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## COMPARISON OF THE EFFECTIVENESS OF AUDITORY INTELLECTUALLY REPETITION METHOD WITH EVERYONE IS TEACHER HERE IN CHEMISTRY LEARNING

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### ABSTRACT

Research on the Application of the Auditory Intellectually Repetition method with the Everyone is Teacher Here Method Measured by Motivation and Chemistry Learning Achievement on the Main Material Hydrocarbons is a quasi-experimental research type with a research design involving 3 classes, namely the first class is taught with the Auditory Intellectually Repetition method, Everyone Is Teacher Here method and the third class taught by a combination of them with different treatments. This research was conducted at MA Darussalam, Lombok, in the 2020/2021 academic year. This study aims to determine the differences in motivation and achievement in learning chemistry of students who are taught using the Auditory Intellectually Repetition learning model and Everyone Is Teacher Here method on the subject matter of hydrocarbons repetition with a combination of them on the subject matter of hydrocarbons, and knowing the differences in students' motivation and achievement in learning chemistry taught by those two methods. Based on the results of the study, it was found that there was a significant difference in the application of the Auditory Intellectually Repetition method with the Everyone Is Teacher Here method measured by motivation and achievement in learning chemistry on the subject matter of hydrocarbons.

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**Keywords:** Learning Methods, Chemistry, Hydrocarbon.

### INTRODUCTION

In chemistry lessons, there are a lot of materials that are considered difficult, especially material that requires conceptual knowledge and material that requires numeracy skills. Based on the results, many of them felt they could not understand the concepts and did not have a solid foundation in studying chemistry. One of the less desirable concepts is hydrocarbon material. According to students, the hydrocarbon material is quite difficult, including the difficulty in classifying carbon atoms, naming hydrocarbon compounds, and chemical reactions of hydrocarbons. This obstacle is caused because in general most students learn by memorizing patterns but do not understand the concept. This has an impact on student learning outcomes

where the average achievement is below the graduation standard.

Another factor that causes incompleteness in the teaching and learning process is one of them caused by the weakness of the learning process. Given the importance of the chemistry learning process as a step to increase student motivation and achievement, the weaknesses of the learning process must be corrected. Responding to the above, chemistry teachers are required to understand and develop their abilities, namely by using appropriate methods for teaching that are able to arouse students' enthusiasm for learning but can also make students play an active role in learning activities. For this reason, it is necessary to make an effort to increase students' motivation and learning achievement by improving their learning methods. One alternative learning that can be used is the Auditory Intellectually

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Repetition learning model and the Everyone Is Teacher Here method.

The AIR (Auditory Intellectually Repetition) learning model is a learning model that assumes that a learning will be effective if it pays attention to three things, namely Auditory, Intellectually, and Repetition. While the Everyone is teacher here method is a learning method where students are expected to be able to be teachers for their friends. In a lesson, all students are expected to have active participation to ask questions and express opinions. Based on the description of the background above, the researchers took the title: "Application of the Auditory Intellectually Repetition Learning Model with Everyone Is Teacher Here Measured by Motivation and Chemistry Learning Achievement in the Main Material Hydrocarbons of MA Darussalam Students".

Based on the background described above, the formulation of the problems proposed in this study are: 1) Is there a difference in motivation and achievement in learning chemistry between students who are taught with the Auditory Intellectually Repetition learning model and students who are taught using the Everyone Is Teacher Here method on the material the main hydrocarbons of MA Darussalam students? 2) Is there a difference in motivation and achievement in learning chemistry of students who are taught using the Auditory Intellectually Repetition learning model with a combination of the Auditory Intellectually Repetition learning model and the Everyone Is Teacher Here method on the hydrocarbon subject matter of MA Darussalam students? 3) Are there differences in students' motivation and achievement in learning chemistry taught by the Everyone Is Teacher Here method and the combination of the Everyone Is Teacher Here method with the Auditory Intellectually Repetition learning model on the hydrocarbon subject matter of MA Darussalam students?

The objectives to be achieved in this study are: 1) To find out the difference in motivation and achievement in learning chemistry of students who are taught by using the Auditory Intellectually Repetition learning model and students who are taught by the Everyone Is Teacher Here method on the hydrocarbon subject matter of MA Darussalam students. 2) To find out the differences in motivation and achievement in learning chemistry of students who are taught using the Auditory Intellectually Repetition learning model with a combination of the Auditory Intellectually Repetition learning model and the Everyone Is Teacher Here method on the hydrocarbon subject matter of MA Darussalam

students. 3) To find out the differences in students' motivation and achievement in learning chemistry taught by the Everyone Is Teacher Here method with a combination of the Everyone Is Teacher Here method and the Auditory Intellectually Repetition learning model on the hydrocarbon subject matter of MA Darussalam students.

