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Web-based thematic module in social studies to improving student digital literation skill

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ABSTRACT

Web-based thematic modules were developed based on the needs of social studies teachers and students of a media that collects social science material in an integrated and thematic manner that is easily accessible and flexible. This study aims to: 1.) Find out the procedures for developing and making web-based modules on social science subjects material; 2.) Knowing the students' responses after using the web-based module as teaching material for social studies; and 3.) Knowing the effectiveness of web-based modules viewed from student learning outcomes. The method used is the research and development (R&D) method with a three-stage development model there are design, production, and evaluation. The results of this study are: 1.) Web-based thematic modules developed in two themes, namely the first theme of forest and land fires in Kalimantan and the second theme of the Industrial Revolution 4.0; 2.) As for student responses to the use of this web-based thematic module product, in general, give a positive response. Although they found obstacles that were difficult to concentrate when studying with website; and 3.) The effectiveness of the product seen from student learning outcomes showed that this web-based module did not have a significant positive impact on student learning outcomes. 46.03% of students entered the category of mastering, and 53.94% of students entered the category of not mastering, so that shows the level of digital literacy of students is still low.

INTRODUCTION

This digital literacy is one of the essential literacies to be developed in this millennial era. Digital literacy is the ability to understand and use information in various formats from various sources presented through digital communication tools (Chou, 2010, p. 34). Digital literacy involves identifying sources and digital content, reaching out, managing, combining, evaluating, and making analysis or synthesis, and allowing it to communicate with others (Shu, 2010, p. 61). Digital literacy is critical to be improved because it can guarantee the public in using various online information sources more effectively and efficiently (Chen, Lin, Yeh, & Lou, 2013, p. 111). Based on the results of an Indonesian poll study in collaboration with the Indonesian Internet Service Providers Association (APJII), internet users are increasingly increasing. At present, the number of internet users in Indonesia reaches 171,17 million people or around 64.8 percent of the population, growing 10.12 percent from 2017 when internet penetration in Indonesia record at 54,86% (Pratomo, 2019). The increase in internet users should be accompanied by an increase in the quality of internet use (Hwang, 2011, p.1).

One way to improve digital literacy in society, especially students, is by developing web-based learning (Hung, 2010, p. 48). This learning model can increase the intensity of students in using digital content on the internet as part of learning (Liu, 2011, p. 47). Internet-based learning or web-based learning will make learning more exciting and meaningful because it will provide multi experiences to students, namely theoretical and practical experiences (Li, 2009, p. 17). Also, teachers can focus on the integration of technology and pedagogical practices. Based on this background, one of the first steps in the development of web-based learning is to develop web-based modules as teaching materials (Hong, 2002, p. 267). Researchers want to develop web-based thematic modules on social science subjects material, because social studies have extensive material content. Social studies subjects include material from various social sciences so that the use of webiste as teaching material requires much time to access it (Erdogan, Bayram, & Deniz, 2008, p. 31). Usually, students will look for economics, sociology, geography, and anthropology material in separate portals. Therefore we need a website that can focus on social studies. This web-based thematic module will be a place and source of learning in integrated social studies subjects learning more efficiently (Annie, 2013, p. 457). Universitas Islam Negeri Malik Ibrahim has developed e-learning that can be used as a source of material for students if they want to access material online. However, e-learning only applies to a limited circle, namely the Universitas Islam Negeri community. Whereas based on the results of observations of researchers when conducting KSM (Madrasah Science Competition) that social studies teachers need references to present social studies material in an integrated manner both in terms of their material development and evaluation because, in schools, they still use the separated approach. Therefore, the web-based thematic module expected to provide enlightenment for social studies teachers in particular and the general public.

Several similar studies have conducted with different subjects and objects, including Parumbuan (2017) with the results of research showing that web-based teaching materials are feasible and valid to be used as web-based teaching materials in message design courses in the educational technology study program at Universitas Negeri Makassar, and are useful in improving student lear-ning outcomes (Parumbuan, 2017). Then there is a study entitled development of web-based social learning media for class VII students of Madrasah Tsanawiyah Negeri by Uno and Ma'ruf (2016) whose results are the assessment of the material used based on validation by five experts. 0.80-0.95 with a reliability level of 0.80 indicates that the material is very suitable for use, the assessment of the media used is based on validation by five experts 0.65-0.95 with a reliability level of 0.80, so this shows that the media is very feasible to use. This study has similarities with these two studies, which are both using development research to create a product that is web-based teaching materials and web-based learning media.

