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The Effectiveness of Jigsaw Type Cooperative Model Assisted by Kahoot Media Towards Student Interest and Learning Outcomes at SMA Negeri 1 Sokaraja

Ika Damayanti[1]✉, Ely Rudyatmi[1]

[1]Biologi Department, FMIPA, Universitas Negeri Semarang, Indonesia

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Abstract

Teachers are experiencing obstacles to develop a logical, systematic, analytical and critical way of thinking, while the learning curriculum principle of 2013 must be centered on the students.One model that can make students learn independently and collaborate with friends is the Jigsaw model.One of the media that can be utilized in the learning process is Kahoot media.Kahoot can provide an effective and enjoyable atmosphere that influences the seriousness of the students in learning.This research aims to determine the effectiveness of the Jigsaw type Cooperative model with Kahoot Media support for students ' interests and learning outcomes.Research using Quasi Experimental Desaign type Nonequivalent Control Group Design with sample X MIPA 4 as Control class and X MIPA 2 as experimental class.Data collection techniques Using test instruments, polls, observations and interviews.Data analysis techniques are performed quantitatively, descriptive percentage and qualitative descriptive.The results of the research are known that there is a significant difference of interest in students learning experiments and controls of 9,66%> 4.01%.The average learning outcomes of experimental and control students are 81 > 78. Experimental class classifications of 89% and control of 80%.The average N-Gain class of experimentation and control there is a significant difference of 0.51 > 0.43. The level of learning is 100% in percentage in both experimental and control classes. 81% of students gave excellent responses and 19% of the responses to both the learning with some statements reached a percentage of 100% satisfaction in the categories strongly agreed and agreed.Teacher response interviews with learning showed a positive response.The conclusion of this research is the cooperative model of the media-assisted Jigsaw type Kahoot effectively increase the interest and learning outcomes of grade X SMA Negeri 1 Sokaraja

✉Correspondence Address:
D6 Building 1st Floor Jl Raya Sekaran Gunungpati Semarang
E-mail: ikadamayanti245@yahoo.co.id

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INTRODUCTION

The process of education has now shifted in accordance with the development of the Times and underwent a rapid change by utilizing digital technology for the benefit of improvement of service and quality of education (Prasojo and Riyanto, 2011). 21st century learning has a fundamental principle that learning should be student-centered.This is in line with the Government's policy on implementing the 2013 curriculum. The implementation of the 2013 curriculum recommends that the learning process using a scientific approach that includes 5M (observing, examining, collecting information, associating and communicating).The 2013 curriculum seeks to create human resources in accordance with 21st century learning skills termed by 4C (Communication, Collaboration, Critical Thingking, and Creative).

Teaching is not only interpreted as the process of delivering knowledge to students but teaching should be seen as the process of setting the environment so that students learn, so that the learning process is able to change the behavior of a student Through learning experiences in aspects of interest, talents and abilities.That fact is a challenge faced by teachers as teachers.It needs to be a creative and innovative teacher role to create a classroom of biological learning in order to be more interesting and liked by learners.The classroom atmosphere needs to be planned and constructed in such a way by using the right learning model and media so that students can have the opportunity to interact with each other so that students ' learning interest in learning is increasing and More optimal learning outcomes.

One of the basic science that promotes mastery of science and skill is biology.Most of the concept of biology is abstract and level concept, in the process of learning biology we are often faced with things that are microscopic like viruses.It is often an obstacle for teachers to develop a logical, systematic, analytical and critical way of thinking from students who are learning at a high school level.The observation result in SMA N 1 Sokaraja uses average daily replay data on the class X MIPA virus material 2017/2018 is known that 47% of students have not reached the minimum submission criteria (KKM) which have been determined by the school party of 62.

Based on the observation result in grade X Biology learning process at SMA Negeri 1 Sokaraja is known that the learning process is still using a conventional model (teacher centered learning) where the learning is one way because the teacher Full control of the learning process in class.The method does not provide opportunities for students to be active and develop their thoughts in solving a problem.The dominant activity in the learning process is listening to and recording teacher explanations.Learning Media is used in the form of PowerPoint to present the material in the form of presentation so that learning impresses monotonous and students are less motivated to learn biology.Based on the results of the observation, there needs to be an innovation of learning model combined with the media based learning (student centered) whose hope can support the interest and learning outcomes of students.

Group discussion models are expected to be a solution for students to be more active in the learning process.One of the learning models that allows group sharing is the type cooperative learning model of Jigsaw.The type cooperative Model of Jigsaw makes students have many opportunities to brainstorm and process the information they can, able to improve communication skills, group members are responsible for the success of His group and the submission of a part of the material studied and could convey information to other groups (Nurdyansyah & Fariyatul, 2016).

Not only learning models can support learning. Media is also one of the most important components in the learning process.The media used in this study is Kahoot media. According to Carolyn & Julia (2017) Kahoot is an online quiz that involves the relationship between students ' active thinking and the content of the lesson that emphasizes the attention and purpose of learning.The concept of learning using Kahoot media will increase students ' learning interest because using the game indirectly can lead to a more engaging and enjoyable learning atmosphere, so that students find it easier to Develop their potential to the fullest extent.

