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Direct Learning And ARCS (Attention, Relevance, Confidence, Satisfaction) : Which Learning Model Influences Statistical Reasoning?

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Abstract

Reasoning ability refers to what students can do with statistical material and how they can use statistical concepts to solve statistical problems. One way to measure students' statistical reasoning is to use a learning model that emphasizes statistical reasoning abilities . Study This use method experiment pseudo with take sample 1 class experiment and 1 class control . Study This aim For know description of the ARCS learning model in the material statistics to ability reasoning statistics student class VIII MTs Negeri 02 Bombana , Para know there is influence of the ARCS learning model on the material statistics to reasoning statistics student class VIII MTs Negeri 02 Bombana . Based on results study obtained ability reasoning statistics student MTsN 02 Bombana taught with the ARCS (Attention, Relevance, Confidence, Satisfaction) learning model average score 69.11 from 30 students as well as liveliness student during four meetings consecutive are 76.63%, 82.89%, 86.84%, 90.78%. Based on hypothesis testing of average ability reasoning statistics taught students with the ARCS model (Attention, Relevance, Confidence, Satisfaction) more tall than the students being taught with a learning model direct . So you can withdrawn conclusion that exists criteria significant influence towards the ARCS learning model.

Keywords: attention; confidence; relevance; satisfaction.

INTRODUCTION

Education is business man For repair and improve his personality so that in accordance with principles society and culture they. In development, the terms " education " or " pedagogy "are meaningful help or deliberate guidance given by adults to somebody For help they grow mature. Apart from that, education is efforts made in a way aware by family, society and government For prepare people to role in various environment life . This was achieved through education, guidance, and/ or exercises done inside and outside institution education (Triwiyanto, 2014). Mathematics is one of the field very helpful education progress knowledge knowledge in a way whole.

Mathematics is field knowledge very important knowledge that contributes big impact on world progress. Even life daily We influenced by mathematics. According to (Zuliatin, 2021) Mathematics is subject research that has object abstract and constructed through a reasoning process deductive, where is the truth something draft obtained as consequence logical from the truth has been accepted previously. With Thus, relationships between the concept is very strong and clear. Odds and statistics is material Mathematics in Schools Intermediate First and School Upper Middle School in Indonesia. Statistics can considered as tool For solve problem knowledge knowledge, life everyday, and place work (Yusuf, 2017). The 2013 curriculum places special emphasis on statistics and probability topics because knowledge of these topics is very important.

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Statistics is a mathematics subject and is very important for education, especially in human life, from laboratory work to government work. Therefore, it is very important for prospective undergraduates to understand the basics of statistics. This is in line with Moore's opinion that statistics can be used to solve problems in science, everyday life and the workplace (Isnarto et al., 2020). Ability reasoning statistics is condition For understand statistics.

Reasoning ability is an important ability that students need to improve their understanding of statistics. Reasoning refers to what students can do with statistical material and how they can use statistical concepts to solve statistical problems (Rahayu & Sari, 2017). Statistical reasoning ability is the ability to understand information in daily life based on statistical data; ability to use existing data to determine effective solutions to specific problems; and the ability to produce multiple outcomes (Maryati, 2017). Statistical reasoning should be taught to students in junior high school. Moore (in Ibrahim et al., 2019) said that students must experience the process of collecting and exploring data directly. This experience should include a discussion of data collection techniques, choices of summary statistics, and how to draw conclusions. According to Minister of National Education Regulation number 22 of 2016, reasoning ability is one of the abilities that students must have. According to (NCTM, 2000), reasoning and proof skills are one of the standards of the mathematics learning process. Consequently, statistical reasoning is one type of reasoning related to statistical material. Statistical abilities and skills are very important for society.

