Learning model development moodle-based problem-based learning to improve critical thinking ability

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Article Info

ABSTRACT

Ability thinks critically is ability to make conclusions and judge authenticity as well as truth something based on prior knowledge-owned. Think critically as a complex process that requires cognitive level in process information. In study literature this will discuss development ability and critical participant education with the MOODLE -Based Blended Problem Based Learning Model to support alternative recovery learning during the endemic period of COVID-19. The MOODLE -Based Blended Problem Based Learning Model is considered suitable for develop ability think critical because Blended Problem Based Learning related learning with real world problems as context for participant educate for study think critical and skills solve problem , the MOODLE -based Learning Management System helps participant educate enter into the room digital class and can access materials learning in blended learning as effort restore educational conditions during the COVID-19 endemic. With thereby study this as solution description learning distance far for development ability think critical during the COVID-19 endemic.

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Introduction

Management Education in Indonesia is based on law Number 20 of 2003 concerning the National Education System. Education is effort conscious and planned for realize atmosphere learning and the learning process for participants educate in a manner active develop potency himself for have religious spiritual power, control self, personality, intelligence, morals glorious, as well necessary skills himself, society, nation and state (UU No. 20 of 2003, 2003). Refer exposure the participant educate could develop capabilities, one of them is ability think.

Skills required by the participants are to challenge the world after the Covid-19 pandemic is ability think. Ability among them is ability to think critically, think creatively and ability to solve problems(Kalelioğlu & Gülbahar, 2014). Ability thinkcritically that important because they possible participant educate for handle problem in a manner effective with social, scientific, and problems practical (Shakirova, 2007 in Dimmitt, 2017). Think critically is Settings self in deciding something that produces interpretation, analysis, evaluation, and inference, as well as exposure to use something proof, concept, methodology, criteria, or consideration contextual being base he made decision(Facione, 2011). Think critically as a complex process that requires cognitive level tall in process information(Choy & Cheah, 2009). Think critically is ability to think reflective and reasoned focus on what to believe or done(Ennis, 2011).

Study earlier confirms that in the learning process should apply and hone ability think critically(Chukwuyenum, 2013). Ability is critical as one ability should be owned by the participants' students(Nuryanti et al., 2018). Learning process should always emphasize the ability to think critical participants educate as a goal to produce experience, valuable learning and more fun (Duron, 2006 in Alsaleh, 2020). Learning process done optimally possible interpreted as something Suite implementation learning carried out by teachers and participants educated for achievement destination learning(Zevender, 2019). theory at some level thinks that is known knowledge, understanding, application, analysis, synthesis, and evaluation with the designation Bloom 's Taxonomy. At stage think critical and said think level tall because at the stage this participant educate capable see something complex problem in a manner more in from various side, analyze something problem with carefully so that capable find efficient solution for problem(Susilowati & Sumaji, 2021). Evaluation ability think critically could be conducted with use choice double with justification written, test essay thinkscritically, and judgment performance.

Based on results study before, the teacher continued fight for involve participant educate in activity think critically, and participants educate seldom use ability think critical for solve complex real-world problems (Bartlett, 2002; Rippin, 2002 in Smith & Stitts, 2013). Problems this suspected sourced from the use of learning models. Teacher doesn't only teach participants how to think, but the teacher must also teach them what to thought. On the other hand, oddly enough that teachers expect participants to educate for learning, however seldom teaching them anything about learning. Learning at school generally still uses method lectures so that ability makes critical participants very difficult to teach for development(Sormin & Agustina, 2018). Still there are participant students who have ability to think low critical, p this seen from participant students who don't listen during the learning process, and still there is participant still teach experience difficulty in learning, apply questions, and put forward his opinion moment discuss(Hasyim et al., 2019).

Using problem-based learning models, scholars have already done a number of studies. Based on research byAsyari et al. (2016), a way of teaching that combines PBL with GI and gets students involved can help them learn to think critically by asking questions, giving reasons or opinions, practicing starting and ending arguments, and doing evaluations. Then, Saputra et al. (2019)said that using the problem-based learning model along with the Jigsaw joint learning model helped students in the Accounting Department Vocational School improve their critical thinking skills. Unlike some other studies,Demirel & Dağyar (2016) found that PBL did not have a big good effect on how students felt. Anazifa & Djukri (2017)found the same thing, which backs up this statement: that PBL doesn't have a different effect on students' critical thinking.

