

Digital Content Model to Promote Literacy in Society Version 5.0 Using the Social Study Education Perspective

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Society today needs high quality information, especially in the era of industrial age version 4.0. The information on the internet is not all correct and useful and there are hoaxes, information that has no reliable sources, etc. The public does not know the rules of digital content writing that have value, are beneficial to society and do not violate intellectual property rights, this is because there is no digital content model that can be used as a reference in making digital content. While media literacy has a big role in educating the public in accessing information and also in making and distributing information if we are using references from literacy, we need a model that can be used as a reference in creating digital content so that useful information can be created which is an information medium choice. The digital content model is made referring to the social studies education perspective whose purpose is to create a quality society, useful for itself, the environment, society and the state, including for global society in the industrial era version 4.0 and is intended to become a factor to prepare the community to welcome society version 5.0. Six components are used as a chart of digital content model standards: Social Studies Education Theme Topics, Knowledge, Writing Procedures, Digital Media, Search Engine Optimization Technique and Copyright.



Key words: *Digital Content Model, Industry version 4.0, Society 5.0, Studies Education Theme Topics, Knowledge, Writing Procedure, Digital Media, Search Engine Optimization, Copyright.*

Introduction

The need for information encourages the continued development of communication and information technology, which raises competition in the digital world. The presence of computers in the era of the 1940s finally answered the public's need for information, an intelligent computing machine that was able to create, design, process, and store data and process data into valuable information. This innovation continued to experience significant developments, which then continued with the development of the Internet in the 1970s to the present with updated web technologies (Aditia, 2017; Art, 1995; Bawden, 2001; Bialo and Kachala, 1996; Buchanan and Crawford, 2015).

The emergence of various kinds of content that targets netizens as consumers, needs to be addressed carefully. Digital literacy competencies in the 21st century are important skills in addressing the development of technology and the Internet today. There are many studies of digital literacy and literacy in answering challenges in the 21st century. Basically, digital literacy is as important as reading, writing, arithmetic, and other scientific disciplines, even in practice having more meaningful actions. This is important to be introduced to today's society, especially those who live in the information age as the generation that is growing in the era of digital technology has a very different mindset to the previous generation.

Mastery of literacy in all aspects of life becomes the backbone of the progress of a nation's civilization. Literacy is the ability to read and write. Literacy culture is intended to habituate thinking that begins with reading and writing activities to create a work and even behavior change and instill good manners (Suragangga, 2017; Zhang, 2018). Media literacy, technology literacy and visual literacy are competencies that need to be popularized and employed in the era of technology and the internet. The current era of technology literacy has penetrated the digital literacy field and skills that are clearly different from the previous era are needed (Buckingham, 2007; Wyrwoll, 2014; Davis and Shaw, 2011; Demirkaya, n.d). Digital literacy is a combination of several forms of literacy and includes: computer, information, technology, visual, media and communication.

Digital literacy will create a society with a critical and creative mindset and viewpoint. The community will not be easily consumed by provocative issues, become victims of hoax information, or victims of digital-based fraud because the public understands the credibility and quality of digital content that is appropriate. Thus, the social life and culture of the people will tend to be safe and conducive to a happy experience. Building a digital literacy culture

needs to involve the active role of community. The success of building digital literacy is one indicator of achievement in the field of education and culture. Society 5.0 is a concept of a human-centered and technology-based society and community version 5.0 is a follow-up to the 4.0 industrial revolution. This community transformation version 5.0 will help humans to live more meaningful lives (Dogruera et al., 2011; Farisi, 2013; Farisi, 2015; Gasser et al., n.d).

Innovation in Society 5.0 will reach forward-looking communities, communities whose members respect each other and communities where everyone can lead an active and enjoyable life. In the past information society (Society 4.0), people will access cloud services (databases) in cyberspace through the internet and search, retrieve, and analyze information or data.

