantages of the integrated learning model are [4]: (1) motivation factor, due to the selection of themes based on interest, (2) The writing of the unit is well known by the teacher, (3)) This model is a to the point curriculum planning that is easily captured by inexperienced teachers, (4) it also encourages joint planning because a learning course works together so that it can be used by all subjects, (5) the student will be easy to see how different activities can be interconnected.

Learning motivation determines how the learners follow the learning process happened. Hamalik said that motivation is a change in person energy in that marked the emergence of feelings and reactions to achieve the goals [8]. Eysenck, motivation is a process that determines the level of activity, intensity, consistency, and general direction of human behavior [9]. In activities of learning, motivation can be said as the overall driving force within the learners that lead to learning activities, which ensure continuity of learning activities and provide direction on learning activities so that the desired goal by the subject of learning can be achieved [10]

Learning motivation plays an important role in delivering the passion, spirit and a sense of calm in learning that have high motivation a lot of energy to carry out the activities to learn. According to Sardiman, the characteristics of the motivation of oneself is as follows [10]: (1) perform the tasks continue until completion, (2) resilient in the face of adversity (not quickly despair), (3) shows interest in various issues (of interest to succeed), (4) has a future orientation, (5) prefer to work independently, (6) to get bored on the tasks of routine, (7) can maintain his opinion, if it is convinced of something, (8) is never easy to let go of things have believed, and (9) love to make and solving problem problems.

Motivation as a motivator and a driver of learning activities for learners can come from within the students or from outside learners themselves. Djamarah found two types of motivation as follows [11]: (1) intrinsic motivation is the motives that become active or functioning does not need to be stimulated from the outside because in each individual there is a drive to do something. Intrinsic motivation consists of attitudes, feelings of interest, talent and need, (2) extrinsic motivation is the motive that is active and functioning because of the external stimulus. The extrinsic motivation consists of praise, reward, punishment, and competition.

The results of a benchmark study to look at the success of learners in mastering the subject matter presented during learning. This will be determined by the occurrence of a change in the behavior of the learners after the learning process ends. As stated by Suprijono that the learning outcomes are patterns of actions, values, understandings, attitudes, appreciation, and skill [12]. In line with the opinions, Sudjana defines the learning outcomes of students is essentially is a change in behavior as a result of learning in a broader sense include the areas of cognitive, affective, and psychomotor [13].

Learning outcomes can be seen through the evaluation of activities that aims to get the data of proof that will b showed the level of ability of learners to achieve the learning objectives.

III. RESEARCH METHOD

The type of the research is quasi-experiment by using a 2x2 factorial design. The type of research used is Random Research Group Control. This research was conducted on MIN 1 Padang City. The objects studied are students of class V MIN 1 Padang consisting of 3 classes. The time of this research was conducted in the odd semester of 2017/2018 in November -December 2017.

The population in this research is all students of class V SD year 2017 / 2018. This research has done in MIN 1 Padang city and as a sample in research is class V student MIN 1 Padang city consisting of three classes that are class of VA, VB, and VC.t To determines the sample class used random sampling technique. Research instrument is a data collection tool that is useful in conducting a study. This study uses three instruments: questionnaire learning motivation, test and observation sheet (assessment) for the attitude aspect of learners. Prior to the use of tested instruments try and tested the validity and reliability, the level of difficulty and different problems.

In general, research procedures can be divided into three parts, namely the preparation stage, implementation, and completion. In the implementation of this research to obtain the data, the data collection techniques conducted there are three questionnaires are motivated to learn, giving the test, observation sheet and rubric. The technique of data analysis used a test that is a normality test, the homogeneity test, and hypothesis test.

IV. RESULT AND DISCUSSION

The data of learning outcome classified into three groups, ie learning outcome data according to assessed aspects, overall learning outcome data and learning outcome based on high and low motivation for experimental class and control class. The learning outcome data according to the aspect assessed is presented in the following figure .

Picture 1. The Average of Learning Outcomes Appropriate to the Aspect Assessed Experiment Class and Control Class
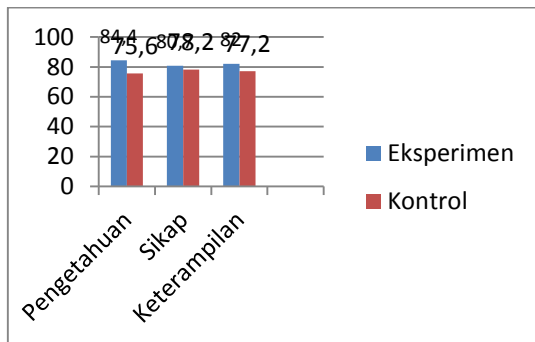
Based on the picture above shows the average of learning the outcome of a student by using the experimental class integrated the model of knowledge aspects, attitudes, and skills higher than the average student learning outcomes in control classes taught using conventional teaching.