The combination of Jigsaw-type cooperative model with Kahoot media support in the virus material is expected to make students actively involved in the learning process, the virus material no longer discusses the abstract thing because students can clearly see Various viruses, how the virus is based and some of the impacts caused by the virus for life through the group's discussion process using the Jigsaw model and quizzes using Kahoot media, so the students ' learning interest in following the Biology lessons become increased and learning outcomes are

gained optimally.

Based on the background of the above, it is important that there is research on "the effectiveness of models of cooperative learning types assisted Jigsaw Media on interest and student learning outcomes in SMA Negeri 1 Sokaraja"

RESEARCH METHODS

Conducted in SMA Negeri 1 Sokaraja on the odd semester of school year 2019/2020.The study used Quasi Experimental Desaign type Nonequivalent Control Group Design with sample X Mipa 4 as the control class and X Mipa 2 as the experimental class.Learning Interest Data and student responses are obtained using poll instruments, learning outcomes using test instruments, learning implementation using observation instruments and teacher responses using interview Guide instruments.The analysis of data in this study quantitatively uses test normality, homogenity and T for pretest data, posttest, student learning interests, student learning outcomes and N-Gain.The analysis of the percentage of the classifications for the classical data, the implementation of students ' learning and responses.A qualitative descriptive analysis of teacher response data.

RESULTS AND DISCUSSION

a. Student Learning Interests

Based on the results of an interest analysis study class before learning is known that before learning 19% of experimental class students are very interested and 78% of students are interested in biological learning.After learning an increase in the category is very interested to be 64% students and 36% of students are interested in biological learning.This means that in the experimental class there is an increase of learning interest by category students at 45%.While the control class is known that before learning 20% of students are very interested and 77% of students are interested in biological learning.After learning 20% of students are very interested and there is an increase in the interest category to 80%.This means that in the control class there is no increase in the students ' learning interest categories are very interested or inclined.Higher percentage of learning interest in experimental classes was allegedly at leave due to the influence of the use of the Kahoot Media assisted Jigsaw model on the experimental class.

Based on the results of analysis of learning interest students are known that the experimental classes and controls are normal and homogeneous distribution.Once the test is done it is known that t_{hitung}2,870 < t_{tabel} 1,667. This means there is a significant difference in the learning interest of experimentation classes and control students.The use of Jigsaw models is done in experimental class or control class.So the two classes are equally improved. Jigsaw model is one of the models that implement student center learning.According to Bhakti et al. (2018) The implementation of Student Center learning will make it easier for students to learn because they meet the needs of students and focus on the students themselves, so that the learning process is not limited to formalities, but Psychological attention of students.The students ' interest in the experimental class and control after using the Jigsaw model began to be seen when all students collaborated in the original group and had discussions with the Group of Experts.The use of Jigsaw models on learning process is done in groups. Harsanto (2007:44) says that the existence of learning in a group can increase the value of cooperation, solidarity, students ' active participation, student intensified, academic ability, self-confidence, and basic skills in life.

Kahoot Media applied to the experimental class also greatly affects the increasing interest of higher student learning when compared to the control class.The use of the Kahoot app in learning can increase student interest, this is evident in every learning process while students are very pleased and well following learning when using media Kahoot.While following the study using Kahoot media students feel a more varied and relaxed learning atmosphere that is not boring because of the learning process they do different namely learning while playing the

quiz.Learning to use Kahoot media requires students to compete for the highest ranking, allowing students to learn more actively achieving it.Competition or competition is one way that can be done to bring the students ' motivation to learn at the learning activities of Sardiman (in Ilmiyah, 2019).

b. Pretest Value

Based on the results of Pretests value analysis using SPSS version 22 known that the experimental classes and controls are normal and homogeneous distribution.After the test it is known that t_{hitung} 1.990 < t_{tabel} 1,667. There is no significant difference, meaning the initial ability of the experiment class and the controls are the same.

c. Posttest Value

Based on the analysis of the posttest value it is known that the experiment and control classes are normal and homogeneous distributions.After the test has been conducted known that t_{hitung} 2.658 > t_{tabel} 1,667. meaning that after the learning process there is a significant difference in the average results of students posttest.This is due to the study of viral material in the control class using PowerPoint media.Presenting material in the form of presentation is only one way so the learning is monotonous and the students are less motivated to learn biology.

d. Student Learning Outcomes

Based on the analysis of student learning outcomes it is known that the data of both the experimental and control classes are normally distributed and homogeneous. After doing the t test it was found that t_{hitung} 2,543> t_{tabel} 1,667. This means that the learning outcomes of experimental and control class students have a significant difference. The difference in learning outcomes between the experimental and control classes is influenced by the use of Kahoot media in the experimental class. Although both classes apply the Jigsaw model, the learning media used are different, namely Kahoot media for the experimental class and powerpoint media for the control class. The strengths of Kahoot media when compared to powerpoint media according to Putri and Muzaki (2019) are that Kahoot is a game based learning media that can be used easily for a variety of learning and training needs both as an evaluation media, giving learning assignments at home or just for provide entertainment in the learning process.