Based on the problem, researchers mean to study more and carry on with the help of MOODLE -based Problem Based Learning blended learning. The Independent Curriculum requires implementation participants centered learning educate and place the teacher as facilitator in activity learning (Praginda, 2013 in Kristinawati et al., 2018). Problem Based Learning (PBL) is a learning model that places the teacher as facilitator (Hamburg & O'Brien, 2014) and is an approach participant - centered learning educate with presenting problems as trigger activity discussion and inquiry in learning something material. PBL facilitates participants' education for enriching information and building knowledge related directly with real life and future (Greening, 1998 in Stentoft, 2017). PBL activities carried out with shared participant education become groups small and the teacher acts as facilitator in activity discussions conducted by the participants educated in groups (Hung et al., 2008 in Figueiró & Raufflet, 2015).

Method

The literature study method is used in this study. The Campbell says that a systematic study of the literature should have clear criteria for what to include, a clear search strategy, be organized, and use the right meta-analsysis methods(Collaboration, 2017). In this study, we did the following: (1) come up with search strategy criteria; (2) look for articles that met our criteria; (3) check articles to make sure they met the inclusion criteria; and (4) pull out detailed reports about certain parts and then write research results. The data used in this study are secondary data, which means they were not collected directly but from other studies. Sources and source data come from books or research reports that are published in journals, theses, or articles. Content analysis approaches are used as a way to look at the data in this study. Once all the needed data has been gathered, it needs to be analyzed, which means that it needs to be summed up so that exact and correct results can be obtained. The style of this analysis is an in-depth look at what was said in a talk that was written or printed in the media. The literature used is from the last 10 years and meets certain standards. Key words like OCB, serving leadership, creativity, empowerment, and/or SITOREM analysis were used.

Results and Discussions

Study is a process of changing behavior or personal somebody based on practice or experience. Whereas learning is an arrangement environment that gives the nuances of learning programs grow and develop optimally. Learning models intended as pattern interaction participants educate with the teacher inside concerning classes, strategies, approaches, methods, and techniques applied learning in implementation activity study teach in class. Learning is not centered on the teacher only, but on the participants' education. Master here functions as just a facilitator and motivator. Fill in activities is sourced learning material (material) and curriculum an educational program. Activity process is steps or stages passed educators and participants educate in learning. Based on theory developed by Barrow, Min Liu (2005) explains characteristics of Problem based learning (PBL) namely the learning process in PBL more climb weight to student as people learn (Learning is student-centered), the problems presented to student is authentic problem so that student capable with easy understand problem the as well as could apply it in life the professional later (New information is acquired through self-directed learning), happens interaction scientific and exchange thinking in effort develop knowledge in a manner collaborative in Problem based learning implemented in group small (Learning occurs in small groups), and in the implementation of problem-based learning teachers only role as facilitator (Teachers act as facilitators).

Component important implementation learning covers curriculum, materials learning, and learning models. Learning models are used in arranging curriculum, compiling learning material, and providing instructions to instructors in class in Settings teaching or Settings others (Joyce & Weil, 1980). Learning models are guidelines for teachers and participants educated in implementation of the learning process (Rahman, 2019). Blended Learning can utilize approach stare face (offline) and e-learning (online), expanding limits of the learning process moment this (Paschalis, 2017). PBLs are method learning and training, characterized by real- world problems as context for participants educated for study, think critically and skills to solve problems as well as obtain knowledge. Characteristic of PBL that sets it apart from method learning is PBL centered on what participants learn, not on what to do lecturer (Macdonald & Isaacs, 2001).