The next two studies examine the effect of online learning on student skills. Karl Royle conducted the first study with the results of the study that students still have digital literacy competence at the primary level and the skills to use information and communication technology at the primary level. They need training on how to use digital tools more efficiently for learning purposes (Nilgun et al., 2015). Next is the Shieh, Liao, & Hu (2013) study with the results of the study that there is a partially significant correlation between Web-Based Instruction and learning behavior, between Learning Behavior and Learning Effectiveness, and between Web-Based Instruction and learning effectiveness (Shieh, Liao, & Hu, 2013). Based on this research, it can seem that media and teaching materials based on the web- are suitable for use in learning. However, according to other studies, there are still weaknesses that students still have digital literacy competence at the primary level.

What distinguishes this research from previous research is that this study develops web-based thematic modules as teaching materials in the field of social studies that integrate with Islamic principles. It is what will make the results of this research as a new product in the world of education, exceptionally social studies education. Also, the results of this study will provide information about the level of digital literacy of students based on the use of web-based modules. The value of innovation in this study is evident from the fact that the results of similar research have not yet found, especially related to web-based thematic social studies modules. Digital literacy is the ability to understand and use information in various formats from various sources that are presented through communication tools (Wen & Shih, 2009, p. 90). Digital literacy involves identifying resources and

digital content, reaching out, managing, combining, evaluating and analyzing or synthesizing, forming new data, creating new ways of media expression and enabling it to communicate with others (Lin, 2009, p.1). Digital literacy requires some literacy skills, namely computer literacy, technological literacy, information literacy, media literacy, visual literacy, and communication literacy (Wang, 2009).

Digital literacy can be seen from three capabilities: 1.) Finding and using digital content. This capability is related to the effective use of the website which includes information-seeking activities strategically and evaluating the accuracy and relevance of the subject matter. Some of the skills needed to support this ability are knowledge of how to use search engines, literacy skills, and general knowledge about the content available on the website; 2.) Creating digital content. Creating digital material content is an easy thing for teachers and students to do. This can be done with various media and various 2.0 websites that are available. The teacher can ask students to demonstrate digital mastery in learning by producing material in the form of digital content; and 3.) Communicating digital content. Digital content must be effectively communicated to become a useful learning media. Using social networking sites like Facebook and Instagram is one method or way to communicate digital content because using this site requires the ability to understand and use information in various formats from a wide variety of sources (Spiers & Bartlett, 2012).

Learning with web-based modules is part of Web-Based Instruction (WBI) (Yin & Liu, 2011, p. 43). Web-Based Instruction is an effective teaching strategy for developing scientific skills such as reporting, interpretation, reasoning, and problem solving (Yeh, 2010, p. 99). Web-Based Instruction offers students access to a wider range of learning resources, far beyond the reach of conventional classes. This makes it possible to provide learning experiences that are more open, flexible, and provide opportunities for teaching that is more interesting, interactive, and efficient (Sudha & Amutha, 2015). Two aspects must consider in using web-based teaching materials to improve student learning. The first aspect is the availability of the material in the chosen field of study. Because quality learning materials are scarce to produce, sharing of teaching/learning resources between institutions is needed. For example, the Massachusetts Institute of Technology makes material for almost all of its programs freely available on the web as part of the program, known as MIT Open Course Ware.

The second aspect of using web-based teaching materials involves finding relevant material and assessing its quality. Finding resources with a standard web search engine is usually inefficient. Finding relevant information on the web can benefit from the availability of portals, websites that are entry points to other websites. As an education portal that provides a categorization and search system that allows users to access learning and teaching resources that connect to the portal (Orhun, 2002). Based on the explanation above, it can seem that the development of web-based thematic modules that will be developed by researchers will enrich the source of social science material that can be accessed anytime and anywhere by students, teachers, and students. Besides, the search for social science subjects teaching materials through the web will be more focused, given the vast scope of social studies material. Web-based modules created by researchers can provide efficiency in the search for social studies material on the internet, especially those integrated with Islamic principles.