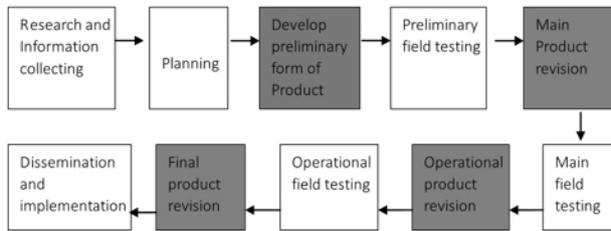
Industrial Revolution version 4.0 and digital literacy applied in making digital content models are expected to be able to prepare the public to transform themselves into society version 5.0.

Methodology

This research involves development research which is basically aimed at producing certain products and testing the effectiveness of these products. The mechanism used is based on the results of research about a new science discovery which will be tested and developed so that it is established to a certain extent and then applied in the community. In this study, research and development is intended to produce digital content models containing social science education implemented in User Generated Content Platform so that digital literacy skills in students and also in general, in a digital society, can be developed (Ghosh and McAfee, 2011; Gregurec and Grd, 2012; Gunawan and Palupi, n.d; Haryati, 2012).

In order to create a digital content model, the Research and Development (R & D) educational research method version initiated by Borg & Gall (1989: 782) was used. In this research, Research and Development is used to produce digital content models charged with Social Sciences aimed at educating students in the 21st century and to also educate the digital literacy community. Research that uses a model approach R & D research and development approaches are aimed at developing and validating educational products. This method divides the work step into ten stages as follow:

Fig. 1. Research and Development Borg and Gall Version Method



The instrument which is an important part of the research uses the R & D method, which is to develop research instruments that will be used at each stage of research. At the research stages, there are many methods that can be used as surveys, case studies, previous research studies and others followed by formative evaluations such as repeated field testing (Borg & Gall, 1983). Some of the instruments used in this study include: questionnaires (questionnaire), interviews and documentation (Hiller and Melissa, n.d; Hiller, n.d; Hobbs, 2010; Hunt, 2003; Hussien, 2014).

Referring to Borg and Gall (1989: 783-795), the Research and Development (R & D) approach in education that will be used in this study includes ten steps:

- 1) Review and Information Collecting: As a first step, research focuses on needs analysis, literature studies, literature studies, small-scale research and setting the required standard reports, including: Needs Analysis, Literature Studies, Small-Scale Research
- 2) Planning: Based on what has been done at the preliminary study stage, the developer then makes a research plan which includes: formulating research objectives, estimating funds, labor and time, and formulating the researcher's qualifications and participation in research.
- 3) Development Preliminary Form of Product: Several stages namely Determine product design, determine research facilities and infrastructure needed during the research and development process, Determine the stages of implementation of design tests in the field, Determine the description of the tasks of the parties involved in the study.
- 4) Preliminary Field Test: In the initial test, product testing will be limited.
- 5) Main Product Revision: This stage is a model or design improvement based on a limited field test. Improvement of the initial product will be carried out after a limited field trial. .
- 6) Main Field Test: This stage is a product test more broadly.
- 7) Operational Product Revision: This stage is the second improvement after extensive field testing of the previous field test. Product improvement from the results of a broader field test will further strengthen the products developed for the needs of a wider scope, while the previous field trial phase was carried out in the presence of a control group.

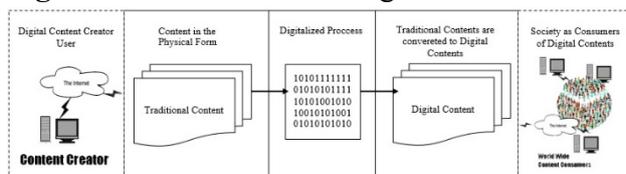
- 8) Operational Field Testing: This stage includes best carried out on a large scale, namely testing the effectiveness and adaptability of product designs that prospective product users use
- 9) Final Product Revision Results: This stage is intended to perfect the product to a proven level of maturity, the purpose of which is to refine the final product before the product is disseminated. At this stage a product that has a level of effectiveness and generalizability can be obtained.
- 10) Distribution and Implementation of Final Products (Dissemination and Implementation): During the Deployment and Implementation of Final Products, the results of R & D reports are disseminated through scientific forums, or through mass media. Product distribution must be done after going through quality control.