Based on a theory that Barrow developed explains characteristics from Learning based Problems (Problem Based Learning), namely: first the learning process in PBL emphasizes participant education as a learner. Second problem presented to participant educate is authentic problem so that participant educate capable with easy understand problem the as well as could apply it in life the professional later. Third in the process of solving problem possible just participant educate not yet know and understand all knowledge prerequisites, so participant educate attempted for look for alone through source, fine from book or information other. Fourth In order to happen interaction scientific and exchange thinking in effort build knowledge in a manner collaborative, then the learning process teach carried out in group small. Group created demand distribution clear tasks and assignments clear goals. Fifth on the implementation of the learning process teaching, teacher only role as facilitator. Howeve, even so the teacher should always monitor development activity, educate and encourage participants to learn to achieve the desired target(Liu, 2005). Steps learning based problems started from orienting students on the problem, organizing students for learning, guiding personal experience or group, developing and presenting results work, analyzing and evaluating the solving process problem.

Blended Learning is a common learning adopted approach in education height, which combines stare advance teach with instructions and bait back online. This is a pedagogical model to push participants to study in a manner interactive and collaborative, offering framework time as flexible as possible personalized to fit the needs of study individuals. Problem based learning (PBL) is method problem triggered learning, which encourages students to study and work cooperatively in a group to get solutions, think critical and analytical, capable sets as well as use source power appropriate learning. PBL method/solving problem is something method learning with confronting a student to a problem/ problem for solved or resolved in a manner conceptual problem open in learning (Hotimah, 2020).
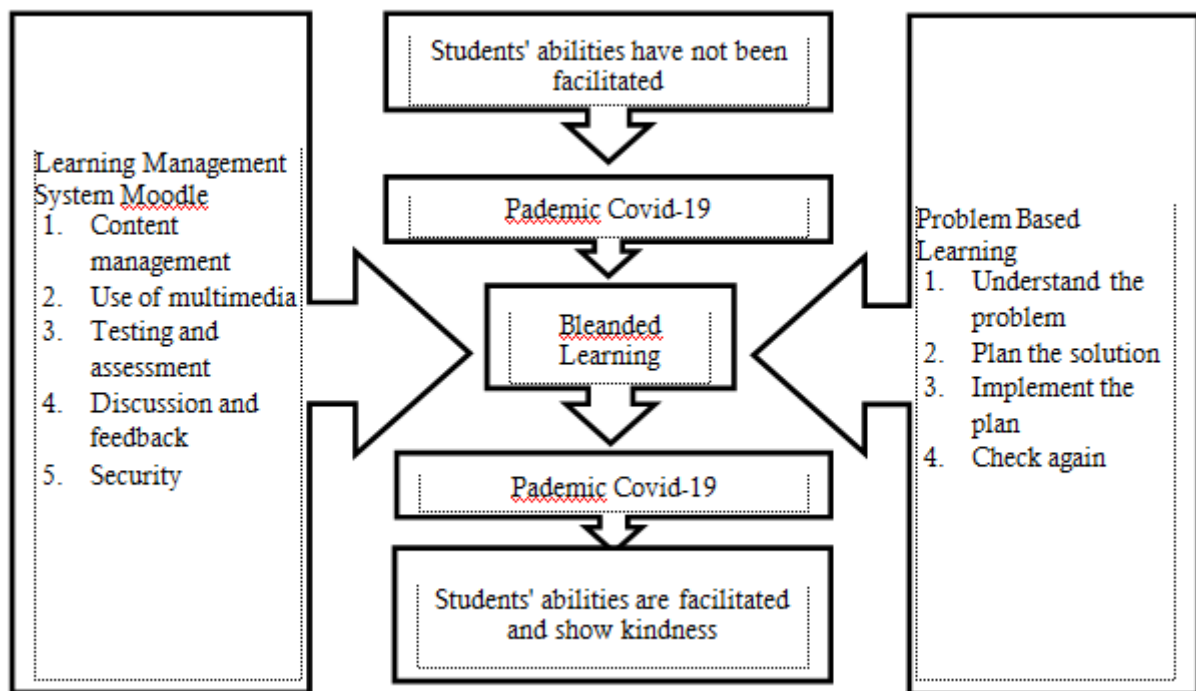
Figure 1. Alternative Design of MOODLE -based Blended Learning Model for developing Ability Think Critical during the endemic period of COVID-19

