



**DIGITAL CONTENT AND INFORMATION LITERACY FOR
SOCIAL STUDIES LEARNING IN INDUSTRIAL ERA VERSION 4.0**

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Abstract : Technological developments, especially computers and the internet, have changed human behavior and ways of getting information, development of technology has lots of impact. There are many negative effects that arise such as hoaxes, radical content, showing horror, provocative content, or information others who do not provide good value to the community, such as how to make bombs, or steal social networking accounts, etc. Therefore, digital content containing social studies is needed, which is the guideline, this digital content has five fundamental elements that become the reference for making content that is worthy of being said as digital content, which are: internet technology, digital media, writing, digital copyright, script of knowledge and social studies education. The purpose of the digital content model is not only intended for consumers, but it is expected that people understand the benefits of digital literacy and become producers or creators of quality digital content, especially to be good citizen in the industrial age version 4.0.

Keywords : digital literacy, content, media, industry version 4.0, social studies, user generated content platform

I. INTRODUCTION

Indonesia is one of the largest number of internet users in the world, based on the results of research conducted by the Indonesian Internet Service Providers Association (Asosiasi Penyelenggara Jasa Internet Indonesia - APJII) together with the University of Indonesia's Communication Studies Center (Puskakom), the total number of Internet users in Indonesia as early as 2015 was 88.1 million person. And the tendency continues to increase. Furthermore, research is reported by wearesocial.sg in 2017 there were 132 million internet users in Indonesia which is growing by 51 percent in a year. Increasing use of internet in the society occurs because we are now live in the industrial age version 4.0 which is enabled with a smart, fast and automated system, in the scope of information this involves data exchange, cyber systems, internet of things, cloud computing, Cognitive Computing, which are supported by computer and internet technology.

People need to be aware that the number of youth who access the internet are very large, which is approximately 70 million people, they spend their time on the internet, either via cellphone, personal computer, or laptop, close to 5 hours per day. Furthermore, the accessibility of Indonesian youth of pornographic content per day reaches 25 thousand people on the average (Source: Republika, 2017), as well as unhealthy internet behavior, indicated by the



spread of hoax news, hate speech, and intolerance on social media. These things are certainly a big challenge for the community in the generation of 21st century generations who have digital competencies.

The results of research reported by Mitchell Kapoor show that the younger generation who have the expertise to access digital media, have not yet compensated for their ability to use digital media for the sake of obtaining self-development information. This is also not supported by the increase in material / information presented in digital media that is very diverse in type, relevance and validation (Hagel, 2012). The development of the number of media in Indonesia has recorded a rapid increase, reaching around 43,400, while those registered in the Press Council are only about 243 media. Thus, the public can easily obtain information from various existing media, regardless of whether the news is official or not (Source: Kumparan, 2017). Therefore we need a model that is the basis for creating digital content that in addition to having quality content that is knowledgeable and educating digital content is reported responsibly without neglecting intellectual property rights, digital content must meet the requirements of Search Engine.

II. METHOD AND RESEARCH DESIGN

According to Borg & Gall (1983) stated: "educational research and development, R & D, the process used to develop and validate educational products". Also Richey & Client (2007) stated: "the systematic study, development and evaluation processes with the aim of establishing an empirical basis for the creation of instructional products". Gay, Mills & Airasian (2009) stated: "the process of research and development. The purpose of R & D is to develop effective products for use in schools".

These products can be in the form of specific curricula for certain educational needs, educational media, textbooks, teaching methods, educational staff competencies, evaluation systems, competency test models, classroom arrangement for specific learning models, management models, employee development systems, and other physical forms, systems, processes, procedures, whose understanding is basically the same as the understanding of development R & D steps with reference to Borg & Gall (1983) include 10 steps, which are:

- 1) **Research and information collection:** conducting research and gathering information as initial research related to educational products that will be developed, including in this step include literature studies relating to the issues being studied, needs measurement, small-scale research, and preparation to formulate a research framework;
- 2) **Planning:** included in this step develop a research plan which includes formulating skills and expertise related to the problem, determining the objectives to be achieved at each stage, design or research steps and if possible / required to carry out a feasibility study limited;
- 3) **Develop Preliminary form of Product :** developing the initial form of the product to be produced, including in this step the preparation of supporting components, preparing guidelines and evaluating the appropriateness of supporting equipment;
- 4) **Preliminary Field Testing:** conducting initial field trials on a limited scale, in this step data collection and analysis can be done by means of interviews, observations, or questionnaires;



