



Implementation of the Numbered Head Together (NHT) Type of Cooperative Model Assisted by Trello Application in Sport Health Education Courses Penjas FKIP UNIB

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Abstract

Sports Health Education uses the Agile Scrum Trello Application as a learning medium in the application of the Number Head Together (NHT) model to the fifth semester students of the Physical Education Study Program, FKIP University of Bengkulu. This research shows that the combined use of Agile Scrum and Trello can be continuously maintained and practiced by information system developers. The combination of the two is quite reliable, with the use of Trello, and implemented into the Cooperative model of Number Head Together (NHT) type, collaboration between teams is more harmonious and task tracking is easier. This research is a classroom action research that uses this descriptive method and will be carried out in two cycles. Where data collection is done through test and non-test techniques. As a result, the achievement targets were obtained in cycle II with the following details; 15 students or 42% got category A, 17 students or 47% got category B, 4 students or 11% got category C, and none or 0 students got category D. The results of the questionnaire responses distributed to students showed they gained the final score of 24.61 or obtained an average of 4.1 which means the category most chosen by students is agreed. These results indicate that the implementation of learning in the application of the Number Head Together (NHT) model to the fifth semester students of the Physical Education Study Program, FKIP University of Bengkulu, is of interest to students.



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INTRODUCTION

One of the compulsory subjects for Undergraduate Physical Education (Penjas) students of FKIP Unib is the Sport Health Education course which has a weight of 2 credits. This course is given in odd semesters (V) with learning outcomes, namely students are able to understand the material in Sports Health Education well. Learning in Physical Education Study Program has differences with other study programs, the difference is about the percentage of practice. In physical education learning, almost all courses emphasize practical activities, where students are able to carry out certain sports activities that are the goals of each course in the Physical Education Study Program. Learning in the Sport Health Education course emphasizes how students can later become teachers who can organize sports health education in schools.

The combination of this offline and online combined learning system will demand the readiness of many parties, both from the government, students, educators, and the learning environment, especially in the era of the Merdeka Campus and Merdeka Learning policies in universities. Students in this policy era are given the freedom to drink the knowledge they need. The term Z-generation or millennial children pinned on today's students refers to their proximity to digital technology. There is a link between digital technology and the education system as Flavin said, namely digital technology is described as a tool that can increase collaboration and motivate students to re-engage with education and enable them to develop their multimodal skills (Firmansyah and Suwadi, 2021). However, besides being required to practice sports well, students are also expected to understand the material about Sports Health Education

well. Initial observations made showed that there was a tendency for students to have a fairly low level of understanding of the material about Sports Health Education. This is because the courses in the Physical Education Study Program emphasize more on the practical aspects, so it is natural that the theoretical aspects of students are weak. Of course this must be corrected because the Physical Education Study Program students will later become sports teachers who must master theory and practice in order to be able to model good practice activities for their students. Based on these conditions, the team teaching of the Sport Health Education course, Physical Education Study Program, FKIP UNIB held a discussion that resulted in a reflection on the need for classroom action research by implementing interesting and innovative learning models in order to improve students' theoretical understanding skills and ultimately maximize learning outcomes in Education courses. Sports Health. The learning model that is expected to improve the quality of students' theoretical mastery in the Sport Health Education course is the Numbered Heads Together (NHT) Cooperative learning model.

The Numbered Heads Together (NHT) Cooperative learning model is a learning model that prioritizes student activities in finding, processing, and reporting information from various sources which are finally presented in front of the class (Hapsari 2017). NHT cooperative learning is one type of cooperative learning that emphasizes a special structure designed to influence student interaction patterns and has the aim of increasing academic mastery. This type was developed by Kagen (in Kristian 2018)) by involving students in reviewing the material covered in a lesson and checking their understanding of the content of the lesson. Through the NHT

model in the Sport Health Education course, students are expected to be able to master theories related to physical education so that the desired results in learning are achieved.

The use of digital technology in the education system can construct ways of learning, increase competence and develop students' skills in various aspects. In the midst of a pandemic that is still spreading, digital technology is present to accompany students and this situation should be an opportunity for educators to carry out the learning process by utilizing modern technology as an interactive learning medium in the eyes of students such as the Agile Scrum Trello application. The Trello Agile Scrum application is contained within the Trello application, which is an easy and popular place to use collaborative team work. Trello also makes it possible to work across teams or divisions. This application is very widely used among the millennial generation now. This is what makes researchers interested in using the Agile Scrum Trello application.

