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INFLUENCE APPLICATION OF THE CHILDREN LEARNING IN SCIENCE MODEL TO LEARNING OUTCOMES STUDENTS AT SDN 03 TILONGKABILA GORONTALO

Kudus
Universitas Negeri Gorontalo
kudus@ung.ac.id

ABSTRACT

Study this aim describe is there is Influence Application of the Children Learning in Science Model to Learning Outcomes Students On Material Various Styles in Class Class IV SDN 03 Tilongkabila, Bone Bolango Regency . Type research used _ quantitative descriptive . Method research used _ method study experiment and design study nonequivalent group design. Research this use technique data collection through observation , test , interview and documentation . Sample study this is student class IVa and IVb as many as 39 people. Based on results study obtained score significant of 0.000 < 0.05 can concluded the average yield study student for class experiment and for class control obtained score significant of 0.000 < 0.05. Then Ho is rejected and H1 is accepted because score significant not enough from 0.05. This showing that there is the effect of the Children Learning in Science learning model on results study student in class IV SDN 03 Tilongkabila .

Keywords : children learning in science, results study, all kinds style

INTRODUCTION

Science subjects require real understanding about various events in the environment around or society . Delivery Theory science lessons without use interesting learning methods and models will make student no motivated and reduce curiosity. So, the teacher must capable help students so they can understand something Theory lesson or the things that exist in Theory corresponding with condition environment life student . Based on survey results with method interview at SDN 03 Tilongkabila , activity science learning conducted still using learning models conventional with using the image media listed inside book learning just . this causing student still feel difficulty in accept lesson because there is a number of Theory lessons that don't enough only explained through picture . How process student activity nor work same in learning and solving problem not yet many considered in develop learning and teaching strategies. Using the right learning model could push growing pleasure student to lesson still less .

One good learning model according to appropriate author with condition environment community at SDN 03 Tilongkabila is the learning model of Children Learning in Science (CLIS), ie based on views constructivism , learning student - centered where student active itself mentally build his knowledge yourself , student build mind on activities , Setiawan & Neri (2018: 69).

THEORITICAL REVIEW

Learning Model Children Learning in Science

Sagala (2008: 175) model can understood as something type or design. Then according to Trianto (2007:5) learning model is framework conceptual depiction procedure systematic in organize experience study for

reach purpose study certain, works as guidelines for designer learning and the teachers in design and implement learning. According to Susilo (2020: 109) the most influencing aspect success achievement competence that is method or deep teacher method convey Theory learning .

Based on understanding of the learning model put forward by experts above, researcher conclude that learning model is something framework conceptually designed in a manner simple and systematic in framework reach purpose learning .

CLIS Learning Model was developed by Driver in 1988 in England means child study in science. The CLIS Learning Model aims form basic knowledge (concept) . to in memory students to remember and follow in a row stages activity student in learn concepts being taught (Mayudin & Muhtar, 2020:49). Sutarno (2009: 8.30) states that the CLIS model is an attempted learning model develop an idea or idea student about something problem certain in learning as well as reconstructing ideas or idea .

Based on expert opinion above , researcher conclude that the CLIS learning model is a learning model innovative where student develop his ideas and reconstruct the idea return after experience activity learn .

Every learning model in general own advantages and disadvantages Likewise with the CLIS learning model. Following the advantages and disadvantages of the CLIS learning model (Mayudin & Muhtar, 2020:50):

a. The advantages of the CLIS learning model are get used to student study in a manner independent and capable resolve frequent problems faced in the learning process . this capable push student for role active in learning . So that during the learning process going on could give convenience for student in learn .

b. The disadvantages of the CLIS Learning Model are Clarity every stages in the CLIS Learning Model no always easy held although re planned with ok . The application of the CLIS Learning Model instills in students build understanding independent , p this need a long time and every student need time different handling different. So, every the type of learning model applied own the advantages and disadvantages of each depending on the steps implementation in one class .