Following this is example learning through moodle related classroom learning as defined in Figure 2 below this:
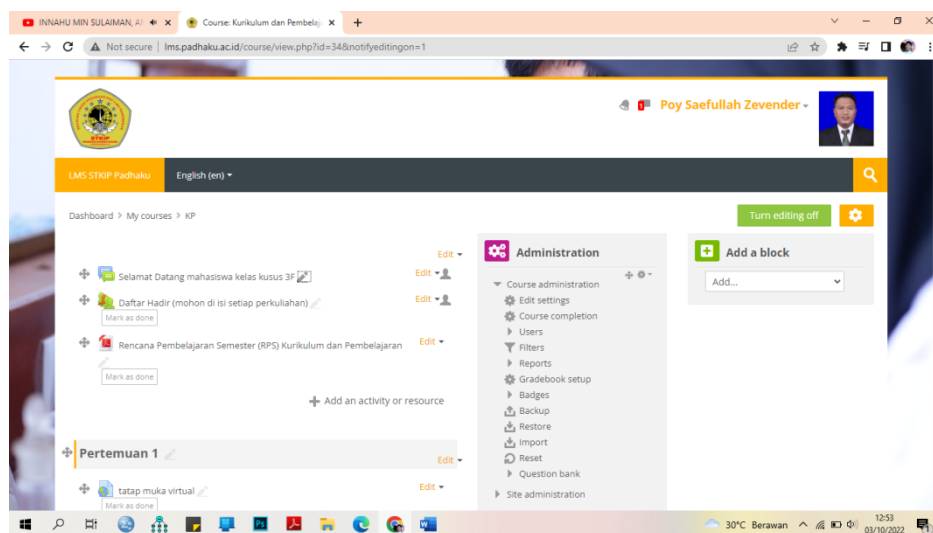

Figure 2. The use of MOODLE as an online learning medium during the post -COVID-19 pandemic

Increasing abilities is very important by using the Moodle-based blended problem-based learning model as an alternative during the COVID-19 epidemic, which combines the learning process of students so they can learn offline and online. The use of media in the classroom has the potential to attract students and encourage the growth of their critical thinking abilities. The main advantage of using Moodle is that it helps students develop appropriate learning strategies for the various stages of cognitive development that occur during the middle school years.

Learning begins with the teacher conveying the learning objectives and conducting apperception to explore knowledge from an early age. Participants learn problem-oriented learning available on the Moodle-based

Learning Management System. Problem: increasingly enthusiastic participants are taught to ask questions, answer questions, and express their opinions. Then the teacher guides the participants to convey the information that has been obtained individually to group members, and the teacher guides the participants to determine solutions to the problems that have been given. The information is then presented in the form of videos uploaded via the Moodle-based Learning Management System. After that, the teacher asks other groups to respond to the results of the discussion displayed and attach their responses to the available assignment menu. Then the teacher provides reinforcement and correct explanations regarding the results of the discussion shown. Finally, the teacher reflects on or makes a summary of the learning and guides the participants in making a summary of the learning outcomes. Summaries are available in the LMS account and can be accessed by every learner.

According toFitrianingsih et al. (2019), middle school students are at the "formal operational stage" of cognitive development, which is characterized by the emergence of scientific thinking models such as the ability to sketch. draw conclusions, examine data, and develop hypotheses. This is in accordance with the findings ofGunawan et al. (2021), who stated that Moodle's built-in chat and discussion forums contributed to the growth of students' higher-order thinking skills. Teachers can also monitor student activity in Moodle online forums. With the help of this forum, students and teachers can stay in touch and provide continuous encouragement to each other at every stage of the PBL process. These results provide credence to the conclusions drawn bySeptiani et al. (2020)that students get the benefits of e-learning in developing their critical thinking skills. When using Moodle for problem-based learning,Herayanti et al. (2018) found that students' conceptual understanding of the idea of waves increased.

Conclusions

Based on the research that has been conducted, it is concluded that alternative learning through Moodle blended problem-based learning is considered effective during the COVID-19 epidemic in developing students' critical thinking skills. The MOODLE-based Learning Management System helps students enter digital classrooms and can access learning materials using blended learning as an effort to restore educational conditions during the COVID-19 epidemic.

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