Implementation of digital content in the classroom can be an essential and effective method to improve the quality of learning and provide opportunities for students to improve the skills needed by students in the 21st century, namely digital literacy. Digital teaching materials can give teachers more flexibility and allow them to spend more time facilitating students' online-based learning. Also, allowing students to create and use digital content in the classroom can enhance and encourage the development of skills needed for the technological society.

METHOD

The method used in this research is Research & Development. According to Sugiyono (2010) stated that research and development is a research method used to produce specific products, and test the effectiveness of these products. The design of development in this study uses instructional development design. According to Reigeluth, development through the stages of design, production, and evaluation (Warsita, 2008). This research was conducted in August to November at

UIN Maliki Malang. The subjects in this study were social studies students in semester III of class B and D. The trial product development activities were carried out by One-Shot Case Study. The instrument used to determine the validity of the product uses a validation questionnaire filled out by experts. To find out the practicality of the product using the student response questionnaire filled out by students. They knew the effectiveness of the product using a test of learning outcomes, which then the average of student learning outcomes will compare with the value of weak UIN learning completeness criteria.

The type of data obtained base on a learning media trial in the form of quantitative and qualitative data. Quantitative data obtained from questionnaires and tests distributed to trial subjects, while qualitative data were in the form of responses and suggestions for improvements obtained from material experts, media experts, and users. The data analysis technique uses two approaches. The qualitative descriptive analysis uses to process the data review of media experts and material experts. This analysis technique is done by grouping information from qualitative data in the form of responses, criticisms, or suggestions for improvement contained in the validation sheet. Data analysis is used as a reference to improve or revise teaching material development products. Data from the questionnaire will be analyzed to get a picture of student responses.

FINDINGS AND DISCCUSIONS

Web-based thematic modules are one of the media used to support learning that utilizes the internet in the process. According to Rusman (2011), learning that uses web-based technology applications is called web-based learning. Therefore, the application of web-based modules is part of web-based learning. The thematic modules developed in the web intend to facilitate the community, especially social studies teachers at the junior and senior high school level who want to see the integrated presentation of social studies material quickly. This is actually in accordance with the characteristics of ICT-based learning that is learning with faster access because it is not limited by space and time (Rusman & Kurniawan, 2013). As long as the teachers have a computer and internet access, access to learn various things, especially social studies material, will be open.

Modules have an essential role in learning. One of the crucial roles is being able to train students' independence in learning. That is, by learning to use modules, students will conduct thinking activities ranging from reading, analyzing readings to answering questions independently (Indriyanti & Susilowati, 2010). Based on observations researchers process using module, was no independence students learning using module. They still seem to work together and discuss each other especially when working on problems. So, it takes a different approach so that when using modules students can learn them independently. Some of the advantages of web-based modules that are obtained from the results of student response questionnaires include: 1) Providing new experiences in learning social studies. It applies to half of the students because, based on point one, almost half of the number of students stated that they had already studied social studies through the web, So it can be concluded that the new experience obtains by half of the students in studying social studies with the web; 2.) The contents of the module giving this new insight signify that the material in the module is the knowledge that has never been known by students. It shows that the module has fulfilled the element of actuality; and 3.) Learning becomes more flexible because it can learn wherever and whenever.

The students' responses to the use of this web-based thematic module product, in general, gave a positive response. The available data shows that 71% of students of social studies at Universitas Islam Negeri Maulana Malik Ibrahim Malang are very happy and interested in learning thematic social studies via the website, and 99% of students agree that web-based of social studies modules can provide new experiences in learning. Nevertheless, this positive response is not accompanied by positive learning outcomes. In fact, according to the theory, if students are happy and interested during the learning process, they will get good learning outcomes. This view is consistent with Hawley's opinion that states students who are well motivated in learning to do more and faster activities, compared to students who are less motivated in learning. Achievements will be better if they have high motivation. Furthermore, 83.6% of students stated that the web-based thematic social science modules made were very useful for social studies learning. Furthermore, 50% of students

can understand the material well after reading the module as a whole. This data is consistent with the level of student learning outcomes, which shows that 49% of students fall into the category of mastering. It means that half of the students who follow the product trial process do not understand the material well.