CLIS learning has a number of stages according to (Samatowa 2016:74) who can held namely :

a. Stages orientation . Is teacher 's effort to concentrate attention students , for example with mention and show something frequent phenomenon happen in life related daily with topic studied. Effort hook topic to be studied with phenomenon environment (eg product technology) is also one activity in use technology science approach society .

b. Stages appearance idea. Is teacher 's effort to bring up idea beginning student way that can conducted for example with method request student write what only have is known about topic talks or with answer a number of question description open . For stage teachers this is effort exploration knowledge beginning student. because that stages this can also be done through informal interview .

c. Stages disclosure and exchange idea Disclosure and exchange idea get ahead opening to situation conflict. Stage this is effort for clarify and reveal idea beginning student about something topic in a manner general , for example with method discuss answer students on step second (appearance idea) in group small , then one _ member group report results discussion the to whole class . Teacher doesn't justify or blame . At stage opening to situation conflict student given chance for look for definition moderate scientific studied in the book text. Next student look for a number of difference Among conception beginning they with draft existing science in book text or results observation to activities carried out. Stage construction idea new and evaluation conducted for match suitable idea with studied phenomenon To use construct idea new . Student given chance for do experiment and observation , then discuss it with the group.

d. Stages application idea . At stage this student requested for answer drafted questions for apply draft scientific that has developed through test or observation to in situation new existing ideas reconstructed this in the application could used for analyze issue and solve existing problem environment .

e. Stages study repeat idea . Conception that has obtained student need given bait back by the teacher for strengthen draft scientific the. With thus expected conceptual students at first no consistent with draft scientific aware will change conception at first Becomes conception scientific . On occasion this can also be given chance compare draft already scientific arranged with draft start at step 2.

From the learning process carried out by this model give chance to student for role many and active with in a row stages activities given by the teacher to student . Based on model stages by Samatowa 2016:74 Master only role as giver motivation and create condition open learning , helpful _ develop ideas later explain return actual concept from Theory Miscellaneous style and influence on the ending stages or end learning .

Learning Outcomes

Every individuals who carry out the learning process expect achievement success learn . Susanto (2014:5) explains that results study that is changes that occur within yourself students , both concerning aspect cognitive , affective and psychomotor as results from activity learn . It means results study no only viewed in terms of knowledge course , but whole aspect from activity learn . Study results is results finally obtained student after complete the learning process that can made size is student the already succeed in understand submitted material or not yet Firmansyah (2015:34).

Achievement purpose effective and efficient learning ien need theory suitable study with purpose study that alone . Speak about theory study there is many theory study used in Indonesia. On CLIS models it contains theory study cognitiveism and constructivism . As for the theories study cognitiveism and constructivism as following : 1) Theory Cognitivism . According to Jean Piaget theory development cognitive also called theory development intellectual or theory mental development . Theory regarding with readiness child for packed study in stages development intellectual since born until mature . According to Piaget, development cognitive is a process based on mechanism biological development system nerves . With more increase age someone , then more complex arrangement cell his nerves and more his ability also increases . on the basis thinking this that 's why Piaget called it tend adhere theory psychogenesis , that is knowledge as results study originate from in individual . According to Piaget, the learning process will happen if follow stages assimilation , accommodation and equilibration (balancing). assimilation process is an integration process or unification information new to in structure cognitive that has owned by individuals . (End et al , 2019:62). 2) Theory Constructivism . Jean Piaget mentioned that emphasis theory constructivism on process is for find theory or built knowledge from reality in reality . The role of the teacher in learning according to theory constructivism is as facilitator or moderator (Akhiruddin et al , 2019:67). Globally , the influencing factors study student according to Shah (2015: 145-146) exists three kinds, namely : Internal factors (factor from in student), that is circumstances / conditions physical and spiritual students ; Factor external (factor from outside student), that is condition the environment in which it resides around students; Factor approach learning (approach to learning), that is effort study student the strategies and methods used in activity learning materials lesson .