## LITERATURE RIVIEW

The learning method is the method used by the teacher in making contact with students during the lesson. Therefore, the role of learning methods as a tool to create a process of teaching and learning activities is very important. With this learning method, it is hoped that various student learning activities will grow in connection with the teacher's teaching activities. In other words, deductive interaction is created, in this interaction the teacher acts as a mover or mentor, while students act as recipients or those who are guided. This interaction process will run well if students are more active than the teacher. Therefore, because a good learning method can foster interactive student learning activities from all aspects of learning activities, in this case the learning method used is the Auditory Intellectually Repetition learning model with the Every One Is Teacher Here method.

In learning activities, motivation can be said as the overall driving force in students that causes learning activities, which ensure the continuity of learning activities and which provide direction to learning activities, so that the goals desired by the learning subject can be achieved (Sardiman, 2010). Meanwhile, learning achievement is the result obtained in the form of impressions that result in behavioral changes in the individual as a result of the interaction between a person and his environment.

### AIR Learning Model (Auditory Intellectually Repetition)

The AIR (Auditory Intellectually Repetition) learning model is a learning that is similar to SAVI and VAK, the difference is only in repetition, namely repetition which means deepening, expanding, strengthening the way students are trained through assignments or quizzes. AIR (Auditory Intellectually Repetition) learning model which assumes that a learning will be effective if it pays attention to three things, namely Auditory, Intellectually, and Repetition. Auditory means the ear senses

are used in learning by listening, speaking, presenting, arguing, expressing opinions, and responding. Intellectually means that thinking skills need to be trained through exercises to reason, create, solve problems, construct, and apply. Repetition means repetition is needed in learning so that understanding is more in-depth and broader, students need to be trained through working on questions, giving assignments and quizzes.

The main characteristics of the AIR learning model are the three main exercises carried out in the learning process, namely auditory (the ear senses are used in learning by listening, speaking, presenting, arguing, expressing opinions, and responding), intellectually (learning by thinking to solve problems, the ability to thinking needs to be trained through the practice of reasoning, creating, solving problems, constructing and applying) and repetition (repeating, exploring, determining the way students are trained through giving assignments or quizzes. Repetition (repetition) is the key to developing good habits) (Meier, 2002).

Learning Method Everyone is Teacher Here

The everyone is teacher here learning method is an easy method, in order to obtain overall class participation and individual responsibility. This method provides an opportunity for each student to act as a "teacher" to other students. With this method, students who have not wanted to be involved will actively participate in learning. The main feature of the Everyone Is Teacher Here method is that "everyone is a teacher" is a great way to get class participation as a whole and individually. This method provides an opportunity for each student to act as a teacher (Suprijono, 2009).

Implementation of the AIR (Auditory Intellectually Repetition) learning model using the Everyone Is Teacher Here method. The Everyone Is Teacher Here method, whose learning only begins with an ordinary lecture, makes this AIR (Auditory Intellectually Repetition) learning model an alternative to make learning more interesting and structured. At the beginning of the lesson, the AIR presentation stage and the assignment presentation stage or learning materials are carried out. The material explanation step in the Everyone Is Teacher Here method is carried out with the 2nd stage of the AIR (Auditory

Intellectually Repetition) model. And at the end of the lesson, ask students to answer questions voluntarily. The following table shows the implementation of the combination of the AIR (Auditory Intellectually Repetition) learning model with the Everyone Is Teacher Here method.

### Hydrocarbon Material Analysis

Hydrocarbons are the simplest carbon compounds composed of two elements, namely hydrogen and carbon. Where carbon compounds are compounds that contain the element carbon (C), and other elements, such as hydrogen (H), oxygen (O), and nitrogen (N).

### METHODS

This research is a type of quasi-experimental research. The research design involves 3 classes, namely the first class is taught using the AIR (Auditory Intellectually Repetition) learning model, the second class is taught using the Everyone Is Teacher Here method and the third class is taught by a combination of learning between the AIR (Auditory Intellectually Repetition) learning model and the Everyone Is Teacher Here method. with different treatments. The population in this study were all students of class X MA Darussalam in the academic year 2020/2021 which consisted of 3 classes with a total of 106 students.