According to (Nisa, Zulkardi, & Susanti, 2019) showed in study they that data representation such as histograms and capabilities For create and interpret chart is component important in learning statistics. Study they about ability reasoning statistics students on the material presentation of histogram data via PMRI learning. However , students often Confused Differentiate between bar charts and histograms. Additionally, students face difficulty in read with appropriate information from the histogram. They also have difficulties find representation scale in form vertical and horizontal lines. As a result, they experience difficulty in describe data, including histograms. They also experience it difficulty in understand and reason representation chart distributions, especially histograms. Apart from that, lesson learned statistics in school not enough notice method reason in a way statistics Because student only follow teacher's instructions and not know what and how the data was obtained . Apart from that, (Rosidah, 2015) stated that student No own ability For interpret reasoning statistics and create appropriate conclusion with context .

Results of initial tests conducted by researchers at MTsN 02 Bombana, where they gave three students with different ability levels. After reading the questions, high-ability students can plan, solve the questions, and write and provide explanations. The questions cover metrics of statistical reasoning ability from the viewpoints of description, organization, data display, analysis, and interpretation. However, they are less careful in assessing the questions they solve. Students with moderate abilities only work on two numbers from the three numbers given; students with less ability finally answered two numbers but not systematically or precisely. Researchers found that the three students did not take the steps necessary to solve the problem; instead, they wrote down their answers directly, which was sometimes inaccurate. The result is that the three students still lack in explaining, showing, drawing conclusions, and interpreting questions.

In addition, researchers do interview with teachers at MTs Negeri 02 Bombana class VIII. the teacher say that student Not yet capable explain and present material statistics with OK, so they No can answer question statistics with Correct when the teacher gives question to them . Teacher at MTs Negeri 02 Bombana No using the learning model established by the 2013 Curriculum, which encourages student For participate in a way active in their own learning process . Therefore That's it, educator only using a learning model direct and lecture . make

ability reasoning statistics student not enough used (Nistarina, 2023). According to Garfield, approaches, models, and assessments can be used to improve students' statistical reasoning. One way to see and measure students' statistical reasoning is to use a learning model that emphasizes statistical reasoning abilities (Shiau Wei et al., 2015). One way to use the ARCS learning model, which stands for Antention (attention), Relevance (relevance/connectedness), Confidence (confidence), and Satisfaction (satisfaction), is as a teaching effort to encourage students to participate more actively in the process. learning.

ARCS learning model is possible alternatives used by teachers for increase participation student in learning. Learning model This consists from four mutual elements very important related matters For activity learning: attract and retain attention student during learning (attention), creating material relevant with students (relevance), growing confidence and trust students (confidence), and foster a sense of satisfaction student. All element This can help increase motivation student For learn and shape ability reasoning statistics they. Learning model This own syntax that can applied to all material mathematics. Statistical reasoning abilities are closely related to the ARCS (Attention, Relevance, Confidence, Satisfaction) learning model. This model allows students to face mathematical difficulties gradually. Students can improve their abilities, especially in statistical reasoning, by improving their skills in math problems that require them to solve problems quickly. The ARCS learning model helps students improve their statistical reasoning skills. One of the shortcomings of the PBL model, according to (Yusri, 2018), is that students are not interested or think the problems being studied are difficult to solve. As a result, students do not want to try because they are worried they will make a mistake. In addition, students do not know why they are trying to solve the problem being studied. As a result, they will not get any knowledge they want. Increasing student self-confidence is one of the four components of the ARCS learning model. Increasing students' self-confidence results in better mass reasoning. The ARCS learning model is more effectively used in classroom education than the problem-based learning model, or PBL. According to (Jamil, 2019) states that the syntax of the ARCS learning model can be applied to all mathematical materials, which means that all interactive learning approaches can be used in the ARCS model. Apart from that, he stated that the ARCS model can provide benefits, such as increasing the motivation and self-confidence of students who lack self-confidence.

