

Conceptual design of Development of the Instructional Media Base-Web Moodle in Civic Education for Students Grade XI

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ABSTRACT

This study aims to describe the conceptual design of development of instructional media web Moodle in Civic Education Grade XI. The reason are (1) negative impacts of internet use in education such as high school students once using a cell phone to send an answer key during an exam to another student, students have used short message or social media to intimidate/ridicule other students. In addition, most students have copied the required information from the internet and have used gadget to play online games during class lessons. (2) Requirement to the development of instructional media web Moodle as one manifestation of internet utilization in learning. Traditional Civic Education Learning needs to utilize information technology, especially internet because students need a new media that utilizes the internet in learning. This research is the study of conceptual framework. In this study a conceptual framework is built on the ADDIE model from Branch. The results of Conceptual design of development of instructional media base-web Moodle is in the form of development procedures, that is analysis, design, develop, implement and evaluate.

Keyword: ADDIE, civic education, instructional media base-web moodle

Introduction

Civic education is a subject that has the aim of forming good citizens who are citizens who know and are able to do their rights and obligations as citizens. It also aims to produce citizens who are able to solve the problem individually and the surrounding community. In fulfilling that objective the Civic Education meet its challenges in both curricular academic and socio-cultural studies (Wahab W & Sapriya, 2011). Winataputra, US (2014, p. 4) says that the Civic Education intended that every citizen is young (young citizens) have a sense of nationalism and love of the homeland in the context of values and moral Pancasila, values and norms The Constitution republic of Indonesia Year 1945, the value and commitment “Bhinneka Tunggal Ika”, and commitment to the unity of the Republic of Indonesia.

In this globalization era, Civic Education is being challenged by the rapid growth of information technology such as the internet. In addition to the negative impacts of internet use in education such as high school students once using a cell phone to send an answer key during an exam to another student, students have used short message or social media to intimidate/ridicule other students. In addition, most students have copied the required information from the internet and have used gadget/android to play online games during class lessons. Positively, they use the gadget with internet facilities in the classroom as a learning resource when students want to find a learning resource that is not in the packaged book. Students claimed to need teaching materials/alternative instructional media that can be used to learn the concept in Civic Education more easily and interesting and students agree if need to be developed online-based learning media provides of concept in Civic Education so the concept is easier to understand. Besides, it can support the goal of civic

education to instill and actualize the values of Pancasila in the life of the nation which is reflected in the character of the Indonesian nation. Thus it is necessary to develop online-based instructional media in Civic Education in Senior High School students Grade XI (Hanum, FF 2018).

Something used in this case is a digital-based instructional media, where the media use internet. Media is developing together with the development of information technology. When technology is developing into a digital or takes advantage of the internet, the instructional media has also been engaged in the digital world. The digital world is not only to show one type of media, such as audio-only or visual only but also has combined with several types of media or often referred to as multimedia. It is important for multimedia developers to have a clear understanding of how the information presented in various digital media is stored, manipulated and remembered by learners (Alty, Sharrah & Beacham 2006). It encourages renewal efforts in the utilization of technological results in the learning process, such as the teacher is able to utilize the tools or media in accordance with the development of these technologies (Kustandi & Sutjipto, 2013, p.6).

This is supported by Parker's argument that students today seem to be involved in many practical tasks every day, from print to film to multimodal forms such as websites and video games. Students live in the media world which on average spends nearly six and a half hours each day with the media. The student is a multimedia user while watching television he can send short messages and complete homework. When playing video games, usually work as a group member and with high concentrations even in a long time, completing a project that takes a long time. Students seek information via the Internet, present themselves on social media, and take pictures from their mobile phones, and then select some public sites in the form of social media. Simultaneously they can also act as actors, directors, editors, and publishers with movie software coming from computers. They expect the teacher to guide him through this information age, not dictate him for the "right" answer to a repeat question that Google can provide soon in seconds through multimodal tools, such as text, video, and digital images (Schrum, 2013). Thus need to take advantage of technological developments in learning, especially learning media, in this case, web-based e-learning media.