The sampling technique in this research is using cluster random sampling technique or random sampling in groups. The sample was selected from a population that has the same class average and is homogeneous based on the homogeneity test (F test) that has been carried out. After cluster random sampling, it was found that class XC was taught using the AIR (Auditory Intellectually Repetition) learning model, class XB was taught using the Everyone Is Teacher Here method and class XA was taught using a combination of the AIR (Auditory Intellectually Repetition) learning model with the Everyone Is Teacher Here method.

There are two data obtained from the results of this study, namely the first data on the results of motivation in the form of giving student learning motivation questionnaires, while the second is data obtained from the results of the evaluation of student learning tests regarding mastery of the subject matter of hydrocarbons.

## RESULTS AND DISCUSSION

### RESULT

#### Questionnaire analysis of student learning motivation who was taught with the Auditory Intellectually Repetition learning model.

The Auditory Intellectually Repetition learning model is applied to class XC as the effect of

Table 1. The results of the questionnaire analysis of the students' learning motivation in class XC

| No      | Measured Variables                       | Questionnaire Number | Maximum Score | Total Score | %      |
|---------|--|----------------------|---------------|-------------|--------|
| 1       | Happy to learn                           | 1, 5, 9              | 396           | 209         | 52,78  |
| 2       | Easy to understand the subject matter    | 2, 3, 4, 19          | 528           | 330         | 62,5   |
| 3       | Motivated to learn                       | 6, 17, 23            | 396           | 232         | 58,59  |
| 4       | Motivated to solve the problems          | 7, 8, 21             | 396           | 225         | 56,81  |
| 5       | Appreciated and dare to express opinions | 12, 14, 15, 16       | 528           | 339         | 64,20  |
| 6       | Collaboration with friends               | 13, 18, 22, 25       | 528           | 335         | 63,44  |
| 7       | Mutual respect for friends and teachers  | 10, 11, 20, 24       | 528           | 302         | 57,19  |
| Amount  |  |                      |               | 1972        | 415,51 |
| Average |  |                      |               | 281,714     | 69,25  |

The average score and total percentage for students' perceptions of the learning model used is the Auditory Intellectually Repetition learning model of 69.25%. Thus, it can be said that students' learning motivation towards the learning model is on a positive perception scale (agree) or in other words students respond positively to the use of the method.

the application of the learning model on students' learning motivation is obtained through the provision of questionnaires filled out by the students themselves. The data is presented in table 1.

the application of the learning model on students' learning motivation is obtained through the provision of questionnaires filled out by the students themselves. The data is presented in table 2.

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#### Questionnaire analysis of students' learning motivation who was taught the Everyone Is Teacher Here method.

The Everyone Is Teacher Here method was applied to class XB as the effect of the application of the learning method on students' learning motivation was obtained through the provision of questionnaires filled out by the students themselves. The data is presented in table 2.

Table 2. The results of the questionnaire analysis of the students' learning motivation in class X

| No | Measured Variables                       | Questionnaire Number | Maximum Score | Total Score | %     |
|----|--|----------------------|---------------|-------------|-------|
| 1  | Happy to learn                           | 1, 5, 9              | 432           | 271         | 62,73 |
| 2  | Easy to understand the subject matter    | 2, 3, 4, 19          | 576           | 405         | 70,31 |
| 3  | Motivated to learn                       | 6, 17, 23            | 432           | 260         | 60,18 |
| 4  | Motivated to solve the problems          | 7, 8, 21             | 432           | 260         | 60,18 |
| 5  | Appreciated and dare to express opinions | 12, 14, 15, 16       | 576           | 238         | 41,31 |
| 6  | Collaboration with friends               | 13, 18, 22, 25       | 576           | 352         | 61,11 |

|         |   |                |        |        |       |
|---------|---|----------------|--------|--------|-------|
| 7       | Mutual respect for friends and teachers | 10, 11, 20, 24 | 576    | 315    | 54,69 |
| Amount  |   |                | 2101   | 410,51 |       |
| Average |   |                | 300,14 | 68,41  |       |

The average score and the total percentage for students' perceptions of the learning method used, namely the Everyone Is Teacher here method, was 68.41%. Thus, it can be said that students' learning motivation towards the learning model is on a positive perception scale (agree) or in other words students respond positively to the use of the method.

#### **Analysis of the motivational questionnaire that was taught by a combination of the Auditory**

#### **Intellectually Repetition learning model with the Everyone Is Teacher Here method**

The combination of the Auditory Intellectually Repetition learning model with the Everyone Is Teacher Here method was applied to class XA as the effect of the application of the combination learning method on students' learning motivation was obtained through the provision of questionnaires filled out by the students themselves. The data is presented in table 3.