The game based learning element presented in Kahoot media is able to create a sense of enthusiasm because students gain new experience in working on problems other than using paper. Base learning games are designed by incorporating elements of competition and cooperation in solving cases in each stage of the problem being worked on. And the speed of obtaining results in the evaluation process, so that teachers will more quickly provide feedback on the results of the evaluation of learning (Winhary and Chyan, 2017). Some weaknesses of powerpoint media in the learning process according to Kudsiyah and Hermanto (2017) are that many teachers use PowerPoint with one-way communication, the information presented on the powerpoint is relatively the same as that in student books and the teacher only presents learning material points which will then explained verbally. The use of powerpoint media when conducting quizzes in the control class does not stimulate students' enthusiasm because it is only one way without any interaction like Kahoot's media. If students are less enthusiastic in learning this can affect student learning outcomes.

e. N-Gain

Based on the N-Gain analysis it is known that the experimental and control classes are normally distributed and homogeneous. After doing the t test it is known that t_{hitung} 2,368> t_{tabel} 1,667. This means that after learning has been implemented there is a significant increase in student learning results. Learning in the experimental class is more effective when compared to the control class. The difference in the increase in mastery of concepts and learning results in the experimental and control classes, allegedly caused by the learning model and media used. The learning model used is a cooperative type of Jigsaw assisted by kahoot media. The application of the Jigsaw model is able to optimize the interaction between students with each

other in the form of full responsibility in delivering material to their friends, because each student must be able to understand the material that is part of it and be able to convey it to his friends (Wisudawati and Sulistyowati, 2015).

The difference in learning results between the experimental and control classes is due to another factor namely Kahoot's media. The use of Kahoot media in the experimental class makes students become more active and more relaxed in conducting the quiz. Students get direct feedback from the quiz that is carried out, so that the stabilization and re-evaluation of a material is immediately given. According to (Purwono et al., 2014) instructional media have an important role in supporting the quality of the teaching and learning process.

f. Mastery of Learning Classically

Student learning outcomes are said to be classically complete if the number of students who meet the minimum completeness criteria (KKM) reaches 85%. The percentage of completeness of classical learning in the experimental class using the Jigsaw learning model assisted by Kahoot media by 89% and declared to have been completed classically. Control class learning using Jigsaw media assisted by powerpoint media is not completely classical because the percentage of mastery learning is 80%. Mastery learning in learning indicates students have mastered thoroughly a basic competency of subjects (Sudaryono, 2018). The percentage obtained by the experimental class using the Jigsaw model assisted by Kahoot media proved to be effective in increasing student grades in order to achieve the specified KKM.

g. The Level of Learning

Based on observations of the level of feasibility of learning it is known that learning activities have been carried out 100% in accordance with the RPP both experimental and control classes. These results indicate that the teacher has carried out all stages of learning activities according to the lesson plan. Kunandar (2011: 264) said that the function of the lesson plan is as a reference for teachers to carry out teaching and learning activities (learning activities) to be more directed and run effectively and efficiently

h. Student Responses

The results of student responses to the learning process using the Jigsaw model aided by Kahoot media were carried out in the experimental class. Based on the results of the analysis note that students gave very good responses to the entire learning process that took place. This is evidenced by the aspects asked on the observation sheet of student responses where the questionnaire obtained good and very good criteria. 81% of students gave very good responses and good responses as many as 19% of students towards learning the Jigsaw model aided by Kahoot media.

Based on the results of student responses to the Jigsaw model assisted by Kahoot media showed that 100% of students gave responses that strongly agreed and agreed on several statements such as feeling happy when participating in learning, students were easier to understand the subject matter, students became trained to discuss and collaborate in groups, quizzes using Kahoot media increases student learning motivation, ease of sentences and language used in the questions, as well as the benefits of Kahoot media for students in learning biology.

i. Teacher Responses

Interview results of teacher responses to learning using the Jigsaw model aided by Kahoot media on viral material showed positive responses. The teacher believes that the Jigsaw cooperative model is an innovative and effective learning model to improve and assist students in understanding viral material. Students are trained to have an attitude of responsibility in understanding the material that has been assigned and help students to dare to express and explain the material they have learned to their peers. In addition, the practice of using Kahoot's media also makes the classroom atmosphere more fun due to the presence of elements of the game in the media, so students feel challenged because of the positive competition element in

this game.

The teacher can provide the widest opportunity for students to develop concepts, ask questions, answer questions, express opinions, and provide responses. The teacher has a very important role in the success of the learning process. The success of achieving educational goals is mainly determined by how the teaching and learning process experienced by students. To achieve the success of student learning the teacher's role is needed as a facilitator and motivator. According to Esi (2017) the role of the teacher as a facilitator and motivator is to facilitate or facilitate students in learning and the teacher must also be able to arouse students' enthusiasm.

CONCLUSION

Based on the results and discussion, it was concluded that the Jigsaw type cooperative model supported by Kahoot media was effective in increasing the interest and learning of class X students of SMA Negeri 1 Sokaraja.

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