Referring to the R & D research method, work steps were taken in this study. The most fundamental things in R & D research are testing of limited-scale and broad-scale models (James, 2011; Jones and Westhuizen, 2013; Jermisittiparsert et al., 2019; Juliswara, 2017; Katharine and Robin, 2012). On a limited scale, the model will be distributed on one internet portal and invites the participation of the community and students to implement the model.

Digital Framework Model Content

Such rapid development of a person makes, presents and gets information. It's just that in this case most people use launch information only without considering or involving other factors. Content with low visibility, content that is not well written and content that has a positive contribution to society that is very difficult to access because of the lack of ability to use information technology which is a problem due to the abundance of non-user quality content.

Figure 2. Old Schema of Digital Content



The picture above shows that anyone can access computer technology and information resources to create digital content, use traditional content as a reference or even package it using digital media and release it on the internet. In this case anyone connected to the internet is able to find and access the content created earlier, regardless of whether the content is quality content or not (Kling, 2000; Kumar and Kumar, 2014; Kumar and Pooja, 2012; Lankshar and Knobel, 2008; Martin, 2008). Another thing about digital content that exists today is that content does not heed the interests of intellectual property rights, does not

include sources and protection of intellectual property rights explicitly on digital content and this means the people who access the content do not know whether they empower or employ the content for useful purposes. Various other things such as inappropriate writing, lack of understanding of digital technology and the lack of media literacy are proof of the low general quality of today's digital content.

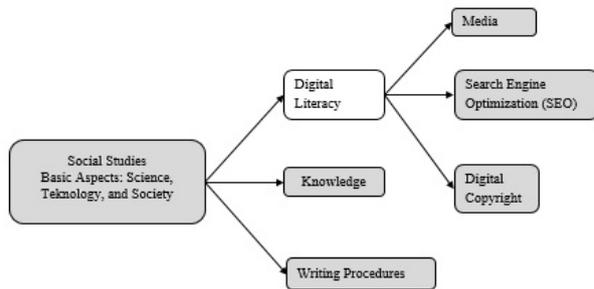
Determining the Components of Digital Content

Referring to the purpose of social science, namely fostering students to become citizens and citizens who know their rights and obligations, who also have responsibility for the broadest common welfare; students who are nurtured through social studies do not only have the knowledge and ability to think critically, but are also expected to have high awareness and responsibility for themselves and their environment.

Social Studies is intended to educate for good citizenship, to foster students to become citizens who know their rights and obligations and who also have responsibility for the broadest possible welfare. Students who are nurtured through social studies do not only have the knowledge and ability to think highly, but are also expected to have high awareness and responsibility for themselves and their environment. Social studies learning is not intended to foster mental awareness of responsibility for one's own rights and obligations to society, nation, and state. Social studies learning is an effort to apply the theories of social science to examine experiences, events, symptoms and social problems that actually occur in society. Through this effort, Social Studies Learning trains both the physical skills of students and the ability to think in studying and finding solutions to the social problems they experience (Maryani and Syamsudin, 2009; Noh, 2017; Prasetyo, n.d; Kling, 1999; Ralph et al., 2007; Riel et al., 2012).

The students as part of the community must be able to involve themselves in people's lives both as citizens, citizens who are aware of responsibility by displaying behavior, actions and by, actions that are full of meaning for the common good. In the end they are expected to become a part of Indonesian people as a whole. This is the aim of social studies learning.