RESEARCH METHODS

Study this located at SDN 03 Tilongkabila Subdistrict Tilongkabila Bone Bolango District Gorontalo Province Research time started from month January 2021 to with month July 2022. Viewable in the following table

Table 1 Research Time

N0	Type Activity	Research Time Year 2022						
		Jan	Feb	Mar	Apr	May	June	July
1	Observation Study							
2	Coordination with Party related							
3	Implementation Study							
4	Preparation Report							

Method used in study this is method quasi experimental research. Design used in study this is nonequivalent control group design. where there is pretest before given treatment with given posttest after given treatment . On design this group experiment nor the control group did not chosen randomly (Sugiyono , 2018).

Table 2 Experiment Design nonequivalent control group design.

Group	Preliminary Test (Pretest)	Action	Final Test (Post-test)
Experiment	O1	X	03
Control	O2	C	04

Description :

O1 = test initial (pretest)
O2 = test final (post-test)
X = class experiment (CLIS models)
C = class control (conventional model)

Research variables is something attribute or characteristic or score of people, objects or activities that have variation specified by the researcher for studied and then pulled the conclusion (Sugiyono , 2010:61). There is two variable in study this , ie use of the Children Learning in Science (CLIS) model (X) and results study Miscellaneous styles and changes (Y). Population is the generalization area it comprises above : object / subject that has quality and characteristics specified by the researcher for studied and then pulled the conclusion (Sugiyono , 2010:117). Population in study this is whole student class IV SDN 03 Tilongkabila Year teaching 2021/2022 totaling 39 students . Data collection techniques performed in study this is observation , interview , test and documentation .

RESEARCH RESULTS AND DISCUSSION

Description of Research Results

Before do research , researcher do a trial run instrument which was carried out on April 7 2022 in class IV SDN 3 Kabila. As for things to do in measure results study student namely , instrument test, normality test and hypothesis test but the test instrument already discussed in chapter III. Research results following is results study from Where is class A and class B ? class A as class experiment and class B as class control . Ability data results beginning student or Pretest , ability data end student or Posttest in the classroom experiment or given class treatment use the CLIS model and capabilities end student in the classroom control or class that uses the conventional model . Data collection begins with do pretest or test beginning on April 13 2022 and April 14 2022 given in class experiment and class control for test beginning before given treatment . Giving treatment using the CLIS model in class experiment done on April 19, 2022 and done class meeting control on April 23, 2022. Then on every end learning given posttest or test end.

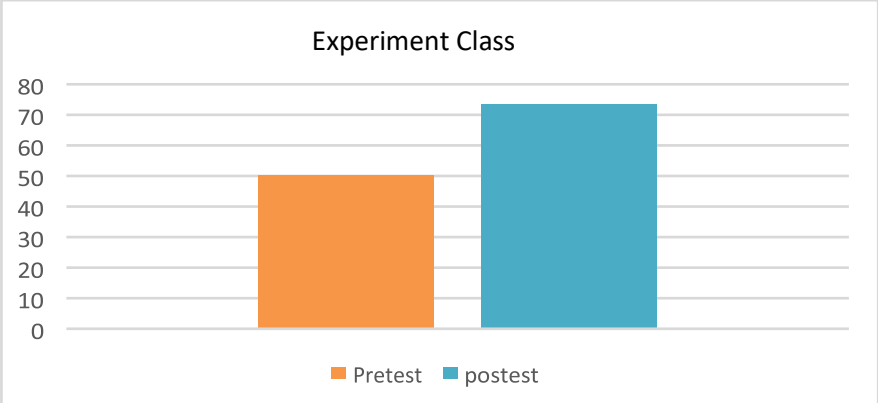
Instrument test Validity and Reliability conducted on April 7 2022 at SDN 3 Kabila Bone Bolango , before do a validity test researcher do drafting about as many as 25 items about for pretest and posttest . About the shared to 12 students . Validity test use formula biserial correlation with compare score rcount and rtable for every grain question .