Table 3. The results of the questionnaire analysis of students' learning motivation in class XA

| No      | Measured Variables                       | Questionnaire Number | Maximum Score | Total Score | %      |
|---------|--|----------------------|---------------|-------------|--------|
| 1       | Happy to learn                           | 1, 5, 9              | 444           | 297         | 66,87  |
| 2       | Easy to understand the subject matter    | 2, 3, 4, 19          | 592           | 354         | 59,78  |
| 3       | Motivated to learn                       | 6, 17, 23            | 444           | 267         | 60,13  |
| 4       | Motivated to solve the problems          | 7, 8, 21             | 444           | 295         | 66,44  |
| 5       | Appreciated and dare to express opinions | 12, 14, 15, 16       | 592           | 244         | 41,21  |
| 6       | Collaboration with friends               | 13, 18, 22, 25       | 592           | 429         | 74,45  |
| 7       | Mutual respect for friends and teachers  | 10, 11, 20, 24       | 592           | 346         | 58,44  |
| Amount  |  |                      |               | 2232        | 427,32 |
| Average |  |                      |               | 318,85      | 71,22  |

The average score and total percentage for students' perceptions of the learning method used is a combination of the Auditory Intellectually Repetition learning model and the Everyone Is Teacher Here method of 71.22%. Thus, it can be said that students' learning motivation towards the learning model is on a positive perception scale (agree) or in other words students respond positively to the use of the method.

## **DISCUSSION**

### **Students' learning motivation**

#### **Students who are taught using the Auditory Intellectually Repetition learning model**

Based on the questionnaire analysis of student learning motivation discussed in the

previous chapter, namely for class XC which was taught with the Auditory Intellectually Repetition learning model shown in table 1 it was found that students' learning motivation towards the learning model was on a positive perception scale (agree) or in other words students responded positively to the use of the learning model. This is because students can work together with friends when discussions take place in class and students are interested in the application of the learning model which is usually with conventional methods and students feel bored everytime they have to take notes. From the questionnaire analysis on the use of the Auditory Intellectually Repetition learning model, students gave a positive response to the use of the learning model

and it can be estimated not only for hydrocarbon material, but also good for other lessons.

#### **Students who are taught by the Everyone Is Teacher Here method.**

Based on the motivational questionnaire analysis that was discussed earlier, namely for class XB which was applied with the Everyone Is Teacher Here method shown in table 2, it was found that the general perception of students gave a positive perception of agreeing, this was caused by students being motivated to want to know and understand the learning material provided. delivered by the teacher because in accordance with the learning steps students have the right to become teachers in front of their friends, so students are motivated and enthusiastic in participating in learning.

#### **Students who are taught using a combination of the Auditory Intellectually Repetition learning model with the Everyone Is Teacher Here method**

Based on the motivational questionnaire analysis that was discussed first, namely for class XA which was taught with a combination of the Auditory Intellectually Repetition learning model with the Everyone Is Teacher Here method, which is shown in table 3, it was found that students' learning motivation towards the combination of learning models was on a positive perception scale (agree). This is because the two methods or learning models are combined or combined into one. In learning when the discussion takes place and then students have the right to become teachers in front of their friends, they are very motivated to be able to follow the learning on the material taught by the teacher.

Based on this research, it can be explained that, in general, students have positive learning motivation or perceptions of the three types of learning models applied, but positive perceptions of the combination of the Auditory Intellectually Repetition learning model with the Everyone Is Teacher Here method are the highest, namely 71.22%, followed by the application of the Auditory Intellectually Repetition learning model, which is 69.25%, then the application of the Everyone Is Teacher Here method, which is 68.41%. From this explanation, it can be concluded that the average learning motivation of class XA

students who are taught with a combination is better than class XB and XC.

#### **Students' learning achievement**

##### **Student learning achievement taught by the Auditory Intellectually Repetition learning model.**

The results of the research that has been carried out using ANOVA analysis with the SPSS version 16.0 program as described in the previous chapter provide an indication that the learning (AIR) Auditory Intellectually Repetition applied to class XC provides an insignificant difference compared to student achievement taught by a combination model. Auditory Intellectually Repetition learning using the Everyone Is Teacher Here method and the Everyone Is Teacher Here method. Based on the data gathered, the average value of student achievement is 73.03; lowest value 50; highest score 90; the number of students who did not complete 10 people and the percentage of completeness 69.69%. The average value is in second place after the combination of learning models. This is due to the ineffectiveness of learning during the discussion.