Trello is an application as a place for collaborative teamwork that is easy and popular to use. Trello also makes it possible to work across teams or divisions. Trello is suitable for teams that apply Agile principles to work. The features found in Trello, such as boards, lists, and cards allow organizations to prioritize projects in an attractive, flexible, and useful way. Trello allows each user to communicate with each other through the use of the comments feature (Johnson 2017). In terms of device support, Trello is accessible via desktop browsers and mobile devices both online and offline. The complete features offered by Trello include Easy to learn; simple interface; SSL encryption support; responsive; available mobile version, easy to upload photos and other attachments; free for basic features;

archive list or card; customizable Board design; undo, update notifications, voting and search features; a brief overview on the front and back of the card; deadline reminders and notifications via email; check lists with progress bars; assignment of tasks to members; logactivity; scope of visibility; power-ups (support of many extensions); features tags, labels and categories; move, swap, drag and drop; inline editing and filter features; API support for developers.

The research that the researchers will do is a combination of Sports Health Education and the Numbered Heads Together (NHT) Cooperative model in the Agile Scrum Trello application. The limited research on the use of the Agile Scrum Trello application as a learning medium, especially in the Sport Health Education course, is also the reason why researchers want to do this research. The use of learning media based on the Agile Scrum Trello application allows the achievement of learning objectives in the era of independent learning policies - independent campuses and allows the creation of effective and comprehensive learning outcomes for students. So that research in the use of the Agile Scrum Trello application as a learning medium in the application of the Numbered Heads Together (NHT) cooperative model in the Sport Health Education course is considered very important to be carried out with the concept of classroom action research using descriptive methods which will be carried out in two cycles. In the future, this research will produce the main output in the form of articles published in SINTA 3 and DOAJ accredited national journals, namely the Kinesthetic Journal submitted on 12 (December) 2022. In addition, there are additional outputs in the form of articles that will be presented at the National Sports Seminar held by the University. PGRI Palembang at the end of 2022.

METHODS

This research is Classroom Action Research, which is an action research within the scope of education carried out by lecturers, and at the same time as researchers in their class or together with other people (collaboration) by designing, implementing, and reflecting on collaborative and collaborative actions. participatory process that aims to improve or improve the quality (quality) of the learning process in its class through a certain action (treatment) in a cycle (Subali 2014).

This study uses a descriptive method because in this study a description will be produced (Gulo 2013). The extent to which the improvement of the quality of learning by using the Agile Scrum Trello application as a learning medium in the application of the Numbered Heads Together (NHT) Cooperative Model in the Sport Health Education course for students who are the research sample. The use of the Agile Scrum Trello application in the application of the Numbered Heads Together (NHT) Cooperative Model enables the achievement of learning objectives in the era of independent learning policies - independent campuses and allows the creation of effective and comprehensive learning outcomes for students.

Participants and Sampling

The population of this study were all students of the Physical Education Education Study Program, FKIP UNIB T.A. 2022/2023. While the samples in this study were fifth semester students who took the subject of Sports Health Education, Physical Education Study Program, FKIP UNIB

Materials and Apparatus

In preparing your manuscript, you need to tell the reader about materials (e.g., questionnaires, stimulus words) and apparatus (e.g., devices to record data, surgical implements) that you used. In general, if researchers are likely to be familiar with your materials and apparatus, you need only mention them. But if you created your own materials, you should give a very detailed depiction of them. If you are using relatively unknown materials or apparatus created by others, you should provide a description of them and indicate to the reader where to obtain them. If you used personality inventories or questionnaires, it is a good idea to indicate levels of reliability reported by previous researchers.

Procedures

This classroom action research plan will be implemented in two cycles, and each cycle consists of four stages, namely (1) planning (planning), (2) action (acting), (3) observation (observing), and (4) reflection (reflecting). The following is a table that describes the flow of research that will be carried out by researchers.

1. Planning Stage

At the planning stage, preparation of learning tools needed during the teaching and learning process is carried out, including: (1) compiling RPS for Sports Health Education courses, (2) preparing material in the form of power points, (3) preparing observation sheets containing questions basic knowledge of Sports Health Education as a pre-action instrument to determine the percentage of student interest, (4) preparing learning scenarios for cycles 1 and 2 with the concept of the Numbered Heads Together (NHT) Cooperative learning model, (5) making an assessment instrument for Sports Health Education, and (6) set up a

Trello account as the main application that accommodates Sports Health Education learning activities.

2. Implementation Stage

This stage is the implementation of the learning scenarios that have been made in the previous stage in the classroom, including initial, middle, and final activities.

3. Reflection stage

Constraints in the learning process were analyzed from the results of the questionnaires that had been distributed for further improvement to achieve the learning outcomes targets.

Data collection technique

The data in this study were collected through one of the test and non-test techniques, namely by using observation sheets to see students' abilities in expressing their abilities and also by giving questionnaires before and after the learning model was applied (Sugiyono 2011). The test technique will be carried out at the end of the cycle in the form of giving test questions to determine student knowledge about the material that has been learned from using the Trello application as a learning medium.

