

MOOCs and Trello Based Blended Learning to Increase Student Involvement

Connie¹, Eko Risdianto²

¹ Universitas Bengkulu, Indonesia; connie@unib.ac.id

² Universitas Bengkulu, Indonesia; eko_risdianto@unib.ac.id

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ABSTRACT

This study aims to see student responses to learning with blended learning based on MOOCs and Trello. This type of research is quantitative research with a survey method. The instrument used is a closed questionnaire using a modified Likert scale with 4 answer options, namely strongly agree with a score of 4, agree with a score of 3, disagree with a score of 2, and strongly disagree with a score of 1. The questionnaire used consists of 29 statement items about the response after using the Trello project management application. Data processing is done using the help of an excel application. The results obtained as a whole are either from a limited test or from the results of an extensive test. The Trello application in learning has a positive response from the respondents. There are no items that agree to disagree or strongly agree based on the respondent's data, but all items agree.

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Corresponding Author:

Connie

Universitas Bengkulu, Indonesia; connie@unib.ac.id

1. INTRODUCTION

Education is something that cannot be separated from humans (Judge et al., 2020). In Law no. 20 of 2003 concerning the National Education System, it is stated that education is a conscious and planned effort to create a learning atmosphere and learning process so that students actively develop their potential to have religious, spiritual strength, self-control, personality, intelligence, noble character and skills needed by themselves (Ramli, 2015). In learning, not only educators are required to be active, but students are also required to be actively involved. The level of student involvement is strongly influenced by the learning model applied.

One of the learning models currently receiving attention in education circles is the blended learning model (Lin et al., 2017). Blended learning is usually seen as a combination of face-to-face and online delivery methods to complement each other (Poon, 2013). There are also those who define it as the integration of useful aspects of online and face-to-face learning environments, where learners and educators interact both with and without technology (Waha & Davis, 2014). Blended learning offers many advantages for institutions, faculty, and students. For example, the institution sees it as a model that makes efficient classroom use; faculty benefit from increased flexibility in their teaching schedules; and students appear to be more satisfied and achieve higher grades than in full face-to-face or online classes (Owston et al., 2013).

Blended learning is considered very appropriate to be applied in post-pandemic situations or what is often referred to as the new normal era today. Learning can no longer be carried out in full in schools as it used to be. So that other alternatives are needed to still meet the learning load with a very short learning time at school. And the most appropriate is to combine face-to-face learning with online learning. Especially in this 21st era, the rapid development of technology makes students think that the learning process does not have to be in the classroom (Wardani et al., 2018). This means that learning can be done anywhere and anytime.

One of the online learning applications can be made with the Massive Open Online Course (MOOCs) model. MOOCs are one of the latest innovations in education that are growing rapidly (Busri et al., 2019). MOOCs are online courses aimed at massive interactive participation and open access via websites (Ismail et al., 2018). In this case, through MOOC, we can expand our knowledge or learn easily because MOOC is a space for online learning, anytime and anywhere. McAuley, Stewart, Siemens and Cormier explain the phenomenon of MOOCs as the involvement of diverse students to achieve shared learning goals by self-regulating their participation (Zhussupbekov, 2015).

In the world of education today, it is also being hotly discussed about the use of an application to support online learning. The application is called Trello. Trello is an application that can be used as a place to work as a team. Trello has several features, one of which is a feature to see how far a job has been completed by a team (Rodhi et al., 2021). Trello Tools is a cloud-based tool that uses the Kanban project management method. Under the Kanban method, all project-related activities are displayed in a single view that can be seen by all members of the project team (Husufa & Djahidin, 2021). In other words, Trello makes it possible to manage multiple projects in one place where everyone on the project knows what is being done, who is working on it, and how far he is working on it (Muhamad, 2019). Trello is a flexible application for educational, office and business purposes. Power-up Application in Trello is an additional function that allows the integration of Trello with other applications. Google Drive, Google docs and dropbox apps are integrated with Trello media. In contrast, the communication function can be integrated and combined with Hangouts Slack (Cahyani & Prapanca, 2021). The Trello application consists of 4 main features: team, board, list, and card. Team is the name of the team, for example the name of the class. Board is a job or project, in the case of learning, the board is given the name of the course_name of the lecturer. List is a list of steps or stages of work. Usually the stages in learning include the sequence of meetings or the sequence of tasks. Card is a task that must be completed in this case the card contains the names (Christianti, 2021).