For that purpose can use the web-based instructional media with the type of Moodle software. According to Surjono (2010), Moodle is one of the LMS (Learning Management System) open sources. Moodle can easily be used to develop e-learning systems. Moodle portal e-learning can also be modified as needed. In accordance with the opinion Setiawan, W (2006) that the use of Moodle this is in line with government policy, Moodle is free and open source. Therefore Moodle is suitable for use in the educational environment. Besides Moodle can be modified and adapted to the existing culture in Indonesia. Moodle is a software package designed to assist educators in creating a quality online course easily without building from scratch but using software developed by Martin Dougiamas.

Teachers can choose or develop the media. Teachers and researchers is an innovator so that the learning is able to plan and realize learning media. In this case able to develop instructional media such web Moodle in civic education. Thus, in this paper will describe: How the conceptual design of development of the instructional media base-Web Moodle in civic education for senior high school students?

Methodology

This research is the study of conceptual framework. In this study a conceptual framework is built on the ADDIE (analysis, design, develop, implement and evaluate) model from Branch (2009). To describe the procedures, this study use literature review.

Literature Review

Instructional media has been defined long ago by Reiser and Gagne (1983) in (Reiser, 2001) "*the term instructional media has been defined as the means through which instruction is presented to learners*". Under this definition, every physical means of instructional delivery, from direct instructor to textbook to computer and so on, will be classified as a learning medium. Thus the learning media as a physical tool that provides direction to learners, related to the tools used in the learning process. As according to Raharjo (1989) that the media is a container of a message that the source wants to be forwarded to the target or recipient of the message. The material received is an instrumental message, while the goal that is to be achieved is the purpose of learning. More specifically media in learning is defined as graphic, photographic or electronic tools to capture, process and rearrange visual or verbal information.

The learning process is a process of communication and takes place in a system, then the instructional media occupies an important position as the one component of the learning system. Without instructional media, communication will not occur and the learning process as a communication process also cannot take place optimally (Murhaini, 2016). Thus the learning media is a fundamental component of learning that support in the delivery of learning objectives.

According to Kemp (1995) at Reiser (2001), instructional media can fulfill three main functions if they are used for large numbers of individuals or groups, in terms of (1) motivating interest or action, (2) presenting information, and (3) give instructions. To fulfill the function of motivation, instructional media can be realized by drama or entertainment techniques. As for the purpose of information, instructional media can be used in order to present information in the presence of a group of students. The content and form of presentation are very general, serving as an introduction, summary report, or background knowledge. The presentation can also be in the form of entertainment, drama, or motivational techniques.

In the era of information technology, processing information is happened upon based online learning (e-learning). One of the online-based media is Moodle. Moodle is open source software that supports the implementation of e-learning with an integrated paradigm where various learning support features can easily be accommodated in an e-learning portal. Important learning support features such as tasks, quizzes, communications, collaborations, and key features that can upload various learning material formats (Surjono, H D., 2010). One advantage for teachers who create LMS-based online learning materials is the ease, this is because the lecturer does not need to know the least about web programming, so that time can be used more to think about the content or content of the learning that will be delivered.

Besides, using LMS Moodle will tend to follow the integrated e-learning paradigm. In addition, to establish cooperation in knowledge sharing between various educational institutions and which uses the same standards. Additionally, according to Chung et.al (2015) in the use of Moodle's web shows that the students who are most appreciative and in control of Moodle give them the advancement of their education. Communication was also found as an important benefit that students trained in Moodle. Student reactions to Moodle are influenced by visual learning and laziness. Besides other features in web Moodle is in the form of a quiz. Quiz for internet-based assessment or called e-assessment. According to

Cohen et.al. (2016), the students positive and interested and performance becomes fast when based online quiz.