If it is associated with research data from open questionnaires, some factors cause students not to master the existing material: First, learning social studies with web-based modules is a new experience for students so that students still need many adjustments in learning, for example, how to understand the material on the web and filter out the many features that appear in online learning. Therefore, the intensity of students in reading and understanding online literature must continue to be improved. Second, difficulty concentrating. Many students admit that they still have much difficulty concentrating because they not accustomed to learning with the web, and the eyes get tired when lingering looking at the screen, so that makes the eyes tired. According to Dimyati and Mudjiono (2006), concentration is an internal factor in students that affects learning outcomes. The better concentration of students in the learning process is the better the learning outcomes (Dimyati & Mudjiono, 2006). Third, the learning method is not right. During the trial, the lecturer only asks students to open the website and read the modules that have to develop then work on the problems. According to students, makes them less maximal in working on problems because some materials are not understood. In the opinion of students, the lecturer should explain the material in the module and make a question and answer session. When students keep quiet and read modules, it makes them bored and lazy.

The facts above show that social science subjects students do not have functional digital literacy because one of the signs of digital literacy ability is being able to understand and use the information contained in the website well. It is following the opinion of Spires, who states that digital literacy is the ability to understand and use information in various formats from various sources presented through digital communication tools. Based on this, digital literacy is not just fiddling with information in digital devices, but also can understand the information in the portal effectively and efficiently. The effectiveness of the module seen from student learning outcomes shows that students can not improve satisfactory learning outcomes after learning to use modules. It can see from the data that students in the category do not master more, 34 people. While those in the category of mastering, only 29 people. These results do not support the results of Parumbuan's (2017) research which revealed that web-based teaching materials are effective in improving student learning outcomes.

In addition, the results of this study also do not support the results of Chich-Jen and Liao Shiehyang's (2013) which states that there is a partially significant correlation between Web-Based Instruction and behavior learning, between learning behavior and learning effectiveness, and between Web-Based Instruction and learning effectiveness. The results of this study also showed that the digital literacy of students was still lacking. Based on existing theories, that digital literacy requires some literacy skills, namely computer literacy, technological literacy, information literacy, media literacy, visual literacy, and communication literacy. Therefore, digital literacy is not only related to the ability to access digital content on the internet but also accompanied by the ability to read and write information on the internet. If they see student learning outcomes that are less satisfactory, and the number of students who fall into the category of not mastering indicates that students are still less able to read and understand the content in digital media.

CONCLUSION

Some conclusions obtained from the description of the results of the research in the previous chapter are as follows: 1.) Thematic modules based on website are developed in two themes, namely the first theme of forest and land fires in Kalimantan (Karhutla) and the second theme of the Industrial revolution 4.0. Based on the results of the validation shows that web-based teaching materials are feasible and valid to use as teaching materials; 2.) The students' responses to the use of these web-based thematic module products generally give positive responses. They are delighted and interested in using this web-based module because it can provide new insights and experiences in learning. Although they find obstacles that are difficult to concentrate when studying with website; and 3.)

The effectiveness of the product seen from the results of student learning shows that this web-based module does not have a significant positive impact on student learning outcomes. 46.03% of the student's masters. 53.94% of students fall into the category of not mastering.

The recommendation from this study is that the web-based thematic modules that have made will continue to be reviewed for improvement in terms of content and evaluation so they can be more effective when used in learning. Video content, links, animations so that the operational web is more varies, and students do not become bored. Once refined, the web-based thematic module will examine its effect on digital literacy in subsequent studies following the existing research roadmap. Thematic modules will continue to be added in the web so that the web can present more thematic social science subjects modules. It is also done to maintain the web so that it can continue to operate.

REFERENCES

Annie, K. L. (2013). Effectiveness of Web-Based Instruction and traditional class room instruction in learning of mathematics. International Journal of Innovative Research and Development, 2(11) 457-460.

Chen, Y. C., Lin, Y. C., Yeh, R. C., & Lou, S. J. (2013). Examining factors affecting college students' intention to use Web-Based Instruction systems: Towards an integrated model. TOJET: The Turkish Online Journal of Educational Technology, 12(2), 111-121.

Chou, L. S. (2010). A study on Web-Based Instruction of social studies for junior high schools. Management Review, 4 (2), 32-56.

Erdogan, Y., Bayram, S., & Deniz, L. (2008). Factors that influence academic achievement and attitudes in web-based education. International Journal of Instruction, 1(1), 31-48.

