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Research Article

The Effectiveness of Providing Student Worksheets in an Effort to Improve Science Learning Outcomes for Class V Elementary School Students

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ABSTRACT

This research aims; (1) to obtain an overview of the science learning outcomes of the fifth grade students of SD Negeri Kalukuang II Makassar who were taught by giving Student Worksheets, (2) to obtain an overview of the science learning outcomes of the fifth graders of SD Negeri Kalukuang II Makassar who were taught without the provision of Student Worksheets, and (3) To examine the science learning outcomes of fifth grade students of SD Negeri Kalukuang II Makassar who were taught by giving student worksheets without giving student worksheets. Based on the results of data analysis and discussion of research results, it can be concluded that; (1) The results of data analysis show that the average score of science learning outcomes for fifth grade students of SD Negeri Kalukuang II Makassar who are taught by giving Student Worksheets is 16.1563 from an ideal score of 20 with a standard deviation of 3.44, (2) The results of the analysis The data shows that the average score of fifth grade science learning outcomes at SD Negeri Kalukuang II Makassar who are taught by giving Student Worksheets is 12.5313 from an ideal score of 20 with a standard deviation of 3.689, and (3) After analyzing the data derived from If the population is normally distributed and homogeneous, a hypothesis research is conducted where the probability ($P = 0.000$) is smaller than ($\alpha = 0.05$) so that it is stated that there is a difference between the science learning outcomes of fifth grade students of SD Negeri Kalukuang II Makassar who are taught with giving Student Worksheets -and those who are taught without giving Student Worksheets. Thus, it can be concluded that the science learning outcomes of fifth grade students of SD Negeri Kalukuang II Makassar who are taught by giving student worksheets are better than those taught without giving student worksheets.

Keywords: Effectiveness, Learning outcomes, Student worksheets

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Introduction

Maluku is one of the provinces in Indonesia IPA are means think scientific and one key main in find relationship and regularity Among a number of thing to be disclose draft about nature (Husna et al., 2020). IPA is also a right method think logical with characteristic systematic , careful and thorough as possible give utility practical in life needed everyday solving in a manner careful and thorough (Fauziah & Nurita, 2019).

Importance learn science no free from role in all type dimensions life, for example many problem needy life ability count and measure. Count leads to arithmetic (study about number) and measure leads to geometry is Foundation or basic science (Astra et al., 2015).

Along with time and movement development national , in the field constant education experience change , then government has attempted increase quality education national through revamping system education national with all components attached to it (Aiman et al., 2020). One of them is change (improvement) curriculum and science teaching in schools , start from school base arrived at school medium general (Melawati et al., 2022).

In the world of science , science plays a role as language possible symbolism realization communication scientific and precise as method think logical , besides is one base and base reject development or development sciences others , IPA is also a solid foundation for development knowledge knowledge and technology in effort increase well being and fulfillment needs people human (Nurlaila & Lufri, 2021).

Problems technology up to date most no could complete only with intuition and physique as well as past experience , likewise with approach empirical many complete problem time past , however fail reach speed great height and strength for face all situation change (Suryawati et al., 2020;Widowati et al., 2018). Changes the more complicated and necessary long time and high cost. This is where IPA offers self as tool drafting and planning evaluation cost (Putra & Utami, 2021;Ernawati & Sujatmika, 2021). because it , no could denied that for support success development nationally supported by use knowledge

knowledge and technology , the role of science is very important (Khofifah & Mitarlis, 2021).

Field education , role mastery of IPA for students , both at school base as well as at school medium is very important , because mastery that will Becomes important and powerful tool for learn eye other subjects , both at the level same education especially at a higher level high (Syarifah & Iswari, 2021;Arizen & Suhartini, 2020).

