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DEVELOPMENT OF GEOGRAPHIC LEARNING DESIGN USING INFORMATION TECHNOLOGY WITH CONSTRUCTIVISTIC APPROACH (BLENDED LEARNING)

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ABSTRACT

The development of the world of education is currently increasing, one of which is the emergence of E-learning and constructivism learning designs that explore the potential, abilities, and insights of students in a broad and structured manner through Blended Learning. The method used in this writing is a literature study using several articles as material to create new articles. In this study, the author writes by referring to several articles that have been reviewed. Results The use of learning designs that combine face-to-face methods with learning designs using IT becomes an alternative when many students feel bored with the current learning designs. The face-to-face learning system that has undergone a change from traditional (lectures) to a more modern one is the constructivist approach. The use of the Blended Learning method that combines the design of Constructivism Learning with E-Learning makes the KBM process run better and optimally.

Keywords: Learning, Constructivism, E-Learning, Geography, Blended Learning

INTRODUCTION

Geography learning in schools mostly uses learning designs with a behavioral approach that has not emphasized the spatial perspective (Khafid, 2007). The learning strategy uses the format of delivering information because this theory assumes that learning is the acquisition of knowledge. Teaching is transferring knowledge to students, not yet emphasizing the activities of students to build their knowledge (Mustaji & Sugiarso, 2005). The results of supervision in schools, it turns out that geography teachers are still the most dominant learning resource, not yet utilizing diverse learning resources. Geography learning is partly centered on listening and memorizing activities, not yet leading to active and creative learning activities, meaning that students build their geographic insight, work, and think like a geographer.

One of the developments in the world of education at this time is the emergence of E-learning, referring to the use of modern IT in the learning process, where modern technology consists of electronic media. This is a new educational pattern that is used by utilizing IT developments to support changes in the learning process, which has been less effective. The changes in IT certainly need to be balanced by the changing roles of teachers and students (Harandi, 2015). Based on Zare et al (2016), E-learning is currently considered one of the most important learning designs in education in the information age. The existence of ELearning should be able to integrate with the constructivism learning process based on IT (E-Learning). Currently, humans are required to be critical, have creativity, collaboration, mutual understanding across cultures, communication, use computers, and careers, and learn to believe in themselves (Ardhana, 2001).

In the context of learning geography, humans are also required to think and act critically by the development of the times. The use of learning designs that combine IT developments and constructivism learning designs in geography lessons is important, it is to reduce student boredom. If we pay attention to the development of geography learning methods in schools, it seems to be boring for students. One of the main reasons for the big mistakes that still exist in learning geography in schools is the lack of contextual and operational elaboration of geographic concepts with spatial, ecological, and regional complex approaches presented in teaching materials or textbooks, modules, or textbooks, geography teacher (Sudaryono, 2006). As a result, the purpose of learning to understand the nature of geography correctly for students has never been achieved until now. Complaints and the fact that geography learning is uninteresting are still often heard and deeply felt. This is because geography teachers have not been able to provide geography lessons to students with an IT-based constructivist approach to add interest when learning.

One of the reasons why geography lessons are not interesting lies in the approach used. The results of the supervision of the learning tools of geography teachers in Gresik Regency from 2011 to 2014 showed that the development of geography learning designs did not use a constructivist approach that emphasized the use of IT in explaining formal objects. What happens in the field is that they are still struggling with a behavioral approach with a strategy for delivering geography aids with a lecture system so that they are less able to generate interest in learning. As a result, most students find geography boring. A new approach to geography learning that provides opportunities for an active process of students constructing their geographic insight, utilizing diverse learning resources, providing opportunities for students to conduct field studies or archival studies through optimal use of maps, and divergent geographical thinking is a constructivist approach to learning geography.

The constructivist approach in geography learning objectives emphasizes learning how to learn, creating new understandings, creativity in real contexts, and encouraging students to think again. Students are also able to take advantage of IT developments to support the geography learning process. "Students construct geographic knowledge, skills, and understanding" (Fisher, undated: 24). A learning system design with a constructivist approach is needed by teachers (Gagnon & Collay, 2001). In the class, this design model consists of six components: 1) situations, in the form of learning objectives and tasks that need to be completed by students; 2) grouping, carried out randomly according to certain criteria, students are allowed to interact with peers; 3) linking, linking the knowledge that students already have with new knowledge through problem-solving or discussion of specific topics; 4) asking questions in the form of questions; 5) exhibition, students are allowed to show learning outcomes; and 6) reflection, teachers and students are allowed to think critically about the learning experiences that have been carried out, and students are also allowed to think about the application of the knowledge they already have. Kinniburg (2010) explains that the design model includes a methodology based on constructivist learning theory.

The constructivist learning design model was developed in geography as a new finding in the field of geography learning design with the following syntax: invitation, exploration, consolidation, exhibition, and evaluation. The invitation stage (situation), activates the memory or mind of students through conveying the objectives and benefits of learning, and tasks that need to be completed by students. In the grouping and exploration stage, students are allowed to interact with peers, observe directly or indirectly, ask questions, and explore information. Consolidated learning stage, negotiating to achieve new knowledge by analyzing, linking existing knowledge with new knowledge through discussion of

geography topics, and concluding in writing. In the exhibition stage, students are allowed to present geographic works or build networks through presentations, displayed on the wall, or uploaded on the internet. In addition, students are also required to pledge to apply the science of geography in life. The stage of reflection and formative evaluation is to get feedback for both teachers and students.

