

Online Group Investigation by Using Facebook to Improve Students Critical Thinking on Geography Subjects

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Abstract—The purpose of this study is to obtain an Online group investigation by using Facebook in improving students critical thinking on geography subject. The type of research is development research. It conducted of preliminary research stage, product design stage, evaluation stage and reflection stage and documentation. The data is collected through discussion, observation, interview, questionnaire, and test. The collected data are analyzed by using descriptive and inferential statistics. The product of the research consists of model book, model support system in the form of teacher book and student book. The products categorized as valid, it that can be seen from organizational aspect, format, material and language and supporting system. Practical results obtained that products are easy to use, understood, helpful learning process, adequate time to use, and interested. The result of the effectiveness test is developed with the ability to think critically. The finding shows that the online group investigation learning using Facebook in Geography subject is valid, practical and effective.

Keywords—Online group investigation learning, Critical Thinking Ability, Geography Subject

I. INTRODUCTION

In "21 Century Partnership Learning Framework", there are several competencies or skills that must be possessed by 21st century human resources that are Collaboration, Communicative, creativity and critical thinking and problem solving abilities especially in Geography subject. This subject has a great opportunity in realizing the role of education above as proposed by the International Geography Union (IGU), the Geography Educational Commission declared a continuous development education as a Geography education mission in 2005 - 2015 in which Geography competence is charged one of them is the geography skills in the case critical thinking skill. critical thinking is a high-level thinking in depth and comprehensively in order to find solutions based fact and phenomenon, so that it can solve a problem in detail [1]. The ability to think critically is an essential skill for life, work, and functioning effectively in all other aspects of life. Definition of critical thinking put forward many experts. Besides, critical thinking is the ability and high-level skills in analyzing and analyzing of a problem and solve or find the right solution in its completion Critical thinking must go through several stages to arrive at a conclusions or judgments [2]. To optimize learning can be done in various ways that is by developing and applying various models and learning strategies by following the development of technology such as utilizing social media, computers and so forth.

However, based on pre-survey that have been done at SMA Negeri 15 Padang, Geography teachers still tend to use the lecture method and question and answer method. Learning does not mean anything other than just the fulfillment of the target exam and the teacher is bound to be attached to students exercise book. Based on the phenomena above, it is necessary for Geography teachers to make efforts that can make students more communicative, creative and able to think critically and understanding and also capable of solving problems. One of them is by changing the model and learning strategy. Learning model is a planned and systematic procedure in organizing a learning experience or an approach used in learning activities to achieve the goals of learning.

One of the learning model that can be used to face the problem above is cooperative learning model, because by using this model, the teacher will be the facilitator in the classroom that has function as a bridge connecting towards higher understanding. The type of cooperative learning model that can be implemented is investigation group. Learning by using investigation group can improve students critical thinking ability. Using Investigation group can increase students' achievement and it is very effective used both superior and ordinary school. Unfortunately, Group investigation which is used still has some disadvantages such as this kind of learning model will take longer time in the process of using it in the classroom and the material can not be adjusted to the existing curriculum if the teacher is not experienced [3].

In order to overcome the weakness of the model of Investigation Group, the researcher tries to make a development and innovation to the learning model. That learning model is not only limited to class, space and time but they can use it anytime and anywhere. Learning Investigation Group that will be developed is using social media as a medium of learning and Facebook is a social media chose in this research. The learning model is designed to help students develop thinking skills and gain an understanding of the form or in specific form along with the development of technology and social networking or social media then the social network can be used as a means of learning. Facebook is the most commonly used medium by all circles not only as a social networking site for learning in teams and online learning system platforms in the educational community. Facebook has applications that support teaching and learning and improve learning experiences significantly. Moreover, Facebook as an educational platform for online learning that is very quickly

recognized in the educational community. also determine that Facebook has many applications which supports teaching and learning that can foster a positive learning experience and can improve the relationship between educators and students. This model is also effective to add in learning efficiency in the classroom and conduct discussions or add / find information outside of the classroom. It also can improve students' critical thinking skills since facebook as a social networking tool that can increase student's interaction in discussions with teachers in relation to the academic content, facebook can encourage students to collaborate with other students and it is an innovative learning [4].

II. METHOD

This research is development research method (Research and Development). The procedure in this research is done systematically. These are needs analysis, prototype design, assessment / evaluation, reflection and prototype documentation. These activities are carried out to produce a valid, participative, and effective online group investigation learning that can improve students' critical thinking skills on geography subject. Learning models that have been developed will be tested in the Class X SMAN 15 Padang and Implementation of the model are carried out at the same school but in different classes. Product is validated by some experts and FGD then in order to see the effectiveness of the model, it is done with Quasy-experiment. The improvement of students critical thinking skills is seen from the test and observation by rubric of assessment consisting of communication ability, problem solving and reasoning. Data processed by using SPSS.

III. RESULT AND DISCUSSION

Based on the results of research after the product of online learning investigation by using facebook (teacher book, student book, model book) is validated by 5 experts namely: 3 material experts 1 discussion person and 1 design experts show that the resulting product is declared valid in which for the book model, the value of ICC obtained is very high = 0.887 from the average analysis of agreement between rater, while for one rater consistency is 0.375. For Student Books, the value of ICC obtained is very high = 0.968 from the average analysis of agreement between rater, while for one rater the consistency is 0.400. And for teacher book, the value of ICC obtained is very high = 0.958 from the average analysis of agreement between rater, while for one rater consistency is 0.360. For Practical model of online learning investigation group using Facebook along with teacher book and student book have been practically according to observers, teachers and students. On the other hand, the model can be done well and in the process of learning does not occur a problem or run in normal situations. Teachers with a teacher book and a model guide book can help the learning process. In general, students can participate in the learning process by using the student's book with the application of online group investigation learning [5]. Overall, it can be stated online group investigation learning, teacher book and student book are easy to use, understand, useful and interesting. Based on result of data analysis and discussion obtained: that there are difference of critical thinking ability (communication skills, problem-solving skills, and reasoning abilities) students taught by

online group investigation learning with students taught by conventional learning. These differences show that critical thinking skills (communication skills, problem-solving abilities, and reasoning abilities) are taught with online group investigation learning developed well than students taught by conventional learning [6]. The investigation group learning is as a process, and investigation as a activities and investigative activities include problem-solving as a process. investigative-based learning models are valid, practical and effective in improving student learning outcomes. While using facebook in learning, social network has the ability to transform students from being passive learners into active learners [7]. This finding is also who stated that the use of social network in higher education provides a collaborative space for learning and teaching that enables increased peer interaction as well as interaction between educators and students. Then show that facebook is one of the best ways to improve communication inculcating positive learning attitudes, motivating students to learn and to encourage them to do more seriously and independent learning tasks through virtual interaction [8].

IV. CONCLUSION

The development of online group investigation learning using facebook is already through the rules and stages of test development and implementation of this product that is done in SMAN 15 Padang in class X with litosphere material of Geography subject. Using online group investigation learning in class X SMAN 15 Padang on Litosfire material is very effective used in the learning process where online group investigation learning can improve students' critical thinking ability. Students become more analytic and able to develop their idea by using reasoning in problem solving and find solutions of a problem appropriately and fastly. Besides, students can comprehend knowledge comprehensively.

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