Remember adequate role of IPA important so mastery student to IPA always demanded to be optimal for school basic(Yasin et al., 2019) . Meanwhile on the ground , reality show that performance learn science school base still relatively low (Andayani et al., 2021). It turns out demands that always bumped into three problem tree namely: (1) students with all type condition, (2) material with all characteristics, (3) method teach with all suitability. Problems the each other related one each other temporarily the solution need special treatment for each problem (Megahati et al., 2018). In Thing material , IPA has problem arranged tree in a manner hierarchical (Maharani & Yohandri, 2020). because it , students absolute demanded for dominate Theory in a manner complete (Warodiah et al., 2021). In Thing method , no there is none method regular science teaching suitable and effective for all topics material and fit all age student (Sinuraya et al., 2019).

Various method, science teaching has researched and tested for get more method well , one method science teaching in schools base that is method gift sheet work student (Rukmana & Alimah, 2019;Kusumawati et al., 2020). Method this on purpose developed for gift answer to problem science teaching in schools base , among other things is level intellectual child still on stage preoperational so that child not yet capable understand science concept (Febriansyah et al., 2021). Method this very emphasize aspect memory and activity child in triggered learning with often given exercises to students, meanwhile bait behind will have pleasant result for student. With method this , frequency study child could increase so that mastery child to presented material Becomes more great (Irham et al., 2017;Harwati & Rokhmat, 2021).

From the description above, can concluded that method sheet work student is method effective study on the side practice student for think fast and skilled in count, also embed as early as possible will importance dominate calculation base as capital for understand science concepts (Sumarmi et al., 2021).

Based on Thing that's writer want to study more deep through study about how much influence gift sheet work student in effort increase results learn science students class V SD Negeri Kalukuang II Makassar.

Methods

This research is a quantitative research conducted by direct experiments on the samples used. the sample will be given two different treatments, namely by giving student worksheets and without giving student worksheets (Sugiyono, 2018). the sample used in this study was Class V Sd Negeri Kalukuang II MAKASSAR. The learning outcomes will be processed using descriptive analysis, namely by testing normality, homogeneity and testing hypotheses for research decision making.

Hypothesis Researcher

Based on background back and summary problem so hypothesis study formulated as following: "Student Science learning outcomes Class V SD Negeri Kalukuang II Makassar taught with gift sheet work student Increase". For test statistics, hypothesis formulated as following:

Ho: $\mu_1 = \mu_2$ versus Hi: $\mu_1 > \mu_2$ Where:

1. μ_1 = Average score population with gift sheet work student
2. μ_2 = Average score population with without gift sheet work student.

Results and Discussion

Analysis Results Descriptive

Analysis descriptive conducted for describe characteristics score results learn science students for each group treatment learn. Science Learning Outcomes Taught with Providing Worksheets Student. From the results analysis descriptive obtained statistics score results learn the science being taught with gift sheet work student could summarized in table as following:

Table 1. Descriptive score results learn what is taught with gift sheet work student

Statistics	Statistical Value
Size sample	32
Ideal score	20
Maximum score	20.00
Min score	8.00
Average	16.1563
Range	12.00
Variation	10.532
Standard deviation	3,244

If score results learn IPA _grouped to into five classes that refer to groupings mastery material. According to " Guidelines analysis results

learning " Department of Education and Culture (Nuryanti, 2003:29) can seen in table following :

Table 2. Descriptive frequency and percentage score results learn what is taught with gift sheet work student

Score	Mastery Level	Kategori	F	%
19 - 20	>90%	Sgt. tall	7	21.875%
14 - 13	65%-90%	Tall	18	26.25%
12-13	55%-64.9%	Currently	4	12.5% 3.125%
10- 11	45%-54.9%	Low	1	6.25%
0-9	< 44.9%	Sgt. low	2	

Based on results table 2, got served in form chart following.