Additionally, results study show that the ARCS (Attention, relevance, trust, and satisfaction) learning model can applied in education. The only one a study conducted by (Hidayat, 2016) found that the ARCS learning model influences activity students and achievement academic they. The influence of the Attention, Relevant, Confident, Satisfication (ARCS) learning model on the material statistics to reasoning statistics student Class VIII at MTs Negeri 02 Bombana is subject this research. According to (Jamil, 2019), ARCS consists of from four describing category various characteristic motivation individual. Categories This is interest / attention (Attention), relevance (Relevance), trust self / confident (Confidence), and satisfaction / proud (Satisfaction). Analysis problem motivation student based on eye lesson carried out by the base model design motivation ARCS learning. In design ARCS motivation, four categories of strategies used: (1) interest and attention participant educate to eye lesson For cultivate a sense of desire know and sustained attention, (2) relevant / related with eye lesson with reasons and needs participant educate , (3) hope participant educate to eye lesson For increase trust yourself and push success , and (4) satisfaction participant educate with the learning process from perspective student. (Rosidah, 2015) stated that reasoning statistics is method somebody understand concepts and information statistics. This includes make interpretation based on a set of data, data representation, or summary statistics. Reasoning statistics can also be done includes the process of connecting ideas with other ideas, such as center and spread, or Possible combining ideas about data and opportunity . Reasoning statistics covers a number of steps, like understand data, provide explanation about statistical processes

, and interpreting the result . In other words, reason means understand and explain statistical processes as well as can interpret results statistics in a way comprehensive.

Four stage in reasoning is describe, organize , present , and analyze and interpret data. (Atiyatun Hasanah's, 2019) study found that students who use system study 4MAT for solve problem mathematics own ability reasoning statistics : understand concepts and rules statistics , reveals reason for specific data , offers alternative solution based on statistical concepts and processes , and achieving conclusion . For every meeting , research conducted by (Maidiya & Fonda, 2013) found that attention students , believe it self students , relationships teaching materials with need students , and satisfaction respective students are classified as Good . Every ARCS components have response classified students as positive . Because of the percentage completed students Study in a way individuals (KKM = 75) less from 85%, completeness classic Not yet fulfilled . As a result , learning with the ARCS model no effective . A research conducted by (Hidayat, 2016) found that taught students with the ARCS learning model has the average score is 11.3, which puts they in excellent and achieving category extraordinary results normal.

In addition, students are taught with the ARCS learning model has more results Good in activity biology and learning they. Research conducted in (Wulansari et al., 2019) found that ability reasoning statistics student influenced by the learning model based. (Irsaf, 2014) found in class VII Labschool Middle School, Tadulako University that application ARCS model steps can be increase results Study student. In research (Nisa, Zulkardi, & Susanti, 2019) that discovered that ability reasoning statistics student to material presentation of data through categorized PMRI learning good : 8 students are in the very good category , 11 students are in the category OK , 9 students are in the category enough , 7 students are in the category less , and no There is students who are in the very poor category . Indicator reasoning the most frequent statistics appear is indicator organizing and reducing data by 84.69%.

In research of course own objective separately . Based on problem being explored , objectives study This is For know description of the Attention, Relevant , Confident, Satisfication learning model (ARCS) on the material Statistics to ability reasoning statistics student class VIII MTs Negeri 02 Bombana as well as For know there is influence of learning models Attention, relevant , confident, satisfaction (ARCS) on the material Statistics to ability reasoning statistics student class VIII MTs Negeri 02 Bombana

METHODS

Types of research This is research experiment quasi (quasi experiment). Study experiment pseudo done For test hypothesis about There is or not influence to something action . Study This done For know ability reasoning statistics student between class experiments consisting of 30 students and applying the ARCS (Attention, Relevance, Confidence, Satisfaction) learning model and class control consisting of 32 students and apply method learning conventional . This study use test ability reasoning composed statistics from four question description given in form observation and posttest, or test end .