Figure 3. Six Components in Digital Content Model



Social Studies Component

The Social Studies Component referred to in making digital content refers to the theme used as a standard and framework for social studies by National Council for the Social Studies (NCSS). This framework provides ten themes that represent the way to manage IPS knowledge regarding human experience in society and is also used for students in facing challenges as citizens in democratic life (Robert, n.d; Rojko, 2017; Sapriya, 2011; Saubari and Baharuddin, 2016; Sawyer and Rosenbaum, 2000).

According to Sapriya (2009: 7), "One of the characteristics of social studies is dynamic nature, meaning that it always changes according to the level of community development". Changes can be in material aspects, approaches, and even goals in accordance with the level of community development. Thus, along with the changing times and technological developments, the media, facilities and infrastructure and implementation in the education and community environment will experience changes adjusting to changing times and technology and people's behavior in activities in the present era. Moreover, in the current age of information technology, various kinds of human activities have been digitized to increase effectiveness and efficiency in many ways. One of them is how today's society gets information and makes and distributes information.

Of the eight themes, the eighth theme will be chosen, namely Science, Technology and Society (Science, Technology, And Society) for this research. This theme includes experiences that provide a study of the relationship between science, technology, and society, for which students can study several important subjects which are the scope of the theme to be used as a means of literacy.

Knowledge Component

Aspects of critical thinking, analyzing, determining and gathering information or data, organizing and judging logically, reading to be able to understand reasoning, interpreting content and understanding the concepts of space and time are aspects that are closely related

to assessing existing knowledge in content. Not all good content is said to have knowledge and not all statements are worthy of being knowledgeable (Shettar, n.d; Silalahi, 2017; Stein and Prewett, 2009; Stephen and Phyllis, n.d; Steve, 2012; Sulianta, 2016). Therefore to create a good standard of digital content, digital content must have a useful knowledge content to determine or identify knowledgeable digital content and for this reason the point of view of knowledge is based on Bloom's taxonomy.

The levels in the Bloom Taxonomy have been used for almost half a century as a basis for the preparation of educational goals, preparation of test, and curriculum throughout the world. This mindset makes it easy for educators to understand, organize and implement educational goals. Based on this, Bloom's Taxonomy is something important and has a broad influence over a long time. Bloom's taxonomy has been revised because the world community has undergone many changes since 1956, and these changes affect the way of thinking and practice of education (Sulianta and Zainul, 2017; Supriatna, 2018; Tompkins, 2010; Sinaga et al., 2019; Zhang, 2018). The change in knowledge in Bloom's taxonomy is a separate dimension, namely the knowledge dimension in the revised taxonomy. Knowledge is retained in the revised taxonomy but changes into its own dimension because it is assumed that each category in the taxonomy requires knowledge of what students must learn.

Writing Procedure Component

Aspects of determining and collecting information or data, organizing and evaluating logically, reading and listening to be able to understand reasoning and systematic writing are the aspects that underlie the integration of written writing in assembling and evaluating administrative components in digital content. Furthermore, regarding the essence of writing, this requires writing skills and guidelines and according to Tompkins & Hoskisson (1991: 212), the focus in the writing process lies in what is experienced, thought out and done in the writing process. Hairstone (1997: 31) divides the writing process into four stages, namely stages: (1) preparation stage, (2) incubation (incubation stage), (3) illumination and execution stage, and (4) verification (verification stage). Tompkins and Hoskisson (1991: 211) stated "the focus in writing the process is what students think and do and that the five stages are prewriting, drafting, revising, editing, and publishing." This can be seen as a writing process which consists of five stages: (1) writing, (2) drafting, (3) revising, (4) editing, and (5) publishing. The following table presents the key steps for writing using this process approach.

Digital Media Component

Basically, the process of writing digital content is different from the step of writing with non-digital content, the media used and how to apply the media are very different from traditional

methods, such as word processing, digital image content, audio and video embedded in content digital has to be considered in making digital content, which requires expertise in using information technology devices. The use of Digital Media such as: audio, video, proportional text and understanding of operating devices for literacy purposes such as blogs or portals are also important and become part of the digital content model (Wheeler, 2012: 8).