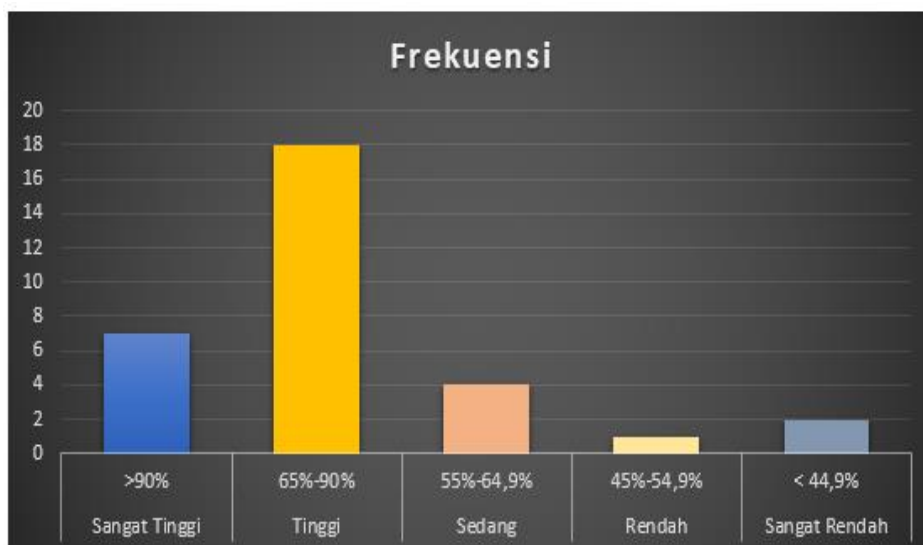


Figure 1. Descriptive frequency of student learning outcomes by using student worksheets

Science Learning Outcomes Taught Without Providing Worksheets Student. From the results analysis descriptive so statistics score

results learn the science taught without gift sheet work student could summarized in table as following.

Table 3. Descriptive score results learn what is taught without gift sheet work student

Statistics	Statistical Value
Size sample	32
Ideal score	20
Maximum score	19.00
Min score	6.00
Average	12.5313
Range	13.00
Variation	13.132
Standard deviation	3,689

Table 4. Distribution frequency and percentage score results test performance learn what is taught without gift sheet work student

Score	Mastery Level	Category	F	%
19-20	>90%	Sgt. tall	2	6.25%
14-18	65%-90%	Tall	10	31.25%
12-13	55%-64%	Currently	6	18.75%
10-11	54%-54.9%	Low	7	21.875%
0-9	<44.9%	Sgt. low	7	21.875%

Based on results table 4, got served in form chart following

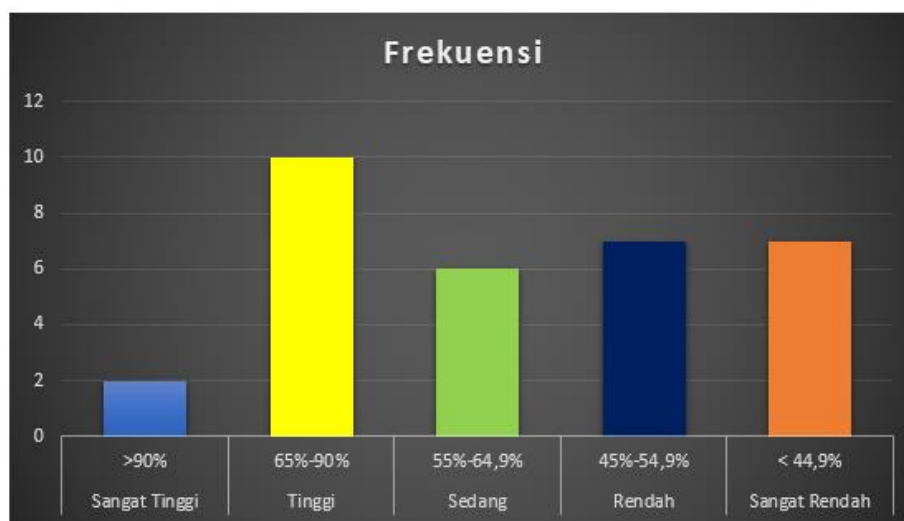


Figure 2. Descriptive frequency of student learning outcomes without using student worksheets

Analysis Results Inferential

Testing Requirements Analysis

Before conduct statistical tests inferential that is with use t-test statistics, then especially for=merly conducted testing requirements analysis as following:

Testing Normality

Testing normality aim for see what is the data about the results learn IPA on each group slowly originated from normally distributed population . Test results normality on both seen treatment show that P value = 0.176, with level significance $\alpha = 0.05$ means p value $< \alpha$, then could concluded that result data study IPA from second group treatment originated from normally distributed population.