Based on calculation obtained score coefficient point biserial correlation (rpbi) for grain about number 1. After obtain rcount so step next testing validity with compare rcount and rtable . Due to testing is r count > r table , then about is valid and if r count < r table , then about the invalid . Because there is many grain question you want validated researcher use SPSS 21 assistance for make it easy calculation with method automatic . So that obtained as many as 20 items valid questions and 5 items invalid question . Data on test results of the validity of the test instrument could seen in attachment 10 (page-65). so instrument matter done for pretest and posttest on the material Miscellaneous style and influence that will used at SDN 03 Tilongkabila as many as 20 items questions that can seen in attachment 12 (p-67).

Reliability test use formula Kuderand Richardson 20. Obtained reliability test instrument about test that is 0.92. Based on reliable criteria , instrument questions very high test so that declared reliable. The results of the data from the instrument reliability test questions could seen in attachment 11 (p-66).

Pretest or test beginning given to student in the classroom experiment in class IV SDN 03 Tilongkabila . Test beginning conducted before the learning process with given treatment learning model of Children LearningInScience (CLIS). Pretest aim for know score beginning student in learning on the material Miscellaneous style and influence . Based on the data obtained could seen in attachment 16 (page-77).

Postest or test end given to students _ class IV SDN 03 Tilongkabila , carried out with method researcher teach Theory Miscellaneous style and influence with the Children Learning in Science (CLIS) learning model.



After explain Theory researcher give about to student for know ability student after given treatment . The result could seen in the diagram below this based on the average yield study student . For more he explained difference results pretest and posttest could seen in attachment 16 (page-77).

Figure 1 Comparison diagram score pretest posttest class experiment

1. Description results pretest control class

Pretest or pre - test shared to students before the learning process with conventional models in class IV SDN 03 Tilongkabila for know score beginning Theory about Miscellaneous style and influence . Based on the data conducted could seen in Based on the data obtained could seen in attachment 16 (page-77).

2. Description results posttest class control

Postest or test given end to student after do learning with a learning model conventional class IV SDN 03 Tilongkabila . After researcher explain Theory about Miscellaneous style and influence then given posttest for know score end student . Based on the data obtained could seen in attachment 16 (page-77).

For more clear ratio indigo pretest and posttest in the classroom control could seen in the picture diagram below related with student grade point average .

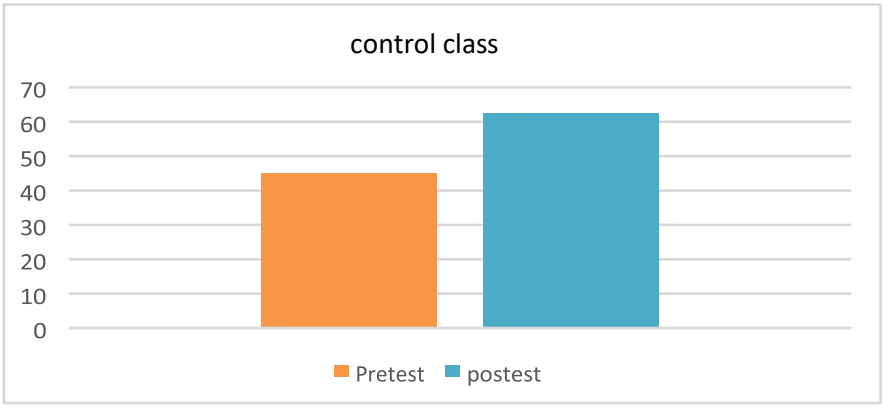


Figure 2 Comparison diagram score pretest posttest class experiment

3. Normality test results

1. Formulate hypothesis

Ho = Data normally distributed if Count < Dtable

Ha = No data normally distributed if Count > Table

2. Data is sorted from the smallest value to score biggest .
3. Determine data frequency as well frequency cumulative data
4. Count Zi values from the data with formula :

$Zi = \frac{Xi - \bar{X}}{S}$ for $Zi = \frac{15 - 50,27}{16,93} = -2.08$

Description :