Some understanding needs to be conveyed and educated re creator content in making models of digital content in terms of digital media, for example: Computer Resources, the Internet and applying blogs. Understanding of and using the right device is an important skill in the industrial age version 4.0. In addition, without careful understanding in use of these technological devices, good digital content cannot be realized. So for the aspects that are reviewed, education and assessment of understanding of media literacy in relation to information technology has an important role and becomes a component that is integrated in the digital content model.

While the parameters reviewed in the digital media component are the final results displayed in the web browser framework: Feasibility of audio content, Feasibility of video content, Feasibility of image content, Proportional text content (font style, font color, font size), and Content can be accessed by the desktop and mobile version of the browser.

Search Engine Optimization Component

The selection of this component refers to previous research in relation to creating quality content reported on the User Generated Content Platform. That SEO technique is one of the considerations and is used as a basis in making digital content, because without referring to the standard of digital content SEO that is reported to be difficult to find on the internet even though using a search engine, as a result the content will be buried by various other content. In evaluating SEO, there are several components that are reviewed and an assessment of its existence on the content and the components reviewed will be formulated with SEO parameters, some of which are (Kumar, 2014): Page Title, Meta Description, Meta Keyword, Heading Tag, Image alt attribute, Access Robot * .txt.

Digital Copyright Component

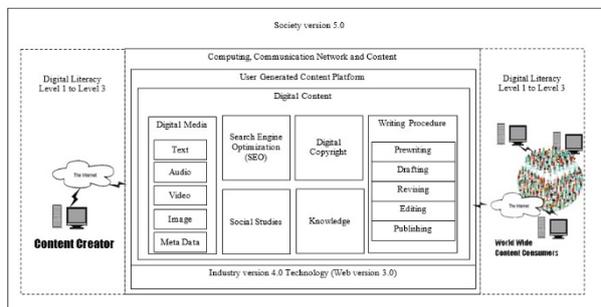
Digital Copyright has become an inseparable part of digital content, with many types of digital copyright such as: public domain, Creative Common License and others guidelines addressing digital works (Wheeler, 2012: 9).

The importance of the inclusion of digital copyright is based on Renee Hobbs in his book on Digital and Media Literacy, that information credibility is influenced by its creator, its

purpose and how the content is made and this cannot be separated from the copyright attribute on the published digital content. Various statements regarding the protection of intellectual property that accompany digital content are very critical and provide clarity about the quality of content and how digital society can further empower the content.

Creative Commons creative works can be used freely without having to worry about copyright infringement. These forms of licensing for use of content are very diverse, such as GNU GPL, Copyleft, Verbatim work and also Creative Commons License (Creativecommons.org) is the protection of intellectual property rights that are most widely used as a form of licensing on digital content. Thus, if a work is found that is under the auspices of a Creative Commons license, the GNU FDL or public domain is also known as free content, then anyone has the right to use it. In addition to the public domain and Creative Commons License, another one will add to the content treasury. Because this content is digital content and is intended to be distributed to User Generated Content Platforms, the creation must also follow the rules of 'fit and proper Search Engine Optimization (SEO) parameters'. The dependence of digital content depends and is strongly influenced by the six main components of building digital content, namely: SEO, Writing, Social Studies Themes, Digital Media, Digital Copyright, and knowledge.