- 5) **Main Product Revision:** that is to make improvements to the initial product produced by the initial trial, this improvement is very likely to be carried out more than once according to the results shown in the limited trial until a draft of the main product is ready for wider testing;
- 6) **Main Field Testing:** usually called the main trial involving a wider audience, the results obtained from this trial are as a result of evaluating the achievement of the results of product trials.
- 7) **Operational Product Revision:** making improvements / improvements to the results of a wider trial, so that the product developed is already an operational model design that is ready to be validated;
- 8) **Operational Field Testing:** procedures of validating the operational model that has been produced, this test is carried out through questionnaires, interviews, observation and analysis of the results.
- 9) **Final Product Revision:** final improvement on the model developed to produce the final product;
- 10) **Dissemination and Implementation:** disseminate products / models developed to the public / public, this step is to communicate and socialize the product, either in the form of research results seminars, publications in journals, or exposure to stakeholders related to the product.

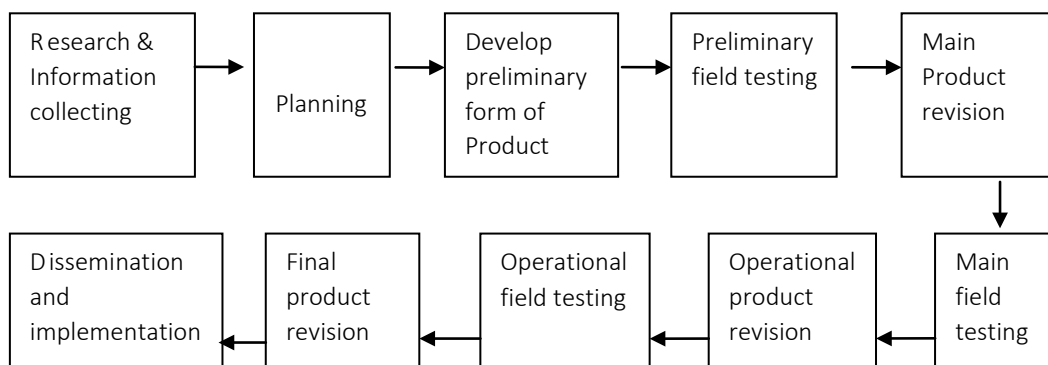


Figure 1 R&D cycle by Borg&Gall

In this study, the research targeting certain schools with certain classes and certain educators and students. This is due to the implementation and purpose of research to improve literacy and the learning of making digital content on a limited scale in certain institutions or schools. Therefore, the components that are tested do not broader and converge only certain institution in the small scale.

III. RESULTS AND DISCUSSIONS

Referring to the research of educational research and development, R & D, in 3 years is developing a preliminary form of product, resulting in the definition of variables as shown in Figure 1. Where each variable has a regulator in building elements of digital content with social studies.

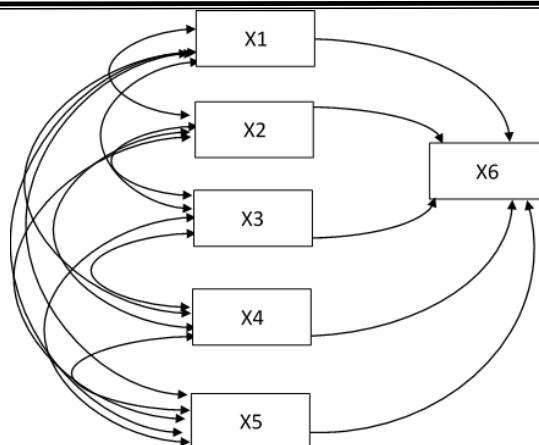


Figure 2 Variable correlation in digital content models

Description Figure 3. Regarding the variables applied to the model as follows: X1 = SEO technique; X2 = Writing Procedures; X3 = Script of Knowledge and Social Studies Education, X4 = Digital Media; X5 = Digital Copyright; X6 = Distributed Digital Content. Digital content is not just traditional content that is digitized, and not traditional content that is accessed like someone reading an article on print media, but this digital content will be accessed through the user generated content platform system using information technology tools such as gadgets or various types of computers today. Therefore, in making digital content, careful understanding is needed:

- a. Writing System Mechanism
- b. Knowledge of social studies and other scientific knowledge on content
- c. Digital Media
- d. Digital Copyright
- e. Internet Technology (SEO techniques)

Without a good understanding of the five things above, the mechanism will not achieve the goal of quality digital content.