Research on Trello-based project management applications has been carried out by several previous researchers. Rodhi et al. (2021) conducted a study to see the effectiveness of features on Trello. The research focused on the effectiveness of Trello's features for e-monitoring activities of management lecturers' tri dharma activities. Meanwhile, Christianti (2021) conducted research through training and assessment activities of the Trello Application. The research was focused on evaluating the Trello application specifically for thesis guidance during the COVID-19 pandemic. Husufa & Djahidin (2021) also researched the topic of Trello applications. The research was conducted through training activities to introduce Trello tools to PKK members in North Meruya Village. From these studies, positive results were obtained regarding the use of the Trello application. Then, what if this Trello application is used in learning activities? Will it have a positive impact? In learning, Trello can be juxtaposed with blended learning and MOOCs models. Therefore, researchers will examine how students respond to learning with moocs and trello-based blended learning in this study.

2. METHODS

This study aims to see student responses to learning with blended learning based on MOOCs and Trello. This type of research is quantitative research with a survey method. Survey research is the type of research carried out to obtain facts or data. The purpose of this research is to be useful in getting accurate and real information. The instrument used is a closed questionnaire using a modified Likert scale with 4 answer options, namely strongly agree with a score of 4, agree with a score of 3, disagree with a score of 2, and strongly disagree with a score of 1. The questionnaire used consists of 29 statement items about the response, after using the Trello project management application. Data processing is done using the help of an excel application.

Analysis of the questionnaire results was carried out quantitatively using the following formula.

$$p = \frac{n}{N} \times 100\% \quad (1)$$

Where P is the percentage of the results of the questionnaire analysis, n is the total score of the assessment, and N is the maximum possible score. For the Likert scale, the score interpretation model can be seen in table 1.

Table 1. Likert Scale Interpretation

Percentage (%)	Category
0% - 25%	Strongly Disagree
26% - 50%	Do not agree
51% - 75%	Agree
76% - 100%	Strongly agree

(Hayati et al., 2015).

3. FINDINGS AND DISCUSSION

In this study, limited and extensive tests were conducted. A limited test is a test that only involves 16 respondents. The following are the percentage results obtained from each statement based on data processing results in the limited test.