Picture 2. Learning Outcome of Learner In Experiment and Control Class
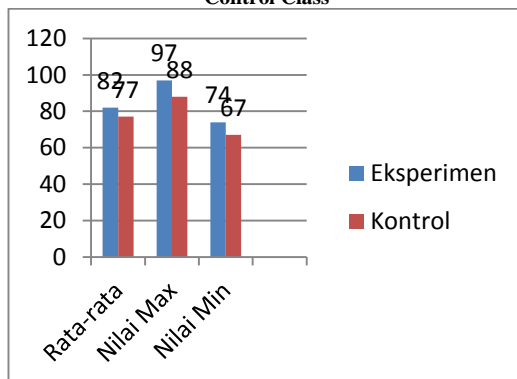
Based on the graph above shows the average of students learning outcomes overall in the experimental class that uses an integrated model of higher than average results control class taught learning with conventional learning. The maximum and minimum of value in the experimental class was higher than the maximum value and the minimum value in the control class taught by conventional teaching. The study of students based on high and low learning motivation can be seen in the following table.

Table 1. Learning Outcome of Learner Based One Motivation In Experiment and Control Class

Sample class	Motivation	X	Xmax	X min	S	S²
Experimental	High	86.28	96.5	84.5	5,8	33.49
	Low	78.59	84.5	73.5	3.4	11.53
Control	High	80.97	87.5	76.5	6.95	48.3
	Low	72.94	77.5	67.5	3.93	15.43

Table 2. The Result of Normality Test

Learning Outcome	Class	F count	Ftable	Description
Sample	Experimental	0.0497	0,1566	Normal
	Control	0.05945		
High Motivation	Experimental	0.10046	0,213	Normal
	Control	0,1871	0,213	Normal
Low Motivation	Experimental	0,0449	0,213	Normal
	Control	0,0545	0,213	Normal

Based on the table above can be seen that the value of Fcount < F table based on experimental class and control class, So it can be concluded the data of the two classes are normally distributed. Each sample class on the normality test was divided into two groups, ie learners who have high motivation and learners who have low motivation. Each group has a value Fhitug < Ftabel, because Fcount < Ftable, both of sample class based on high motivation and motivationlow was also normally distributed.

Homogeneity test was done to see the similarity of the experimental class variables and control class. To determine whether the experimental class and control class has a homogeneous variant or not, then F test was done. The homogeneity test of the sample class can be seen in the following table.

Table 3. The Result of Homogeneity of Sample Class

Test Group	F_{count}	F_{table}	Description
Experimental and Control	1.6027	1,81	Homogeneity
Experimental and Control in High Motivation	1.44	2,33	Homogeneity
Experimental and Control in High Motivation	1,34	2,33	Homogeneity

Based on Table 3 above it can be seen that the calculation by the F test found that the experimental class and control both overall and by high and low motivation of both classes of samples have variants homogenous because both classes of samples have < Fcount Ftable.

Furthermore, to test the hypothesis of the research was done by using two-way Anava two. In summary, can be seen in the following table.

Table 4. The Result of Varians Analysis

Varians Sources	SS	*df*	MS	F_{count}	F_{table}	Description
Between treatment	1.198,8	16		F (1,60)=34.14	4,00	H_a received
Factor (A)	698.94	1	698,94	F (1.60)=24.51		H_a received
Factor (B)	481,27	1	481.27	F (1.60)=0.91		H_a rejected
Faktor AXB	18,62	1	18.62			
Within Treatment	1.228,23	60	20.47			
Total	2.427,06	63				

Based on the calculation of result in table 4 by using a two-way ANOVA test, can be described hypothesis in this research:

Hypothesis 1, based on table 2 above known Fcount> Ftable, which means the hypothesis was accepted, so it can be concluded that there were differences in learning outcomes of learners who were taught using an integrated model with the learning outcomes of learners who were taught with conventional learning. Learning outcomes of learners who were taught with integrated models were higher than those of learners who are taught with conventional learning.

Hypothesis 2, from the table above also obtained Fcount > Ftable, which means the hypothesis was accepted. This means there was a difference between the learning outcomes of learners who have high motivation with learners who have low motivation. The learning outcomes of highly motivated learners in both sample class were better than the low-motivation learning outcomes of the two samples.

Hypothesis 3. Based on the calculation of the results can be obtained Fcount < Ftable, which means the hypothesis was rejected. This means that there was no interaction between the integrated model and the motivation of the learners' learning outcomes on the animal or human circulatory organ.

The learners studied show that learners were taught with the integrated model as a whole, with groups of learners who have high motivation and low motivation, higher than learners were taught by conventional learning. Empirical this was evident from the results of hypothesis testing that has been stated above and test results the hypothesis was discussed. The discussion was associated with the theory that has been put forward in the previous.

The results of the first hypothesis testing revealed that the overall learning outcomes of the learner in material "Organ circulation of animal and human blood". Groups of learners who use the Integrated learning model higher than the learners' learning outcomes using conventional models.

This research proves that the Integrated model has a positive effect on the learners' learning outcomes. Integrated learning model was a learning model that involves learners in the learning process and presents the material in an integrated manner. Students can gain hands-on experience, so as to add strength to receive, store and apply the concepts that have been learned. Thus learners were trained to be able to find their own various a thorough, meaningful, authentic and active learning concept that can improve learning outcomes.