In research this , method data collection used are (1) exams , which are given at the end principal discussion material discussed . Researcher will make test that uses indicator ability reasoning statistics For measure ability reasoning student . Every assignments carried out by students given score based on How they do it . Next , researchers inspect work students and provide score . (2) Studies, which are carried out at every meeting. when the ARCS model is used For classroom learning . The result used For collect data about activities and participation of teachers and students . Analysis quantitative used for descriptive data. (1) Object analysis descriptive is posttest ability data reasoning statistics student . (2) Before inferential analysis is used to test the research hypothesis, normality and homogeneity tests are carried out.

Homogeneity and normality tests determine whether the data is normally distributed. After the normality and homogeneity tests are completed, hypothesis testing will be carried out to determine the effect of the ARCS (Attention, Relevance, Confidence, and Satisfaction) model treatment (X_1) on students' statistical reasoning abilities (Y_1). Test the hypothesis using the independent sample t-test. According to (Hafelly et al., 2018), the influence criteria are (1) average implementation learning with the ARCS model (Attention, Relevance, Confidence, Satisfaction) 75%; (2) Average ability value students' statistical reasoning is taught using the ARCS (Attention, Relevance, Confidence, Satisfaction) model more tall in a way significant from class taught with using a learning model direct .

RESULTS AND DISCUSSION

The results of teacher observations regarding the implementation of learning in the experimental class and control class from the first meeting to the fourth meeting are shown in Table 1.

Table 1. Description of Successful Learning Management by Teachers In Class Experiment and Control Class

Meeting	Experiment		Control	
	Score	Percentage	Score	Percentage
First	17	77.27%	17	77.27%
Second	19	86.36%	19	86.36%
Third	20	90.9%	20	90.9%
Fourth	20	90.9%	20	90.9%
Average	19	86.36%	19	86.36%

The table 1, shows that teachers have been able to change the way they teach in both classes. The percentage of teacher activity increased compared to the first meeting, and the implementation of lessons from the first to the fifth meeting also tended to increase. Overall, teachers have been able to change the way they teach in both classes. Table 2 shows the results of observations of student activities regarding the implementation of mathematics learning in the experimental and control classes from the first meeting to the fourth meeting.

Table 2. Experimental Class and Control Class Students

Meeting	Experiment		Control	
	Score	Percentage	Score	Percentage
First	59	77.63%	43	71.66%
Second	63	82.89%	49	81.66%
Third	66	86.84%	49	81.66%
Fourth	69	90.78%	52	86.66%
Average	64.25	84.53%	48.25	80.41%

The table 2 shows that the students at the first meeting did not understand how to listen to and carry out the LKPD assignments and were still adapting to their new teacher. However, they got better with each meeting, showing that the students were very engaged and little by little active in the research. Table 3 below shows the results of descriptive analysis of the pretest scores for students' statistical reasoning abilities in the experimental class and control.

Table 3. Descriptive Statistical Reasoning Ability of Experiment Class and Control Class Students

Statistics Descriptive	Experimental Class	Control Class
Number of Samples	30	32
Mean	69.1146	60.1074
Median	66.4063	58.5938
Mode	65.63	64.06
Std. Deviation	13.42034	12.58154
Variance	180,106	158 , 295
Skewness	0.234	0.64 3
Kurtosis	-0.568	1,157
Minimum	45.31	34.38
Maximum	93.75	93.75

Table 3 below shows the results of descriptive analysis of the pretest scores for students' statistical reasoning abilities in the experimental and control classes. Table 4 shows the distribution of students' statistical reasoning ability scores in the experimental and control classes.

Table 4. Ability Value Distribution Reasoning Statistics Student Based on Posttest Data in Class Experiment and Control

Mark	Mastery Level Student	ARCS (*Attention, Relevance, Confidence, Satisfaction*)		Hands-On Learning	
		F	%	F	%
$80\% \leq x \leq 100\%$	Very good	7	23.33%	2	6.25%
$66\% \leq x < 80\%$	Good	8	26.66%	5	15.62%
$56\% \leq x < 66\%$	Enough	10	33.33%	13	40.62%
$40\% \leq x < 56\%$	Not enough	5	16.66%	11	34.37%
$0 \leq x < 40$	Very less	0	0	1	3.12%
amount		30	100	32	100

The results of the inferential analysis test the validity of the hypothesis using the t-test. To complete the hypothesis testing analysis, several stages of analysis include data normality test analysis and data homogeneity test. Tables 5 and 6 show the results of normality and homogeneity analysis.