Homogeneity Test

Testing homogeneity aim for see what is the result data learn IPA respectively group treatment from homogeneous population. Test results homogeneity in both treatment show that P value = 0.259 with level significance $\alpha = 0.05$, means value $P > \alpha$, then could concluded that result data test performance learn science from second group per -practice originated from homogeneous population.

Testing hypothesis Study

From the results analysis inferential that is with the t-test showing that score probability

0.000 with $\alpha = 0.05$. From the results the seen that score probability more than α . this means that hypothesis H_0 is rejected and H_1 is accepted . So that could it 's concluded that results learn science students who are taught with gift sheet work student more good compared with learn the science taught without gift sheet work student student class V SD Negeri Kalukuang II Makassar.

Discussion

Refer to results research obtained, then in part this put forward discussion results re-search. Analysis results descriptive pointed right that results learn science students class V SD Negeri Kalukuang II Makassar are in category high. From 32 respondents for group experiment there are 56.25% of students who have score results belonging learning tall whereas for group control of 32 respondents there are 31.25% of students who have results belonging learning high. From the results data analysis also shows, that average value for group experiment 16.1563 and the group mean value control 12.5313 as well students who have score results study classified science tall for group experiment namely 56.25 % and 31.25% for group control, students who have score results study classified science tall for group experiment namely 56.25 % and 31.25% for group control , students who have score results study IPA classified currently for group

experiment namely 12.5% and 18.75% for group control, students who have score results learning science which is classified as low for group experiment namely 3.125% and 21.875 % for group control, students who have score results study classified science very low for to the group experiment namely 6.25% and 21.875 % for group control/

From the description above seen that results learn science students Class V SD Negeri Kalukuang II Makassar taught with gift sheet work student more good from results study taught students without gift sheet work student. This indicated by the average score to a given group sheet work student more tall from the mean score of the group that did not given sheet work students and groups that do not given sheet work students who got score very low more many from group given the Worksheet Student as well as category score tall and very tall for given group sheet work student more much compared group that doesn't given sheet work student. Analysis results statistics inferential show that hypothesis study received or results learn science students Class V SD Negeri Kalukuang II Makassar taught with gift sheet work student more good compared with taught students without gift sheet work student activity this could seen from the hypothesis test that shows that score probability ($P = 0.000$) more small from α ($\alpha = 0.05$) kindly theoretical, success student in learn science because with sheet work student could increase ability in remember, the essence of giving practice this is gift repetition and emphasis for memorize. With thereby student spurred for more many practice himself use potency maximum maybe.

Conclusion

Based on results data analysis and discussion, then could pulled conclusion as following The results of the data analysis show that the average score of the results learn science students Class V SD Negeri Kalukuang II Makassar taught with gift sheet work student is 16.1563 of ideal score of 20 with standard deviation 3.44. The results of the data analysis show that the average score of the results learn science students Class V SD Negeri Kalukuang II Makassar taught with gift sheet work student is

12.5313 of ideal score of 20 with standard deviation 3.689. Once done derived data analysis from population that is normally distributed and homogeneous so conducted study hypothesis where the probability ($P = 0.900$), is more small than α ($\alpha = 0.05$) so stated that there is difference Among results learn science students Class V SD Negeri Kalukuang II Makassar taught with gift sheet work students and those being taught without gift sheet work student. With so, can concluded that results learn science students Class V SD Negeri Kalukuang II Makassar taught without with gift sheet work student more b ok with what is being taught without gift sheet work student.

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