The result of the research using integrated learning was reinforced by previous research result which has been done by the previous researcher that was conducted by [14], about integrated learning, from the result of the research which is obtained the result of first hypothesis testing, it is known that the application of integrated learning model more effective in improving student learning outcomes. Integrated learning stimulates learners to think higher because they have to connect various concepts and knowledge centered on interesting themes or topics.

The difference in learning outcomes of learners who received treatment with an integrated learning model with the learning outcomes of learners who were taught with the conventional learning model can be known in the learning process. The lessons that use the active model of learners well.

Individuals and groups in searching for their own and sharing about the material they are learning. This was in accordance with the opinion of [4] Integrated learning model can provide great opportunities for improved learning outcomes and creativity development significantly toward the achievement of optimal learning objectives.

In contrast to applied the control class, the conventional learning model implemented often results in boredom because it was always presented

with lectures and frequently asked questions. This conventional learning does not provide an opportunity for learners to learn according to their interests and learning styles but tends to wait for explanations and information from educators rather than involvement in the learning process.

The results of hypothesis two test show that in a general group of learners who have high motivation to obtain betterlearning outcomes by using the model of integrated learning instead of using the conventional learning model.

Motivation to learn has a significant relationship and make a meaningful contribution to improve students learning outcomes. According to [15], learning motivation is the driving force from within the individual to conduct learning activities to improve science. The students who have the motivation to learn were very enthusiastic in following every learning process and able to adjust to the difficulty level on some subjects.

The results of this research strengthen research conducted by [16], that the motivation to learn a positive influence on student learning outcomes of science. [17] describes the results of his research on student's learning motivation for science learning achievement in elementary school/ Paket A Program, indicating that learning motivation very effective in improving science learning outcomes. Students who have the motivation to learn are very enthusiastic in following every learning process and able to adjust to the difficulty level on some subjects.

Other previous research [18] about the influence of motivation on student mathematics achievement, the results of his research indicate that there are significant differences in academic achievement of students with high motivation and low motivation in mathematics.

According Bank and Finlayson research (1980) successful students have higher achievement motivation than unsuccessful students.

The result of calculation testing of the third hypothesis with ANAVA test obtained Fcount equal to 0.91 and Ftable obtained was 4.00. Based on the data show F count was smaller than Ftable, then Ha rejected and Ho accepted. This means that there was no interaction between the model of integrated learning and learning motivation in influencing the learning outcomes of the participants on improving the learning outcomes of learners.

The result of calculation testing of the third hypothesis with ANAVA test obtained Fcount equal to 0.91 and Ftable obtained was 4.00. based on the data show F count was smaller than Fcount, then Ha rejected and Ho accepted. This means there was no interaction between the model of integrated learning and learning motivation in influencing. Based on the results of testing the third hypothesis means the main effect of learning model factors each run dependent in influencing learners learning outcomes and there was no interaction between the integrated model and the category of motivation learn participant learning outcomes taught to improve learning outcomes of learners.

The absence of interaction between the integrated model and the motivation in influencing the learning outcomes shows that the learning with integrated model and conventional learning run independently and was not dependent on learners' motivation. Thus, the integrated model can be applied to learners who have high learning motivation, can also improve learning outcomes for learners who have low learning motivation.

In explaining from the findings above, both the learning model used and the indicated learning motivation do not have the same effect, meaning the interfered model applied in the experimental class has an effect on the students' learning outcomes, the better the result, as well as the learning motivation also influences the learning outcomes obtained learners.

Based on the results of research that has been shown that the integrated model was not dependent on the motivation of learning, it can be applied to learners who have high motivation and for learners who have low motivation, because by using the integrated model can increase the motivation of learners.

V. CONCLUSION

Based on the results of research and discussion that has been presented, the conclusion was obtained as follows: 1) Learning outcomes of learners who taught Integrated learning model premises higher than the learning outcomes of learners who were taught with conventional learning model, 2) Results in learners who have motivation higher than the learning outcomes of learners who have low motivation, 3) There was no significant interaction between the learning model Integrated with the motivation to learn the learning outcomes of learners.

Based on the findings obtained in this research, the following suggestions were proposed: First for grade V elementary school/ Paket A Program teachers can apply the Integrated learning model in the learning process, because it is proven to improve

learning outcomes of learners. Second, for advanced researchers, who want to do similar research should examine aspects of the Integrated learning model with variations that can improve the learning outcomes of participants. In this study, the integration of the topic was still limited to several topics from three subjects (science, and SBDP). And the next researcher can integrate various related topics from several subjects so that the meaningfulness of learners learn better.

Third for the related institutions can socialize about integrated learning to be really implemented in the learning process and can provide the means and infrastructure needed for integrated and meaningful learning can be implemented properly.

Based on table 1 above can be seen the average of learning outcomes in experimental class students based on the high motivation taught using integrated model was higher than the average learning outcomes in control class who have the high motivation that was taught using conventional learning. The average learning outcomes of low-motivated experimental class learners also higher than the average learning outcomes of low motivated control class learners.

Normality test was done to see if the data were normally distributed or not. Normality test was done by using Lillifeors test with significance level α = 0.05. The result of the normality test can be seen in the following table.

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