Data analysis

The data analysis technique used in this research is questionnaire data for material experts and media experts and a student response questionnaire conducted with five rating scales, where the highest score is 5 (strongly agree) and the lowest score is 1 (disagree). To calculate the average total score of each questionnaire, the following formula is used: $\bar{X} = \sum X_i / N$. The score obtained is then converted according to the table reference below:

Table 1. Conversion of scores on a scale of five

Value interval	Category
$X > \bar{X} + 1,8 S_{bi}$	Strongly agree

$\bar{X}_i + 0,6S_{bi} < X \leq \bar{X}_i + 1,8S_{bi}$	Agree
$\bar{X}_i - 0,6S_{bi} < X \leq \bar{X}_i + 0,6S_{bi}$	Just Agree
$\bar{X}_i - 1,8S_{bi} < X \leq \bar{X}_i - 0,6S_{bi}$	Disagree
$X \leq \bar{X}_i - 1,8S_{bi}$	Don't agree

RESULT

Research that has been carried out from January to August 2022 on Physical Education students, Bengkulu University, totaling 36 students shows that the use of the Trello application as a learning medium in the application of the Numbered Heads Together (NHT) Cooperative learning model can improve student learning outcomes in Education courses. Sports Health. The following table shows the scores before (cycle 1) and after (cycle 2) using the Trello application in the implementation of the Numbered Heads Together (NHT) Cooperative learning model. From these results, it appears that there is an increase in learning outcomes before the use of the Trello application in the application of the Numbered Heads Together (NHT) Cooperative learning model and after the media and learning models are applied. In cycle 1, students who got grades in category A amounted to 8 students, while in cycle 2 there were 15 students. This means that there is an increase from the first cycle to the second cycle, which is 20%. Furthermore, there were 15 students who got grades with category B in cycle 1, while in cycle 2 there were 17 people. This means that there is a 5% increase in the percentage in the first cycle to the second cycle. Then, for the value of category C there are 13 students in cycle 1, while in cycle 2 there are 4 people. This means that there is a decrease in the number of students who get sufficient marks in cycles 1 and 2, the decrease is 25%. The category of D values in both cycle 1 and cycle 2 both amounted to 0.

In the series above, it appears that in cycle 1 learning activities are carried out online using the zoom application. Students make learning materials on sports health education materials by choosing a predetermined theme and then presenting directly in the zoom application. The following is a table of learning outcomes in all cycles.

Table 2. Distribution of Learning Outcomes in Cycle 1

Value Range	Letter	Description	Cycle I. Value Acquisition
85-100	A	Very good	8 22%
70-84	B	Good	15 42%
50-69	C	Pretty good	13 36%
0-49	D	Not good	0 0%
Amount			36 100%

From the table above, it can be seen that the target achievement set was not achieved in cycle 1. Category A grades only consisted of 8 students or 22%. Category B scores were obtained by 15 students or 42%, and category C grades amounted to 13 students or 36%. Meanwhile, for category D, none of the students fall into this category. The results of the 10 essay questions by the students showed that the students' understanding of the poetry material was not in accordance with the target set where the target was the number of students who scored very well was 30%. The percentage of the target is still quite far from the results obtained in cycle 1 which is only 22% for the number in the very good category.

Table 3. Distribution of Learning Outcomes in Cycle 2

Value Range	Letter	Description	Cycle I. Value Acquisition
85-100	A	Very good	15 42%
70-84	B	Good	17 47%
50-69	C	Pretty good	4 11%
0-49	D	Not good	0 0%
Amount			36 100%

From the table above, it can be seen that the achievement targets set were achieved in cycle 2. Category A scores were obtained by 15 students or 42%. Category B scores were obtained by 17 students or 47%, and category C scores were 4 students or 11%. Meanwhile, for category D, none of the students fall into this category. The results of working on essay questions which amounted to 10 items by students showed students' understanding of the material in accordance with expectations where more than 30% of students, namely 42% or 15 students scored in the very good category.

CONCLUSION

From the results of the research that has been done, it can be concluded as follows:

1. The average practice value in the form of material creation projects on the trello application is 83.5. The assessment aspect consisting of 5 assessment indicators was successfully implemented by students in the trello application that was made.
2. The results of the response questionnaire distributed to students showed a final score of 24.61 or an average of 4.1, which means that the category most chosen by students is agreed. In other words, these results indicate that the implementation of the project assignment for the management of sports health education materials using the trello application is of interest to students.
3. The average score of students in practice and the results of filling out questionnaire responses by students correlated with the results of the knowledge test obtained by students. The use of the trello application as a learning medium in the application of the numbered heads together (nht) cooperative model for the sport health

education course in the fifth semester of unib physical education students can improve student learning outcomes. As a result, the achievement targets were obtained in cycle ii with the following details; 15 students or 42% got category a, 17 students or 47% got category b, 4 students or 11% got category c, and none or 0 students got category d.

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