Table 5. Results of Data Normality Test Analysis of Students' Statistical Reasoning Ability in the Experiment Class and Control Class

Class	*Sig.*	Decision
Experiment	0.200	Accept H_0
Control	0.200	Accept H_0

The significant value for the experimental class is the Asymp value. Sig. (2-tailed) = 0.200 > 0.05 = α, which indicates that H0 is accepted. The significant value of the control class is the

Asymp value. Sig. (2 tails) = 0.200 > 0.05 = α, which shows that H0 is also accepted. Thus, students in the experimental and control classes have the same statistical reasoning abilities.

Table 6. Homogeneity Test Analysis Results

Class	*Sig.*	Decision
Experiment Control	0.474	Homogeneous

H0 accepted Because Sig value = 0.474 more big of 0.05 = α. This shows that the post-test data from second class experiments using the ARCS (Attention, Relevance, Confidence, Satisfaction) and class models taught control with a learning model direct show the same variation . After ensure that capability data reasoning statistics student own normal distribution and variance , L step furthermore is test hypothesis . Hypothesis tested with an independent t-test , or sample data t-test each other free . In IBM SPSS Statistics 22, the t-test formula is used Hypothesis statistics formulated as following : H0: μ1 = μ2 vs H1: μ1>μ2, Criteria : If the value of 1/2 Sig.(2- tailed) ≥ α = 0.05, then H0 is accepted ; If value 1/2 Sig.(2-tailed) ≥ α = 0.05, then H0 is rejected. Hypothesis test analysis results showed in table 7.

Table 7. Hypothesis Testing Students' Statistical Reasoning Ability

***Sig* . (2 – *tailed*)**	**α**	**Decision**
0.008	0.05	H_0 is rejected

According to results testing independent T samples on class posttest data experimental and control shown in table 7, the value (Sig.(2-tailed))/2=0.004 < α = 0.05 indicates that H0 is rejected . Therefore that , you can concluded that ability reasoning statistics student class VIII MTs Negeri 02 Bombana is strongly influenced by the ARCS (Attention, Relevance, Confidence, and Satisfaction) learning model. The data used to obtain quantitative data for this research are the results of the posttest of students' statistical reasoning abilities. The purpose of this posttest is to find out whether the ARCS (Attention, Relevance, Confidence, and Satisfaction) learning model applied to students has an impact on their statistical reasoning abilities. The results showed that the experimental class had good statistical reasoning abilities, with 7 students in the very high category, 8 students in the high category, 10 students in the moderate category, and 5 students in the low category. On the other hand, the control class received an average Posttest score of 60.10, which places them in the category of good statistical reasoning abilities. The experimental class was slightly higher than the control class after the test.

The teacher who teaches the implementation of learning in the classroom is a researcher. Observation of teacher activities and student activities was carried out by the mathematics subject teacher for class VIII C and class VIII D at MTs Negeri 02 Bombana, namely Mrs. Nistarina, S. Pd. The time for implementing learning in research in the experimental class and control class is the same, 10 lesson hours each. Both classes were given 80 minutes to carry out the statistical reasoning ability posttest. The difference given to the two classes lies in the treatment given to each class, namely in the experimental class the ARCS (Attention, Relevance, Confidence, Satisfaction) learning model is applied, while in the control class the direct learning model is applied, in the sense that the learning model is a learning model. which is often used in class before carrying out research.