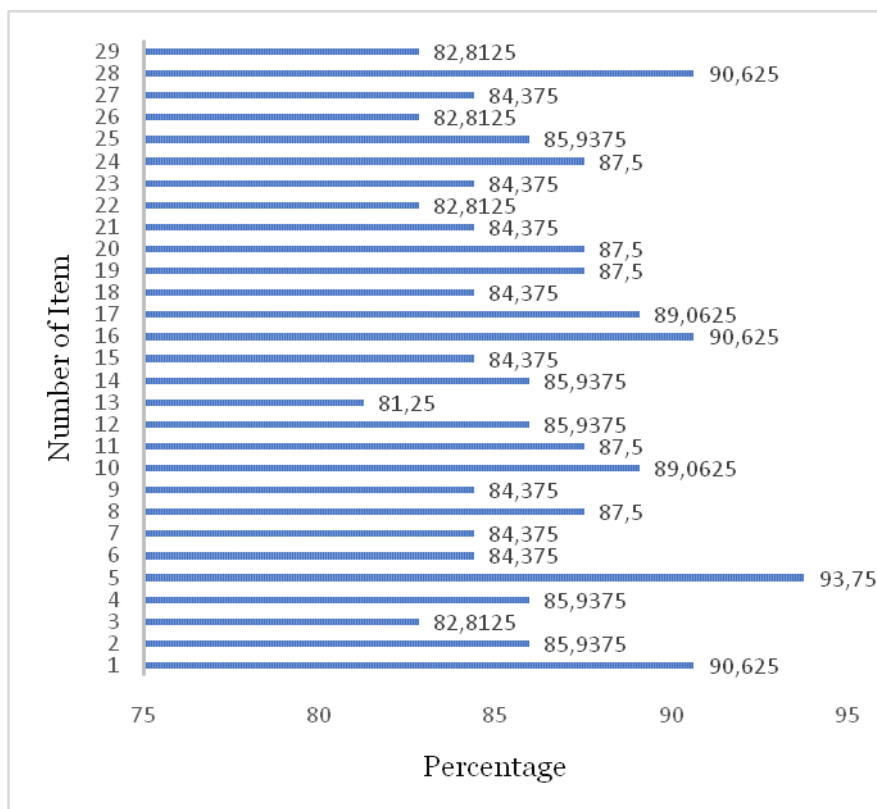


Figure 1. Graph of the Percentage Results of Each Statement in the Limited Test

After a limited test, a wider scale test was conducted with a larger number of respondents, as many as 84 respondents. The following are the percentage results obtained from each statement based on the results of data processing in the extensive test.

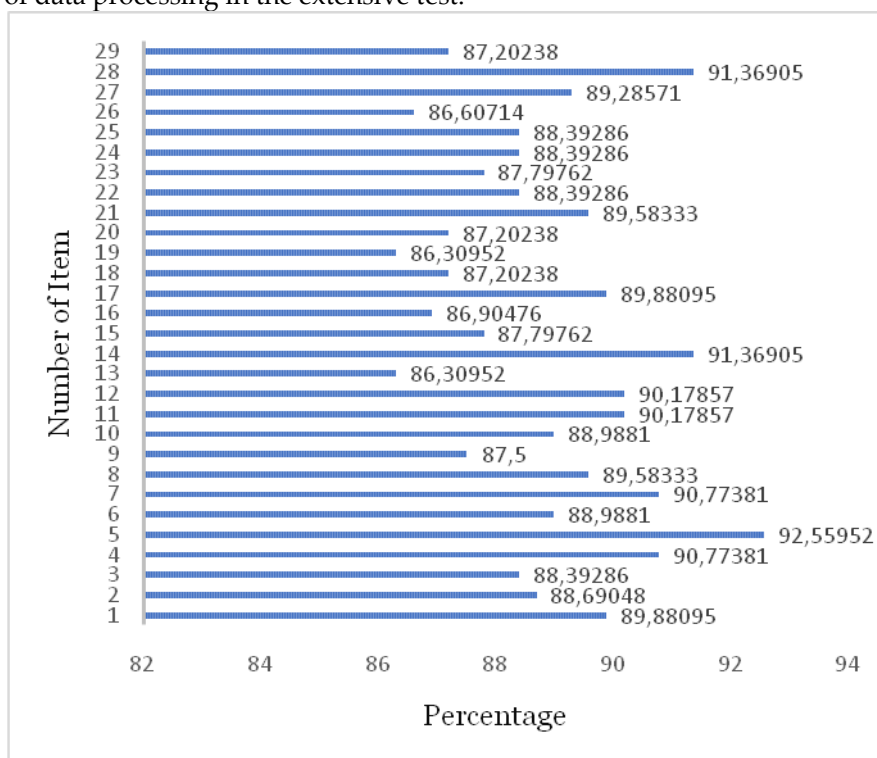


Figure 2. Graph of the Percentage Results of Each Statement in the Extensive Test