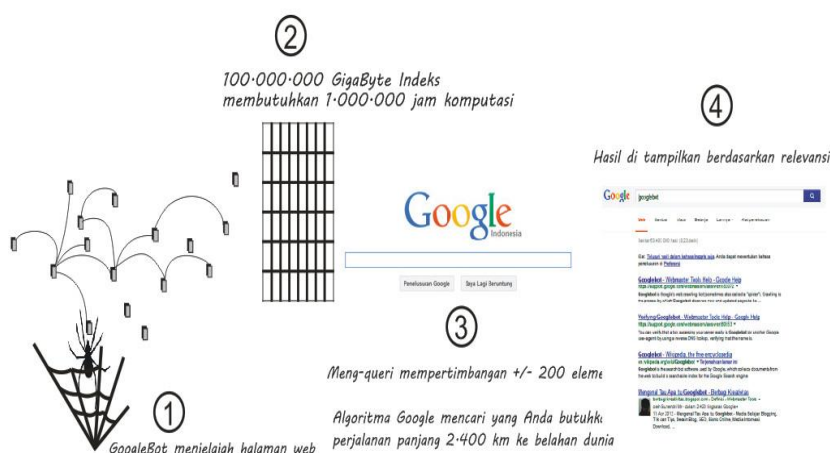


Figure 3 Search Engine Mechanism in handling digital content

Knowledge of SEO is important so content can have good visibility and is suitable for distribution on the internet. Images are told in the knowledge that search engines will index



digital content and be given to users. Without SEO knowledge, digital content will sink into a pile of content on the internet and will not reach the reader.

As shown in the figure above, the steps can be explained:

- 1) Google uses a robot known as GoogleBot (web spider) which is responsible for exploring digital content
- 2) Analyze the feasibility of the content
- 3) Relevance is obtained by considering such as: web page titles, links, content renewal, page rank (the more links between websites, the higher PageRank), the words on web content, the similarity of words with keywords, spelling mode, quality of content, etc.
- 4) Results will be given to users and listed based on level of importance and relevance.

The digital content model of the results of this study is highlighted in a block diagram like the following figure. And this model in practice is used as the basis for making digital content. Digital content that refers to this model is assessed in two directions with two roles, namely students and educators act as content consumers and that is, learners and educators act as content creators, they make it based on digital content models.

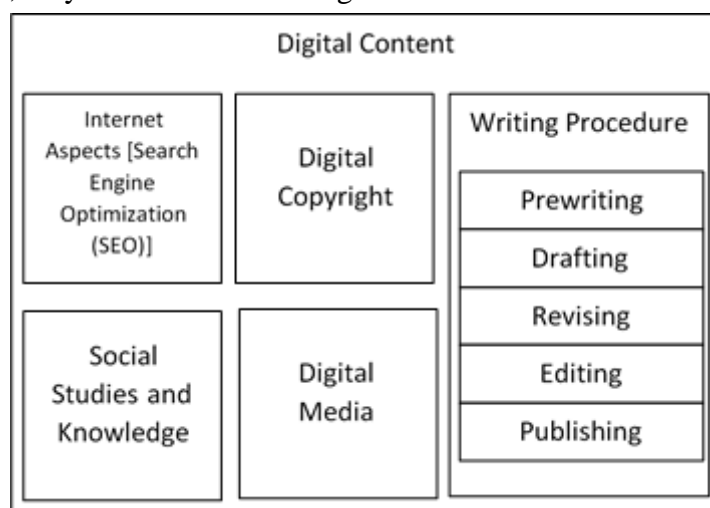


Figure 4 Digital Content Model in block diagram

IV. DISCUSSIONS AND RECOMMENDATIONS

Developing a standard of digital content involving five main elements that are worthy of being digital content has fulfilled all objectives. And in this study digital content is applied to limited spaces for educators and students within the scope of a particular User Generated Content Platform and fiber educators learners are asked to access the content. Based on the results of assessment results from observations, questionnaires and interviews, the outcomes achieved reached the level of student satisfaction reaching up to 80%, while among educators satisfaction levels reached up to 84%.

In this case both educators and students were asked to create digital content and based on the instructional model involving 5 main elements of digital content, the outcomes achieved reached the level of student satisfaction reaching up to 75%, while among educators satisfaction levels reached up to 78%. Obstacles are obtained when educators and students must



follow digital content standards from the technological aspects of using the dashboard and in designing content that involves Search Engine Optimization (SEO).

For that further research can be developed models and rules as well as tools that facilitate educators and students in generating digital content for social studies learning in developing information literacy, this is important because the technology developed in the industrial era version 4.0. Content creators make quality content to improve digital literacy and creator content must hone their knowledge so that it synergizes with the need for digital literacy in the community, and this is very interesting to be studied further, in connection with the digital literacy competence that is needed to create digital content.

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