During four learning meetings, data was obtained on teacher and student activities in managing and following the learning process carried out in the experimental class. Based on sheet observation , the teacher acknowledged that application of the ARCS model (Attention, Relevance, Confidence, Satisfaction) is not it something easy thing . In implementing learning,

teachers experience limitations in not carrying out all stages of this learning model due to limited facilities at the school.

Apart from that, it is not uncommon for problems faced by students to not be resolved well, due to the students' inability to solve the problem and the teacher's lack of focus when explaining the material. For this reason, students sometimes have difficulty completing assignments because the explanations are not in depth. The first teacher meeting in the experimental class carried out preliminary activities by conditioning the class to remain focused and conducive as well as giving appreciation and motivating students and about today's learning material. The initial steps taken by the teacher are: introduce the learning model that will applied namely ARCS (Attention, Relevance, Confidence, Satisfaction).

In the core activity, the teacher displays a phenomenon, then the teacher explores problems regarding the material studied today. The teacher does not carry out one step, namely showing pictures or videos related to today's learning due to limited facilities. After that, the teacher distributes envelopes to each group of students to formulate problems so that students read, study and discuss according to the group theme based on their respective reference sources. Then the teacher provides opportunities and guides students in presenting the themes of each group's material and asks students to respond or answer questions about the related themes of the group presenting. Teachers accompany and strengthen students' self-confidence when presenting arguments. The teacher asks several questions to students or gives opportunities to students who want to ask questions. The teacher also gives students the opportunity to make a summary of the group presentation in question. In the closing activity, the teacher and students will draw conclusions and the teacher will give assignments or homework to students and remind them of the material at the next meeting. At the second to last meeting the teacher continued to improve his teaching methods and managed his time well.

Learning process During four meetings with using the ARCS (Attention, Relevance, Confidence, Satisfaction) learning model , you can seen level liveliness student Keep going increases with each meeting . Based on the results of observations of student activity at the first meeting, an active percentage of 77.63% was obtained. At the first meeting, student activity was still low because they were still adjusting to the learning model applied in class, especially in the early stages of learning. Initially, students were less enthusiastic about this learning, they were still embarrassed when asked to observe and formulate the problem of a phenomenon. Apart from that, there are also students who are not used to study groups, such as being directed to create study groups to formulate problems that have been distributed in envelopes. These envelopes are distributed to each group, students still lack initiative and do not even discuss the problems that have been shared with their group friends. . It can be seen from the students who proposed choosing their own group friends, the lack of cooperation in the group where when presenting the results of their work through presentations and giving examples related to daily life, only one or two students took the initiative and the other group members remained silent even there are students who don't pay attention at all, so only a few students are active when learning takes place.

Over time, the obstacles faced can be overcome well, so that students who were previously less active become more enthusiastic at subsequent meetings. It can be seen from the observation sheet that student activity has increased at each meeting. At the second meeting, student activity reached 82.89%, which can be seen from several activities, starting with enthusiastic students, from formulating problems from envelopes distributed to each group to presenting the results of their work based on examples from everyday life and even responding to questions from other students. At the third meeting, student activity reached 86.84%, certainly better than before. Although Still There is obstacles However with direction and guidance of student teachers start understand with the ARCS (Attention, Relevance,

Confidence, Satisfaction) learning model . Apart from that, they are also more courageous in explaining the results of their work and providing feedback. At the last meeting, the students' activeness and spirit of responsibility in the group was better than before. It can be seen that student activity reached 90.78%. Based on this data, reviewed from the first meeting to the last, it can be concluded that one of the criteria for influence in the learning process is met.

Posttest results of students' statistical reasoning abilities are the data used to obtain quantitative data in this research. The posttest was given to determine whether or not there was an influence on students' statistical reasoning abilities after being taught using the ARCS (Attention, Relevance, Confidence, Satisfaction) learning model. Based on the research results, the experimental class obtained an average Posttest score of 69.11 . If these values are interpreted, then the statistical reasoning abilities of students in the experimental class are classified as good, because 7 students got the very high category, 8 students got the high category, 10 students got the moderate category and 5 students got the low category. On the other hand, in the control class, a Posttest average of 60.10 was obtained , which was in the category of students' statistical reasoning ability which was categorized as sufficient, because 2 students obtained reasoning in the very high category, 5 students in the high category, 13 students in the sufficient category, 11 students in the category low and 1 student in the very low category. It can be seen that the Posttest average in the experimental class is slightly higher than the Posttest average in the control class.