From the data above, both from the limited test results to 16 respondents or the extensive test to 84 respondents, the results obtained are in the same range, which is above 80%, which indicates that all items are in the category of strongly agree. Sequentially, it is known that the respondents strongly agree that the learning method using the Trello Project management application is interesting to be applied in helping the delivery of material in the classroom; the Project-based learning method using Trello can also make respondents more enthusiastic in implementing PBM. Respondents are very interested in using Trello to manage the courses taught at their place of work. Respondents strongly agree that the learning process and assignments given through the learning method using Trello can make students more responsible. Students feel more valued and motivated in doing the tasks given if they are given rewards/awards to students. Respondents strongly agree that students will work on assignments or projects on time if the process of involvement in learning occurs optimally, for example, using Trello. Monitoring learning using this method can make lecturers and students feel closer and more interactive. Teaching and learning activities with Project-based learning methods using trello can bring up the values of disciplined character, honest character values, independent character values, character values respecting achievement, creative character values, hard work character values, and tolerance character values. With the use of technology to help respondents in monitoring their activities of learning activities. If learning is carried out using a project-based learning method using trello, respondents believe that students will be motivated to follow all the material given because it is very fun. Respondents feel that they can apply innovative ideas in their future learning, especially in their field of knowledge. Respondents strongly agree that students will be more enthusiastic when they get a direct response from the collected assignments. The interaction and engagement that is carried out using the Trello application is also very good and optimal. Respondents feel that with this learning method, involvement in the learning process will be more effective and students will be more motivated to complete tasks using this learning method. Student activities will be more easily controlled through this learning method, especially in accuracy in working on the given project. Learning methods like this will help students achieve the desired learning achievement targets. Respondents also strongly agreed that this learning method led to the application of behaviouristic learning theory (stimulus-response). According to respondents, this learning method led to the application of cognitive learning theory, constructivism learning theory, and humanistic learning theory. This technique can help in evaluating the learning process in the classroom more easily. With Trello, respondents can see the history of activities carried out so that it will be easier for respondents.

The course of learning is determined by the involvement provided by the students themselves. This student involvement can be interpreted as something that shows the active role of a student in carrying out a lesson (Febrilia et al., 2020). The level of engagement is achieved when students pay attention to the class and fully invest in their own learning. Factors such as attendance, participation in activities, emotional interaction, motivation or the ability to feel ownership of the course to enhance their experience are indicative of engagement. Student involvement can also be seen in terms of cognitive or student knowledge of the material discussed so that discussions can be active and there is reciprocity. Then there is affective such as feeling happy during the discussion, sad because the discussion ends or feeling annoyed because of unsatisfied answers from other students. Judging from the results of student responses that learning using Trello gives them a sense of enthusiasm when learning, feels interested in the material being discussed, is responsible for all assignments given, and is encouraged to continue to monitor all activities that take place in the Trello system and monitor learning progress continuously. Standing shows student involvement in learning activities carried out through Trello. From there, we can conclude that learning using Trello is able to increase student engagement during online learning, which is part of the blended learning model.

The results obtained in this study are relevant to the results of several previous studies. One of them is research conducted by Cahyani & Prapanca (2021). The results of this study indicate that the student response is 77.5% positive in the use of the learning model using Trello. It can be seen from

the increase in the average pretest and post-test scores. And the results of the research on teacher responses to the need for Trello media in monitoring and planning lessons, 71% are feasible to be reused. Another relevant research is the research conducted by Christianti (2021). The result of this research is that students are satisfied and helped by the Trello application, especially in terms of thesis guidance.

4. CONCLUSION

The results obtained as a whole are either from a limited test or from the results of an extensive test. The use of the Trello application in learning has a positive response from the respondents. There are no statement items that are categorized as disagreeing or strongly disagree based on the respondent's data, but all items are categorized as agree or even strongly agree. This study has limitations in terms of data. For similar research, it can be done with more varied data collection techniques and instruments so that the results obtained are also wider. However, the results of this study have the potential as a basic reference for other researchers who will develop Trello-based learning.

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