Zi = Standard score

Xi = Data score

$\bar{X}$ = average value

S = Standard Deviation

5. Determine score of each zi based on the so- called zi table just F(Zi) with excel formula .

6. Count score proportions Z1, Z2, Z3.... Zn is more small value or same with Z1 value is called just as S(Zi) is expressed as following

$$S(Zi) = \frac{\text{banyaknya Z1, Z2, Z3, ... Zn yang kurang dari Zt}}{n}$$

7. Count difference F(Zi) and S(Zi) and determine score absolute .
8. After obtained score absolute from difference F(Zi) and S(Zi) then taken score biggest from difference the that is 0.112
9. Give interpretation Count with compare it to the D table (table kolmogorov smirnov). If D count more small from Dtable so could concluded that the data is normally distributed .

Based on results from the data above obtained score Count of 0.112 and value Table 0.309 for normality test results . With score that 0.112 □ 0.309 proves that the data is normally distributed .

The amount of data that must be tested then researcher use SPSS help for make it easy in testing in a manner automatic . Ability statistics data beginning student class experiment and class control use Kolmogorov-Smirnov with SPSS help can seen in the table following .

Table 3 Table of Normality Test Results

Class	Significance Value
Pretest Class Experiment	0.200
Postest Class Experiment	0.181
Pretest Class Control	0.144
Postest Class Control	0.200

Kolmogorov Smirnov test applies to this test , the data is distributed abnormal if $p < 0.05$ and the data is normally distributed if $p > 0.05$. Based on table calculation using Kolmogorov Smirnov obtained preliminary data results Pretest experiment with score probability (0.200 > 0.05) and the results of the initial data Pretest control with score probability (0.144 > 0.05). Then final data result Postest experiment score probability (0.181 > 0.05) and the final data results Postest control score probability (0.200 > 0.05). In conclusion fourth data value class experiment and class control normally distributed because score probability more big from 0.05.

4. Homogeneity test results

Based on normality test results could obtained that all data is normally distributed so that could homogeneity test was carried out . On results homogeneity is obtained that data is homogeneous due to the results SPSS calculation of sig value . 0.329 > 0.05 applies base decision sig value (2t-ailed) > alpha (0.05) $H_{0\ is}$ accepted or homogeneous data . Data results can seen in attachment 18 (page-79).

5. T-Test hypothesis test results

Hypothesis Test is a test for know what there is or nope the influence of the CLIS learning model on results study student Among class experiment and class control . There is or nope the influence of the CLIS learning model can seen using paired samples t-test. From the statistical data obtained with using SPSS can seen in attachment 19 (page-80).

Based on results calculation with use SPSS assistance obtained score significant of 0.000 < 0.05 can concluded the average yield study student for class experiment and for class control obtained score significant of 0.000 < 0.05. Then H0 is rejected and H1 is accepted because score significant not enough from 0.05.

H0: μ 1 = μ 2 There is no effect of applying the model CLIS learning of results study student class IV at SDN 03 Tliongkabila

Ha: μ 1 ≠ μ 2 Yes influence the application of the CLIS learning model to results study student class IV at SDN 03 Tliongkabila

Test results end (Posttest) after given treatment Among class experiment and class control with comparison of class means experiment more tall than the class average control . Based on hypothesis testing the could concluded that the learning model of Children Learning In Science has an effect to results study student class IV at SDN 03 Tilongkabila .

DISCUSSION

Study this is study experiment , goal study this is for describe is there is the influence of the Children Learning in Science learning model on the material Miscellaneous style and influence to results study student in class IV SDN 03 Tilonglabila . Study this use design study nonequivalent group design. Study this carried out in class IV SDN 03 Tilongkabila , Bone Bolango Regency , Gorontalo with sample taken is class IV A and class IV B use saturated sampling technique as technique taking sample .

Researcher do activity learning on the material Miscellaneous style and influence . Before do study researcher already do observation at school in the next class Becomes sample in study that is class IV A as class experiment and class IV B as class control . Learning conducted 2 meetings , 1 meeting in the classroom experiment and 1 meeting conducted in the classroom control . With adapt with timetable at school .