Figure 4. Suggested Diagram Block of Digital Content Model



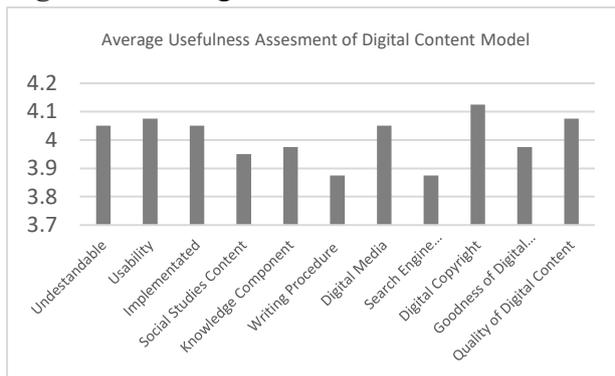
In figure 4, the digital content model which is an element of the 6 main components that synergistically relate strongly and in making content requires multidisciplinary expertise which then raises transdisciplinary knowledge, integrates several disciplines that can create new understanding (synthesis), namely information technology, writing skills and knowledge, namely social studies and other sciences which are the main studies of digital content. The way to make digital content in this model cannot be realized if it only relies on certain science. The testing carried out must also look at it as a new unity of the industrial age of version 4.0 and no longer rely on limited interdisciplinary and multidisciplinary skills (Tompkins and Hoskisson, 1995).

Results

In the field test phase, users create digital content based on digital content models within 1 hour 40 minutes. After the user creates content based on the digital content model, they are asked to fill out a questionnaire to assess the digital content model and how to understand the modelling module. The model that was made is re-examined, and digital content had met the rules in the digital content model.

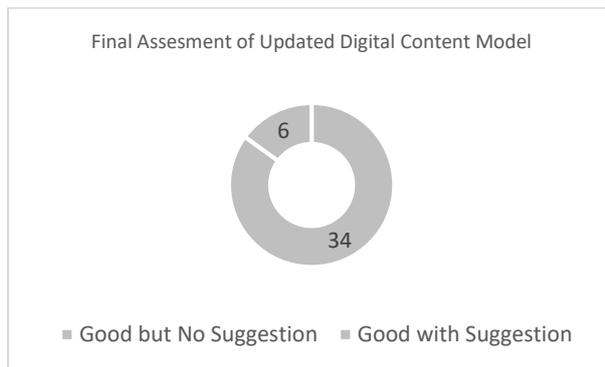
There are eleven aspects that are used as a basis for evaluating the results of the implementation of digital content models, namely: Understanding of Models, Usability of Models, Implemented Social Studies Content, Knowledge Components, Writing Procedures, Digital Media, Search Engine Optimization, Digital Copyright, Goodness of Digital Content Model and Quality of Digital Content.

Figure 5: Average Usefulness Assessment of Digital Content Model



Based on the eleven components that are used as the basis of the assessment, users say that the model is easy to understand and easy to use. Digital Content Model is seen as a good thing and can be used as a reference for creating quality digital content. Six components that are made part of the field model are sufficient and good. As many as 87% said that the model was made well and 13% said the model was good enough.

Figure 6: Final Assessment of Updated Digital Content Model



At the end of the questionnaire, users reassess the model that is slightly camouflaged, 85% of respondents rate that the model's digital content is good and can be published, while 15% of the respondents suggest that explanatory information is added so that the model is easier to understand and added that with live chat functionality if the model is implemented on the internet and is intended for internet users, this would make it easier for them to consult when they want to create digital content based on the model.

Conclusion

The development of computer and internet technology has caused people to be overwhelmed with negative content which has a negative impact on society. Despite the abundance of information resources and the development of technology in the era of industry version 4.0, it is not the entire society that utilizes all the goodness of technology. This is addressed by the large number of negative content circulating such as hoaxes, unsettling content and content that leads to criminal action. For this reason, a model that can be used as a guideline to create useful content that has high visibility and quality and does not violate the rules of intellectual property rights is needed and this model must be implemented in digital communities to support digital literacy. The model of digital content that involves users (audiences) and creator content is expected to contribute to the quality of society in the industrial age version 4.0, which is a knowledgeable, critical society and where good morals are demonstrated by quality citizens. The digital content model provides contributions that are expected to accumulate quality knowledge to be utilized further as material in building a broad-minded society in the era of society version 5.0. This knowledgeable content model can be used to prepare smart and enabled communities to obtain useful information about reducing their own and the community's impact.

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