##### **Student achievement taught by the Everyone Is Teacher Here method.**

The results of the research that has been carried out using ANOVA analysis with the SPSS version 16.0 program as described in the previous chapter provide an indication that the Everyone Is Teacher Here learning method applied to class XB provides a significant difference in learning achievement compared to student achievement taught by a combination model. Auditory Intellectually Repetition learning using the Everyone Is Teacher Here method and the Auditory Intellectually Repetition learning model shown in table 4.9. Based on appendix 23, the average value of student achievement is 69.5833; lowest value 50; highest score 85; the number of students who did not complete 15 people and the percentage of completeness 58.33%. The average value is at the lowest level when compared to the learning achievement of the group of students who were taught by the combination of the Auditory Intellectually Repetition learning model with the Everyone Is Teacher Here method and the group of students who were taught the Auditory Intellectually Repetition learning model. This is caused by several factors including the lack

of students' understanding by delivering the material directly (lectures) then students must get one question to write down and then collect it randomly and answer the questions obtained, this makes students a little confused and can't find the answer.

### **Student learning achievement is taught by a combination of the Auditory Intellectually Repetition learning model with the Everyone Is Teacher Here method**

The results of research that have been carried out using ANOVA analysis with the SPSS version 16.0 program as described in the previous chapter provide an indication that the combination of the Auditory Intellectually Repetition learning model with the Everyone Is Teacher Here method applied to class XA gives better results when compared to learning achievement. students who were taught using the Auditory Intellectually Repetition learning model and the Everyone Is Teacher Here method and gave a significant difference in learning achievement when compared to the other two groups of students. Based on the data gathered, the average value of student achievement is 80.54; lowest score 60; highest score 100; the number of students who did not complete 4 people and the percentage of completeness 89.18%. The average value is at the highest level when compared to the other two groups of students.

Based on this research, it can be explained that student learning achievement with the combination of the Auditory Intellectually Repetition learning model with the Everyone Is Teacher Here method has the highest average score of 80.54 and it can be concluded that the class that is taught with a combination has high motivation and learning achievement, followed by the application of the Auditory Intellectually Repetition learning model, which is 73.03, then the application of the Everyone Is Teacher Here method, which is 69.58. This shows that the class that is taught in combination (class XA) is better than class XB and class XC.

Based on results and discussions depicted above, the final conclusions obtained by the researcher are: 1) "There is no significant difference between motivation and achievement in learning chemistry between students who are taught by using the Auditory Intellectually Repetition learning model and students who are taught by

the Everyone Is Teacher Here method on the subject matter of hydrocarbons for MA students. Darussalam". 2) "There is a significant difference between motivation and achievement in learning chemistry of students who are taught using the Auditory Intellectually Repetition learning model with a combination of the Auditory Intellectually Repetition learning model and the Everyone Is Teacher Here method on the hydrocarbon subject matter of MA Darussalam students". 3) "There is a significant difference between students' motivation and achievement in learning chemistry taught by the Everyone Is Teacher Here method with a combination of the Auditory Intellectually Repetition learning model with the Everyone Is Teacher Here method with the main material hydrocarbons for MA Darussalam students".

Based on these differences, the hypothesis proposed in this study is accepted in other words that "There is a significant difference in the application of the Auditory Intellectually Repetition learning model with the Everyone Is Teacher Here method measured by motivation and achievement in learning chemistry on the hydrocarbon subject matter of MA Darussalam students".

## **CONCLUSION**

Based on the results of research and discussion on the application of the Auditory Intellectually Repetition learning model with the Everyone Is Teacher Here method measured by students' motivation and achievement in learning chemistry, it can be concluded as follows: 1) There is no difference in students' motivation and achievement in learning chemistry taught by Auditory Intellectually Repetition learning model with students taught by the Everyone Is Teacher Here method on the subject matter of hydrocarbons for MA Darussalam students.

2) There is a difference in motivation and achievement in learning chemistry of students who are taught using the Auditory Intellectually Repetition learning model and students who are taught a combination of the Auditory Intellectually Repetition model with the Everyone Is Teacher Here method on the hydrocarbon subject matter of MA Darussalam students. 3) There is a difference in motivation and achievement in learning chemistry of students who are taught the Everyone Is Teacher Here

method with students who are taught a combination of the Auditory Intellectually Repetition model with the Everyone Is Teacher Here method on the hydrocarbon subject matter of MA Darussalam students.

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