The 1st meeting was held class IV A as class experiment on April 19, 2022 researchers teach Theory Miscellaneous style and its influence on theme 7 and sub -theme 1 as well using the Children Learning in Science learning model, besides that student do proving experiment Miscellaneous style. Before do learning researcher especially formerly share pretest as test early . After that researcher do ask answer for stimulate student about Theory style , eg with displays picture of 2 children who are pulling and pushing a table proof exists style . Then student shared into 3 groups and distribute sheet work students and do test To use solve conflict or clarify idea beginning students and prove alone various type style through experiment . Every chairman group record results experiments carried out with cooperation group on sheet work students who have shared . Then each group report results work . The concept has obtained student then given strengthening with researcher explain Theory Miscellaneous style and influence . At the end learning student shared posttest as test end .

The 2nd meeting was held class IV B as class control on April 23, 2022 researchers teach Theory Miscellaneous style and influence with learning models conventional . Before do learning especially formerly student shared ptest or test early . After that researcher do appreciation with show pictures of people weaving in books text learning and doing question and answer about Theory style . Researcher explained Theory Miscellaneous style and influence eg , style muscles , style spring , style electricity , magnetic force , force gravity , force friction and influence style in life . Then student shared into 3 groups and distribute sheet work student with do experiment . Every chairman group write and report results work . Researcher do reinforcement of results work student . At the end learning student given posttest as test end .

Stage beginning researcher make plan implementation learning , and questions to be made as instrument evaluation results study students on the test initial (pretest) and test final (posttest) in class experiment and class control . this made as supporters success in implementation activity learning .

Before do research , researcher especially formerly do the validity and reliability of the question instrument on April 7 2022 at SDN 03 Kabila , Bone Bolango Regency class IV as many as 17 people, however students present _ as many as 12 people at a time do validity and reliability . Instrument questions that have been tested for validity and reliability and declared valid and reliable are used as pretest and posttest in the research process in class IV SDN 03 Tilongkabila . After validated use SPSS 21 program assistance was obtained total grain 20 valid questions and 5 invalid questions .

For know results study student so conducted pretest and posttest for know level knowledge student to material to be taught . Based on results learning score pretest with an average of 50.28 out of 18 students in the class experiment and an average of 45.00 of 18 students in the class control . Could seen from score posttest as ratio obtained an average of 73.33 of 18 students in the class experiment and an average of 62.50 of 18 students in the class control .

From the results data learning could obtained that grades in class experiment more tall compared class control . Corresponding with results from hypothesis testing obtained score significance of $0.000 < \alpha = 0.05$ in class experiment and class control. results of hypothetical data could seen in attachment 19 (p . -80). Then H0 is rejected and H1 is accepted . With thus could concluded that there is the effect of the Children Learning in Science (CLIS) learning model on results learn students on the material Miscellaneous style and influence in class IV SDN 03 Tilongkabila .

CONCLUTION

Based on study results obtained from score given pretest before treatment with an average of 50.28 of 18 students in the classroom experiment , the average of 45.00 of 18 students in the classroom control . After given treatment obtained score postest with average 73.33 of 18 students in the class experiment and 62.50 of 18 students in the class control . Result after t test was performed with use paired sample test -test obtained showing that sig.0.000 value < 0.05 in class experiment and sig value . 0.000 < 0.05 in class control . Then $H_{0\ is}$ rejected and H_1 is accepted . From the data above prove that the Children Learning in Science (CLIS) learning model has an effect positive to results learna student with increasing values and motivation student in learning in class IV SDN 03 Tilongkabila .

SUGGESTION

a. The CLIS learning model can applied as a choice of innovative learning models for increase results study students and make interesting optimal learning for students in SD/MI

b. At the start learning there is good for know knowledge beginning students and students could chance for disclose draft themselves and corrected by teachers who apply the CLIS model

c. For researcher next one you want researching the CLIS model is expected for do study with study CLIS stages with more ok .

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