The geography learning design model with a constructivist approach as a new finding has several advantages. Some of these advantages include: 1) involving students in life, from concrete locations and spaces; 2) encouraging geographically divergent thinking; 3) flexible for field study and archival study; 4) developing collaborative problem-solving skills; 5) applying geographic attitudes and behaviors; 6) building geographic insight; 7) encouraging students to enjoy learning geography through observing the phenomena of the thermosphere with a geographical perspective. "Space, place, environment, and maps are the keys to learning geography" (Matthews & Herbert, 2004).

Research applying a constructivist approach to problem-based geography learning models shows that students become creatively active with greater geospatial understanding and competency attainment, not retention of geographic knowledge for their own sake (Beringer, 2007). Other findings show that students who follow the constructivist learning model of fieldwork in geography learning and the application of problem-based learning through investigations have a positive influence on student participation in field research to obtain geospatial information and geographic skills. This can improve students' spatial understanding, and analytical and interpretive skills, in observing historical phenomena following the demands of geography as an observational science.

METHODS

The method used in this writing is a literature study by using several articles as material to create new articles. In this study, the author writes by referring to several articles that have been reviewed.

FINDINGS AND DISCUSSION

The use of learning designs that combine face-to-face methods with learning designs using IT becomes an alternative when many students are bored with the current learning designs. The face-to-face learning system that has undergone a change from traditional (lectures) to a more modern one is the constructivist approach. With constructivism learning design, it means allowing students to exploit what is in their minds with the signs given by a teacher. The following are the six components of constructivism learning design: 1) Situation, in the form of learning objectives and tasks that need to be completed by students; 2) Grouping is done randomly (random) or according to certain criteria (purposive), students are allowed to interact with peers; 3) Linking, connecting the knowledge that students already have with new knowledge through problem-solving or discussion of specific topics; 4) Questions, asking questions is an important thing in learning because it will bring up original ideas so that students can build knowledge within themselves; 5) Exhibition, students are allowed to show their learning outcomes, and 6) Reflection, teachers, and students are allowed to think critically about the learning experiences that have been carried out, and students are also allowed to think about the application of the knowledge they already have.

In point six it is explained that students apply knowledge, in this process students can take advantage of the IT that they control and have. Thus, the learning process is not rigid, only based on the textbooks they have, but based on several sources, both text and IT. The pattern of combining constructivist learning designs with E-Learning can be realized in this process. Directions and instructions can be given through social media owned by students or teachers and students agree to create new applications to be used in the shared learning process. The steps that can be taken to make the blended learning process are: 1) Teachers and students master IT; 2) Teachers and students agreed to use one of the IT applications to support the constructivism-based learning process; 3) Teachers must be able to prepare well-structured teaching materials; 4) The teacher can explain each problem to students when the KBM process takes place; 5) The teacher provides time to discuss each meeting; 6) The teacher prepares guidelines and steps which are then given to students through an agreed-upon application; and 7) Set the schedule between face-to-face meetings and assignments using applications (E-Learning).

The following are the advantages of the blended learning process:

1. Considering that learning is a process of constructing knowledge from concrete experiences, collaborative activities, reflection, and interpretation. Learning is to organize the environment so that students are motivated to explore the meaning and appreciate uncertainty. Indications of the developed learning device products emphasize teachers as motivators, facilitators, mentors, and professional consultants to deliver students as knowledge builders as well as researchers, and inventors of the concept of geography by using the direct face-to-face method and also using IT (E-Learning).
2. Considering that learning essentially has a social aspect and gifted students are still able to learn with other students. Indications of the learning device products developed include: (a) students are allowed to learn and work in teams, (b) constructivist teamwork is designed randomly or heterogeneously, (c) students are allowed to play varied or diverse roles, and (d) in the evaluation of learning, the teacher takes into account the process and results.
3. Considering that students need a free atmosphere for self-control. The learning tools were developed to indicate that students are given the freedom to control themselves by: (a) applying the most appropriate learning method to themselves, (b) evaluating themselves regarding their way of thinking and learning, (c) real tasks that are relevant to everyday life and the relationship between tasks and personal experiences, (d) discussing the relationship between effort and results.
4. Considering the differences or various cognitive learning styles of students. Indications for the learning device product indications that are developed are tasks with the following specifications: (a) allowed students to determine the choice of problems and solve the problem or task both independently and in a constructivist team, (b) allowed to choose how the program shows that students have mastered the learning material being studied, (c) given (d) sufficient time to think and complete the assignments, and re-think students.
5. Considering that gifted students tend to be high curiosity, critical thinking, and active learning. Indications of the learning device products developed, among others: Students are encouraged to think divergently, reflectively, and interpretatively, provided activities that can be thought-provoking, brainstorming, and explaining to friends, given opportunities for students to have critical thinking skills, and provide opportunities for students to conduct self-evaluations and field studies or fieldwork.
6.

DISCUSSION

The use of the blended learning method that combines constructivism learning design with E-Learning makes the teaching and learning process run better and optimally. This is if it is carried out properly technically and technically. The combination of methods explores the potential of students to the maximum and is fun. Blended learning-based learning models (Constructivism and E-learning) and their learning tools are recommended to be developed with research-based learning models, problem-based learning models, and project-based learning models, IT-based learning models for further development in geography subjects or similar subjects. The learning principle that needs to be considered in the design of blended learning (constructivism and e-learning) is the constructivist principle with the hope that students will be able to develop knowledge, skills, attitudes, and geographic values in respecting diversity in all aspects of life both on a regional scale, national, as well as globally.

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