Teachers and researchers is an innovator so that the learning is able to plan and realize learning media. In this case able to develop the instructional media. Heinich et al. In Arsyad, A. (2014) proposes an effective media usage planning model known as ASSURE (Analyze learner characteristic, State objective, Select, or modify media, Utilize, Require learner response, and Evaluate). In addition to the ASSURE model, in further development, the research and development of the ADDIE model is also frequently used in research and development of teaching materials such as modules and textbooks.

ADDIE stands for Analysis, Design, Development or Production, Implementation or Delivery and Evaluations. ADDIE is a product development paradigm. The concept of ADDIE is being implemented here to build a performance-based stage aimed at the study room. The study room is a term used to refer to a deliberate learning environment rather than a temporary learning that occurs at any time. A deliberately deliberate learning environment and ADDIE provides a way to navigate the complexities associated with module development for use in a deliberate learning environment. The application of the ADDIE instructional system design facilitates the complexity of a deliberate learning environment by responding to situations, interactions in context, and inter-contextual interactions. However, the fundamental ADDIE components remain the same in various applications and the variation of the ADDIE paradigm depends on the context in which ADDIE is applied (Branch, 2009).

The medium is developed in each subject, one of which is in Civic Education. In this case, the scope of Civic Education is related to learning materials or teaching materials. The learning materials outline consists of knowledge, attitudes and skills that students must learn in order to achieve the competencies that have been determined. In detail, the learning materials consist of materials that are knowledge (facts, concepts, prepositions, principles, and theories), skillful materials (procedures, procedures) and materials of value (Winarno, 2014 p.225). The three main components of Civic Education are civic knowledge, civic skills, and civic disposition. Civic knowledge relates to content or what citizens should know. Civic skills are skills what it should be owned by a citizen who covers; intellectual skills and participation skills. While civic disposition relates to the private and public character of citizens who need to be nurtured and improve in the constitutional democracy.

It can be seen that the goal of Civic Education is to instill and actualize the values of Pancasila in the life of the nation and nation which is reflected in the character of the Indonesian nation. Wahab . & Sapriya , (2011 p. 5) say that Civic Education has the primary mission of nurturing and developing citizens to have patriotism values and building commitment to democratic values based on a commitment to truth, honesty, independence, respect and freedom of expression.

Findings and Discussion

ADDIE is applied as a model of developing instructional media base web Moodle in Civic Education. This development has a goal in utilizing information technology, especially the Internet in learning, because there are many abuse of the use of the internet in education, especially in learning in the classroom. It is hoped that with this development can reduce the misuse of internet usage such as cheating and sending answers when replication or test to other friends become reduced or in other words can strengthen the integrity character of high school students. It agree with Wahab & Sapriya, (2011 p. 5) that Civic Education has the primary mission of nurturing and developing citizens to have good character.

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Learning media development process is preceded by describing and developing the concept of development, for the process to be systematic and structured and produce an effective medium for later use by students. Furthermore, it is conducting each process by sequentially based on existing conceptual development. Conceptual model of the development of web-based instructional media is as follows:

