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Penerapan Model Pembelajaran *Jigsaw* untuk Meningkatkan Aktifitas Belajar pada Mata Kuliah Biologi Dasar Tadris IPA IAI Yasni Bungo

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ABSTRACT

The orientation of learning in collage is mainly on the activities or participation of students because they have been able to develop logical, critical and creative thinking. However, learning that does not optimize the competence of each individual causes most of them to be unable to construct knowledge and tends to learn passively. This study aims to increase learning activities through for students Tadris Ilmu Pengetahuan Alam Institut Agama Islam Yasni, Bungo, Jambi in semester II of the 2021/2022 academic year the jigsaw cooperative learning model which is a learning strategy by forming home groups and expert groups. This research method is classroom action research with data collection techniques through observation, interviews and tests. The results of the first cycle of observation show that learning activity indicators are only in the medium category. Activities about interactions between group members are in the low category. However, after the implementation of cycle II, the results of the learning activity indicators were mostly in the high category. Interaction between group members increased from the previous cycle. Each student showed enthusiasm in giving explanations to group members and discussion activities showed good cooperation. Conclusion of research results is the application of the jigsaw learning model can increase learning activities.

INTRODUCTION

Efforts to build human resources are determined by the characteristics of the desired future human and society. The desired future human characteristics are humans who have sensitivity, independence, responsibility for risks in making decisions, developing all aspects of potential through a continuous learning process to find oneself, namely a process. . . (to) learn to be [1]

Student active learning or an approach to active student learning in the management of teaching and learning activities that recognizes the centrality of the role of students in the learning process, is a solid foundation for the formation of the expected future human beings [2]

The orientation of learning in collage is mainly on the activities or participation of students because they have been able to develop logical, critical and creative thinking. However, learning that does not optimize the competence of each individual causes most of them to be unable to construct knowledge and no learning experience.

Based on initial observations on learning in the Biology course for students Tadris Ilmu Pengetahuan Alam Institut Agama Islam Yasni, Bungo, Jambi in

semester II of the 2021/2022 academic year, they can be seen that most of them are difficult to understand the topic of the lesson. They show an expression of confusion about a concept that is explained and when asked questions many are unable to respond. Learning with direct explanations or just asking questions with students does not build their enthusiasm for learning. They are not confident to give feedback or answer questions.

Biology as part of the natural sciences that studies humans, animals and plants. Students centered learning cannot stimulate students to build knowledge. According to learning constructivistic learning is a process of forming knowledge. This formation must be done by the learner. He must carry out activities, think, compose concepts and give meaning to the things being studied[1].

Learning is a reciprocal and functional relationship between individuals and individuals, between individuals and groups, and groups and groups. Engagement with others provides an opportunity for students to evaluate and improve their understanding as they encounter other people's thinking and as they participate in the search for shared understanding[2].

The process of building knowledge based on a constructive approach can be realized, one of which is by implementing cooperative learning models. According to Lufri (2007) the application of cooperative learning, two or more individuals work together, share knowledge and experience to achieve a goal[3].

There are various types of cooperative learning models. Learning in higher education must consider the characteristics of students who are able to think logically, critically and creatively. Students can become more independent, learn to be responsible, tolerate and solve problems. Therefore, the jigsaw learning model will be applied.

This study aims to determine the effectiveness of the implementation of the jigsaw cooperative learning model for student learning activities. The steps for implementing the Jigsaw learning model

1. Students are divided into several groups, each group consisting of 5-6 heterogeneous members
2. Lecturers provide learning materials that will be discussed to each group.
3. Each member is responsible for studying the assigned topic. For example, the topic to be discussed is electricity, then certain sections may include: sources of electricity, electrical devices, electrical circuits, electric currents and power plants.
4. Someone studies electric sources, someone studies electrical tools, someone studies electric circuits, someone studies electric currents and someone studies power generators.
5. Each group member who gets the same task gathers and discusses the topic. This group is called the expert group. Thus there is a group of experts: sources of electricity, electrical equipment, electrical circuits and power generators
6. Each member of this expert group returns to join the home group and teaches the topics they have learned to the members of the home group in turn
7. Lecturers give quizzes individually on all the topics that have been discussed[4]

2. Cite

The reference and quotation are written using parentheses (name, year), for example: (Diani, 2015), (Sugiyono, 2011), (Saregar, 2016), (Honeycutt, 2011),

[1] *Ibid.*, h.58
[2] Agus Suprijono, "Cooperative Learning Teori dan Aplikasi." *http://history22education.wordpress.com*, h. 37
[3] Lufri, *Strategi Pembelajaran Biologi*, (Padang: FMIPA UNP, 2007), h.51
[4] Modifikasi dari Lufri, *Strategi Pembelajaran*., h 52-53

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3. Abbreviations and Acronyms

Define abbreviations and acronyms for the first time they are used in text, even if they have been defined in the abstract. Abbreviations such as IEEE, SI, MKS, CGS, ac, dc, and rms need not be defined. Do not use abbreviations in the title unless they are absolutely unavoidable.

4. Equation

Equation numbering is done sequentially with the number of equations written in parentheses and right alignment, for example (1). The quantity and variables are written in italic Roman symbol. Use a dash (-) to indicate a minus sign. Use parentheses () for the denominators or dividers to avoid mistakes. Give the comma in the equation if the equation is in a sentence. For example equation (1):

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a} \quad (1)$$

If the equation is mentioned in a sentence then simply write "(1)," or "equation (1)," except at the beginning of the sentence, it is not written using a comma after parentheses. For example "Equation (1) is ..."

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The use of Roman numeric symbols for numbering the chapters or sub-chapters is optional. If you use Roman numeric symbols, then the references section, the acknowledgement section, and the sub-headings or sub-chapters are not in letters format. Use two spaces to split between sub-chapters. Use hyphens on modified words: "zero-field-cooled magnetization", avoid irregular sentences such as, "Using (1), potential differences have been calculated", the proper writing should be "potential differences are calculated using equation (1), "or" using equation (1), we calculated the potential differences ".

Decimal numbers are not written ".25". Use a zero before the period to write a decimal number: "0.25". Use "cm3," not "cc." Do not mix full words and abbreviations in physics units, for example: "weber / m2" instead of "Wb / m2". Use the full word when writing a physics unit in a sentence: "some Henry ...".

METHODS

Explaining research chronological, including research method, research design, research procedure (in the form of algorithms, flow chart, storyboard or other), how to test and data acquisition. The description of the course of research should be supported by **references**, so the explanation can be accepted scientifically.

Use international units (MKS) or CGS as the units of dimensions (the SI unit is recommended). The British scale system can also be used as a secondary method written in parentheses.

Avoid using SI and CGS together, for example the current in amperes and the magnitude of the magnetic field in oersted. This will cause an error because the dimensions are not suitable. State clearly the unit used in each quantity, either SI or CGS units.

RESULTS AND DISCUSSION

In this section, it is explained the results of research and at the same time is given the comprehensive discussion. Results can be presented in figures, graphs, tables and others that make the reader understand easily. The discussion can be made in several sub-sections. The errors that often occur include a subscript on the quantity of vacuum permeability, for example, must be written using zero instead of the letter "o". The use of a foreign prefix "non" is not separated with the next word.

CONCLUSION AND SUGGESTION

In the reference section, there are several examples of formats that are widely used by

international journals. The writers are expected to adjust themselves.

AKNOWLEDGMENT (If any)

The acknowledgement is a form of appreciation for the contribution of an institution or an individual who is not considered as the writer for example an institution or an individual who provides the research fundingof this publication.

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