In terms of data diversity (variance), the experimental class has a data variance of 180,106 while the control class is 158,295. The variance value shows that the posttest data from the experimental class is more diverse than the control class. Meanwhile, for standard deviation, the experimental class obtained a value of 13.42034 , while the value obtained in the control class was 12.58154. Both the experimental class and the control class have standard deviation values that are smaller than the Posttest average in each class. This shows that the size of the data deviation from the class average value is small enough so that it can identify that learning in the experimental class and control class is quite even. This means that the information provided by the teacher can be received equally by students. In the experimental class, the information provided by the teacher is quite evenly accepted by the students because the students are interested in learning models that relate to real world problems that they usually encounter and can be understood clearly by the students. The median (middle value) of the experimental class was 66.40, while the median of the control class was 58.59. The value that frequently appears (mode) in the experimental class is 65.63 while in the control class it is 64.06. This shows that there is an influence of using the ARCS learning model on statistics material.

Learning in the experimental class is better than the control class, although there are a few small disturbances encountered, for example some students who choose to remain silent when asked or do not want to give an opinion, are not interested in participating in learning so students are sometimes noisy, making the learning process not conducive, however. because teachers use ARCS (Attention, Relevance, Confidence, Satisfaction) whose learning is not teacher-centered, so students are required to be active. Apart from that, many of the students in the experimental class worked on the questions given seriously and based on what they understood. These things are the reasons or causes why the statistical reasoning abilities of students in the experimental class are classified as higher than students in the control class who are taught using direct learning.

This is in accordance with research found by (Maidiyah & Fonda, 2013) that the ARCS learning model in studying statistical material can be an alternative that can be applied with the hope that students will be motivated in learning. Based on the percentage of implementation of teacher activities in experimental classes taught using the ARCS model (Attention, Relevance, Confidence, Satisfaction) from the first meeting to the fourth meeting in a row ranges from

77.27% to 90.9% and the percentage of student activity is ranged from 77.63% to 90.78%. Meanwhile, the implementation of teacher activities in control classes taught using the direct learning model from the first meeting to the fourth meeting in a row ranged from 77.27% to 90.9% and the percentage of student activity ranged from 71.66% to 86. .66%. Where is the overall average percentage implementation learning with the ARCS model (Attention, Relevance, Confidence, Satisfaction) more from 75%. This is based on hypothesis testing Where mark (Sig.(2 – tailed))/2=0,004 < α = 0.05, then H 0 is rejected where is the average ability reasoning statistics taught students with the ARCS model (Attention, Relevance, Confidence, Satisfaction) is 69.11 more tall than average ability reasoning statistics taught students with a learning model direct namely 60.10. Because everyone criteria influence fulfill , can said that there is significant influence of the ARCS (Attention, Relevance, Confidence, Satisfaction) model on ability reasoning statistics student class VIII MTs Negeri 02 Bombana.

CONCLUSION

A number of conclusion from study these: (1) Students MTsN 02 Bombana , taught with the ARCS (Attention, Relevance, Confidence, and Satisfaction) learning model get average score 69.11 from 30 students . Student active reached 76.63 percent, 82.89 percent, 86.84 percent, and 90.78 percent during four meeting in a row . As a result, class taught experiments with the ARCS (Attention, Relevance, Confidence, and Satisfaction) learning model criteria influence (2). Based on statistical test results and criteria fulfilled influence, can concluded that the ARCS learning model has significant influence to ability reasoning statistics student class VIII MTs Negeri 02 Bombana.

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