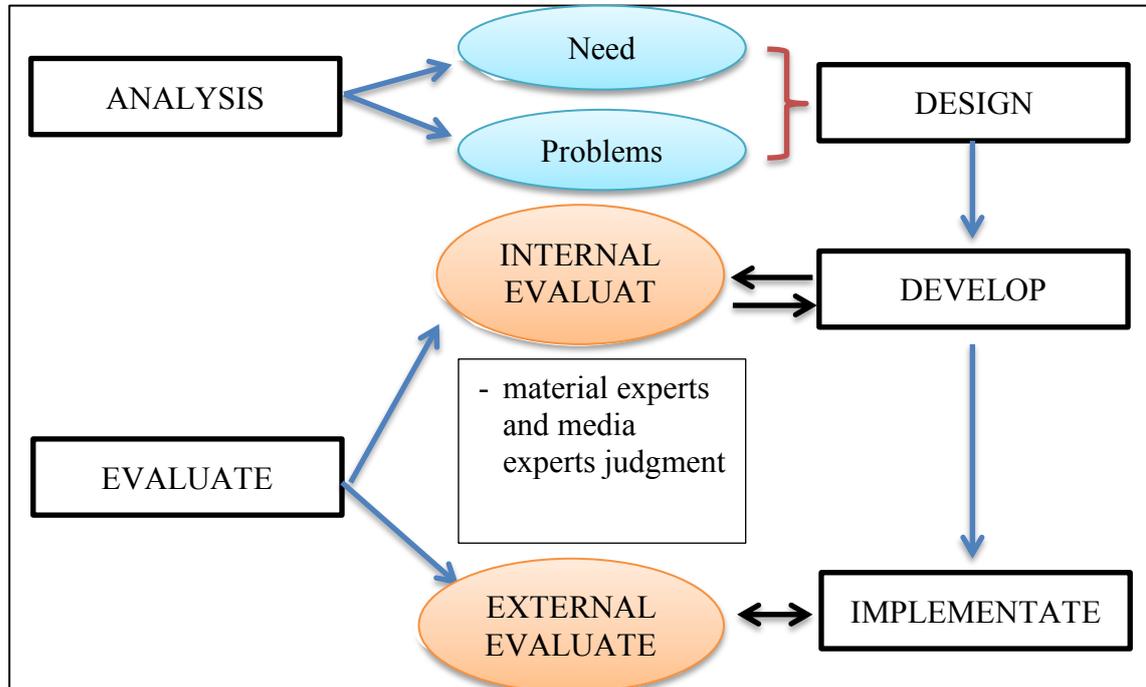


Figure 1. Chart of the Development Procedure of Moodle Web Based instructional Media

The working procedure that is carried out with the conceptual model of ADDIE development from Branch (2009) is as follows:

Stages of Analysis. At this stage the problem analysis and analysis needs of students. Problem analysis is done by conducting observations to schools and in the learning process and using digital citizenship audits on students. Then to analyze the needs of students in learning is done by using questionnaires needs of students and discuss with teachers in Civic Education.

Stages of Design. Stages of design instructional media web-based Moodle is done through several stages, among others: (1) Preparation of Moodle web-based media structure. The framework of the structure of web-based learning media Moodle describes the overall content of the material that has been determined in accordance with the indicators and learning objectives covered in the development product and the order of presentation that contains: Chapter title, component of complete materials such as introduction, description and cover and aspects of learning that includes basic competencies and indicators of achievement of basic competencies, materials, and evaluation. (2) Systematic determination of material presentation, illustration, and visualization. Specify the order of the material from the lesson plan. In determining the systematic sitemap is made to facilitate the creation of the web. (3) Writing draft initial product of web instructional media.

The writing of the initial product draft of learning media is done in stages, part by part according to the framework that has been prepared. In this step the resulting software design is the making of storyboard and manuscript plot of logic presentation of material. This text is a clear and detailed written exposition of the material to be presented in the RPP.

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While the storyboard is a form of translation of the script poured into the frame by frame display on paper. The storyboard is included in the research results.

Stages of Development. In this product development phase, the creation and assembling of web pages, which include text writing, image installation, video installation, hyperlinks and the creation and installation of questions. Software used in the development of this web media is LMS Moodle. Before the creation of web pages and so on first specified template that will be used or applied for web view to be more interesting. Once selected then made a web page or page by referring to the site map that has been made at the design stage of the product. Text writing refers to the manuscript plot of the logic of the presentation of the material in which contain all the material to be loaded on the web. The things that need to be considered in the use of text are the size of letters, fonts, uppercase, lowercase, coloring, spacing, headline, outline, heading, text number, paragraph length, sentence length, word length and clarify text. When the post is known the term hyperlink, the hyperlink here is a way to connect a section in a web page with a page or other website, which is a text that can be clicked to go to the website dituju. This is intended because the intended website supports or provides concrete examples in support of the text or material to be posted.

Installation of images is done by looking for images that are tailored to each title of the material so that it can help students to better understand the material delivered. Image installation also takes note of the layout in text as well as in slides. For example the image is placed before the text, on the right or left and each image is given information to know the intent of the picture.