Dimyati, D., & Mudjiono, M. (2006). Belajar dan Pembelajaran. Jakarta: PT Rineka Cipta.

Hong, K. S. (2002). Relationships between students' and instructional variables with satisfaction and learning from a Web-based course. The Internet and Higher Education, 5(3), 267-281. Doi: https://doi.org/10.1016/S1096-7516(02)00105-7

Hung, M. C. (2010). Evolution of teaching principle and technique for universities: A case study on Web-Based Instruction and learning effect. NTU Management Review, 13(2), 47-61.

Hwang, H. J. (2011). Design of an effective learning evaluation component in Web-Based Instruction. International Journal of Multimedia and Ubiquitous Engineering, 6(4), 1-12.

Li, S. C. & Ling, H.Y. (2009). Designing Strategies for Web-based Courseware Use Educational Communication and Technology for Example. Audio-Visual Education, 45 (5), 17-27.

Lin, C.Y. (2009). A comparison study of web-based and traditional instruction on preservice teachers' knowledge of education: A program-level case study of online MBA courses. Journal of Interactive Online Learning, 4 (1), 1-19.

Liu, L.Y. (2011). A study on the application of digital archives for history instruction. The I Lan Journal of History, 42 (2), 47-76.

Orhun, E. (2004). Web-Based learning materials for higher education: The MERLOT Repository. Turkish Online Journal of Educational Technology-TOJET, 3(3), 73-78.

Parumbuan, M. D. (2017). Pengembangan bahan ajar berbasis web untuk matakuliah desain pesan. JINOTEP (Jurnal Inovasi dan Teknologi Pembelajaran): Kajian dan Riset dalam Teknologi Pembelajaran, 2(2), 323-329. Doi: http://dx.doi.org/10.17977/um031v2i22016p323

Pratomo, Y. (2019). APJII: Jumlah Pengguna Internet di Indonesia Tembus 171 Juta Jiwa [Online Article]. Retrieved from https://tekno.kompas.com/read/2019/05/16/03260037/apjii-jumlah-pengguna-internet-di-indonesia-tembus-171-juta-jiwa.

Rusman, R. (2011). Model-model Pembelajaran. Jakarta: Rajawali Pers.

Rusman, R., & Kurniawan, D. (2011). Pembelajaran berbasis teknologi dan informasi. Jakarta: Rajawali Pers.

Shieh, C. J., Liao, Y., & Hu, R. (2013). Web-Based Instruction, learning effectiveness, and learning behavior: The impact of relatedness. Eurasia Journal of Mathematics, Science & Technology Education, 9(4), 405-410. Doi: http://dx.doi.org/10.12973/eurasia.2013.949a

Shu, C. B. (2010). Effects of web-based asynchronous instruction on learning effect. Bulletin on Hungkuang Institute of Technology, 37(2), 61-66.

Sudha, A., & Amutha, S. (2015). Higher secondary learners' effectiveness towards Web-Based Instruction (WBI) on chemistry. Universal Journal of Educational Research, 3(7), 463-466.

Sugiyono, S. (2010). Metode penelitian pendidikan pendekatan kuantitatif, kualitatif dan R&D. Bandung: Alfabeta.

Uno, H. B., & Ma'ruf, A. R. K. (2016). Pengembangan media pembelajaran IPS berbasis website untuk siswa kelas VII Madrasah Tsanawiyah Negeri. JTP-Jurnal Teknologi Pendidikan, 18(3), 169-185. Doi: https://doi.org/10.21009/JTP1803.1

Wang, T. P. (2009). Effects of training approach, computer self-efficacy, and learning style on learning performance. Journal of National Education, 8(2), 53-71.

Warsita, B. (2008). Teknologi pembelajaran: Landasan dan aplikasinya. Jakarta: Rineka Cipta.

Wen, C. J., & Shih, W. L. (2009). Teachers' strategies for technological change from the aspect of web-based learning theory. Information and Education, 91(1), 90-99.

Yeh, B. Y. (2010). Utilization of Web-based Instruction resources for history instruction in senior high schools. Journal of the National Hualien University of Education, 21(2), 99-118.

Yin, M. C., & Liu, S. H. (2011). A Study of the influence factors about integrating technology into instruction. Contemporary Educational Research, 13(2), 43-68.