Installation of video by uploading video into web page and then student can see video directly in web page. The uploaded video is also related to the concept of civic. its purpose is to make it easier for students to understand the material and also for students' analysis skills.

This web media is used for learning it is also necessary an evaluation in the form of test questions. The test questions have been made before by the teacher and then put into the lesson plan, so they need to be inserted into the web page in quiz form using quizzed plugin. With the plugin the student can immediately fill out the correct answer by clicking on the fields that have been provided, and the developer can immediately know the results.

In this stage, internal evaluation is done in the form of improvement or revision after getting input and suggestion from material experts and media experts in the form of material validation and media validation. So after this product is declared valid by the material experts and media experts then web media products can be applied / tested in the field or in learning.

Implementation Stage (Implement). Implementation phase is utilizing or using the learning package in learning activities. At this stage the evaluation is conducted to determine the feasibility by looking at the responses of teachers and students. In addition to knowing the effectiveness of these media will be done pretest and posttest in a limited trial on students. Implementation of instructional media base-web Moodle used in learning activities of civic education in grade XI with content about "Be aware of the threat to the position of the Unitary State of the Republic of Indonesia". The first stage is the limited test of one class and the results of the evaluation for evaluate, followed by extensive trials in others classroom to measure its effectiveness.

Evaluate Stages. The evaluation stage has been done during the development and implementation stage. The evaluation stage here includes internal and external evaluation (Piskurich in Abdul Gafur, 2012: 40). Internal evaluation (another term of formative evaluation) is carried out to determine the quality of the product. Formative evaluation results are used as feedback to make improvements. Internal evaluation in this research is

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validation from material expert in civic education and media expert (expert judgment) and assessment from Civics teacher and learner. External evaluation (summative evaluation) is intended to determine the level of mastery of learners of the competencies that have been taught. This means to know the effectiveness of web media in improving learning outcomes.

The evaluation stage is when the Moodle web-based learning media product has been completed in its design and done formative evaluation. The first formative evaluation was validation from the material expert by the lecturer of Civic Education, while the validation of the media expert was by the expert lecturer in educational technology. The result of validation becomes an improvement material for Moodle Web Learning media products and at the same time determines whether or not the learning media is applied or tested to the students. After being declared feasible then proceed with the trial and assessment of the civic education teacher to this instructional media. The assessment will then generate input and suggestions used to improve the media. After that the trial is limited to one class of XI students and there is also an evaluation process in the form of responses and ratings from students for web improvement before it is trained in extend.

Conclusion

The concept of development of Moodle Web media is use the ADDIE (Analysis, Design, Development, Implementation and Evaluations) model from Branch (2009). At the analysis stage is done problem analysis and student needs analysis. Stages of Moodle web-based media design is done through several stages, among others: Preparation of framework structure of web-based learning media Moodle, systematic determination of material presentation, illustration, and visualization and Writing draft initial product web learning media. In the development phase of this product made web pages in the form of domain, which will be accessed by students and teachers. After that is the assembling of web pages, which includes text writing, image installation, video installation, user input and installation of questions. At this stage, there is also internal evaluation in the form of improvement or revision after getting input and suggestion from material expert and media expert in the form of material validation and media validation. So after this product is declared valid by the material experts and media experts. Then web media products can be applied/ piloted in the field or in learning (implementation stage). Implementation of the instructional media base-web Moodle used in learning activities of Civic education in grade XI. The first stage is the limited test of one class and the results of the evaluation for evaluation the product, followed by extensive trials in the classroom to measure its effectiveness and impact on the student's integrity character. While the evaluation stage has been done during the stage of development and implementation. So the conceptual design development with ADDIE can develop the instructional media base-web Moodle in Civic Education for Student Grade XI.

Acknowledgements

The author would like to acknowledge and express the greatest gratitude to the Indonesia Endowment Fund for Education (LPDP) for its support of Fathikah Fauziah Hanum's research.

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