THE DEVELOPMENT OF MACROMEDIA FLASH-BASED
INTERACTIVE MULTIMEDIA OF INDONESIA LANGUAGE
LEARNING AT ELEMENTARY SCHOOL

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ABSTRACT

This research aimed to produce a suitable Indonesia language learning multimedia used in narrative text writing materials at primary students. The type of research was Borg and Gall development which was combined with Dick and Carey development model, with stages (1) analyzing students’ needs and characteristics, (2) formulating instructional goals, (3) arranging media script, (4) expert validation, (5) revision, and (6) final product trials. The result of the study showed: data on the quality of development products were collected by questionnaire. The data collected were analyzed by quantitative descriptive analysis technique. The results showed that (1) Experimental test of the material on the content feasibility assessment was on very good criteria (89%); (2) Experimental test of learning design was at very good criteria (89%); Individual test was at very good criteria (83%); (5) field test was on very good criteria (84%). Likewise, on the effectiveness test of the products, there was the difference in students’ learning outcomes using multimedia macromedia flash-based-learning on narrative test material that only used textbooks as learning media. From the data obtained, they were known that $t_{table} = 1.67$ with d.o.f = 58 while $t_{0.05} = 8.75$, then obtained $t_{count} > t_{table} = 7.30 > 1.67$, so Ho was rejected and Ha was accepted.

Keywords: Macromedia flash, learning multimedia, Indonesia language

INTRODUCTION

Many people are still worrying the quality of Indonesia language learning. Compared with the developed countries, the American, Netherlands, and France students are required to read 30 literature books. Similar with Asian countries, such as in Japan, the students are demanded
to read 15 literature books, 7 books in Brunei and 6 literature books in Singapore. Because of the desire to improve reading ability for students in our country, so in Content Standard, it is set a target about the number of literature and non-literature passages that is supposed to be read. Elementary school graduates must have read 9 books; Junior High School must have read 15 books; and Senior High School graduates must have read 15 literature or non-literature books. Thus, if all levels are combined, so the Senior High School graduates will have read 39 literature and non-literature books. However, in schools reality, it is still ignored by the teachers. (Rusmiati, et al, 2014:171).

The efforts to improve the quality of Indonesia language learning can be done by implementing learning innovation including in utilizing technology devices and information communication technology (ICT). (Muslimin, 2011:1).

The efforts to change the old paradigm used in English learning at elementary school which is more emphasize on the role of teacher who is teaching than students who is learning (traditional paradigm) to the Indonesia language learning that is considered more appropriate with students’ natural way in learning language, as well as more appropriate with the nature of students’ language development (new paradigm). They also do not always deliver a satisfactory outcome. If the teachers implement a same teaching approach (based on the previous experience) on Indonesia language learning system which has experienced changes (learning pattern that matches with the spirit of 2013 curriculum), then it will be possible the students’ learning goal or competency expected is not achieved. An established paradigm prevailing in a system can be inappropriate (less relevant) when the paradigm is still implemented on the system that has experienced changes. The paradigm changes tend to cause a crisis. The crisis will demand the scientific revolution that produces a new paradigm in overcoming the crisis occurred. (Kuhn, 2002).

The implementation of new paradigm; teaching learning materials adopted from outside and adapted in the school, demands the students and teachers to change the teaching learning behavior. The constructive interaction between students with their friends, students and teachers, students-problems-teachers are very difficult to be conditioned. They are caused by conventional teaching in which the students receive knowledge passively. During this time, the teachers give the “whole” English concepts
and principles for the students, and not familiarize the students to connect Indonesia language in solving the problems and thinking creatively.

Teachers’ teaching habits are difficult to be changed, because they are not sure that the students are able to establish the skills through problem solving posed. They are more success to teach their students based on the previous experience (Bornok, 20017).

It is proved from students’ activity. They don’t ask to the teachers and friends (especially the students who have cognitive weakness) even though they are given motivation. Besides, the teachers are lack to organize the learning caused by the weakness of teachers understanding toward learning theories based on constructive view (Bornok, 2007).

The use of multimedia gives positive impacts for understanding materials of each student. They no longer think abstractly. By the multimedia used in the class as well as in the laboratory, the abstract material becomes more real. On the language skills materials, such as reading, writing, speaking and listening, the teachers show the steps directly. The learning activity begins to increase. It can be seen from many students ask, express their opinions, even answer the questions from the teachers and friends (Mardhatillah, 2015).

Indonesian language learning is considered effective when the learning process is focused on the students (student center), using appropriate and interesting media so that they do not get bored on the process (Mardhatillah, 2017).

Based on the field observation, many Indonesian language learning implementations were still less varying, the learning process had a tendency in certain methods (conventional), and did not pay attention on the students’ understanding level toward the information delivered. They tended to be less active and did more listening and writing, and caused the lesson content as a memorization so that they did not understand the actual concept.

Based on the observation result at SDN Pondok Geulumbang, it showed that the influence of ineffective learning method resulted 60% of students class V did not achieve the completeness score as much 65. It means that the achieved score was about 0-64. On average, daily and final score did not reach optimal score about 50 average score.

The low Indonesian language learning result especially writing skill is influenced by many factors. However, the main factors are classified in
two parts, internal and external factors. The internal factor includes the lack of students learning activity while the external is the learning media applied by the teachers (Mardhatillah, 2016).

On the implementation, the teachers still used textbook in teaching narrative text writing materials. Consequently, the students have a difficulty to explore their knowledge into a writing form. Therefore, the researcher considered to apply macromedia flash-based learning multimedia to improve their narrative text writing skill.

On the 2013 curriculum implementation, teachers play a big role in implementing every learning process. The curriculum aims to encourage the learners to be better able to observe, ask, think, communicate (present) what they have gained or known after receiving the material. The teachers are demanded to be more active and creative in managing the learning so that the students are motivated to learn independently (Kemendikbud, 2014).

Indonesian language is one of the subjects taught in Primary School. In the curriculum 2013, the subject is integrated with other lessons. The goal is to make students to be able in using language (Subana dan Sunarti, 2009:267).

The researcher observed that the multimedia development of Macromedia Flash learning for narrative text writing material was an appropriate alternative in the teaching learning process. All the time, the teachers also only used textbook media (note) that the use of the media equipped with interesting animation features and execution buttons were able to make teaching learning atmosphere became interesting and not monotonous and easy to understand. The media was developed in CD (Compact Disk) form.

Theoretically, the media development of Indonesian language macromedia flash-based learning was expected to increase information or knowledge. Furthermore, practically, the development was able to improve teachers’ motivation to design and utilize the learning media and provide a choice in using the media. It was also expected to be able to help the students in learning process of writing a letter and evoke their learning motivation. While for the school, adding learning media collections could be used at any time and improving students’ learning motivation and students’ quality that impact on the improvement of school quality.

The multimedia of macromedia flash utilizes computer to make and combines various images and objects, such as text, graphic, audio, picture,
moving image (video and animation). By combining link and tool, it enables the user to navigate, interact and communicate (Suyatno, 2009:45).

The software has many advantages compared with other animation software, as object oriented program which is able to design vector-based-image. Its ability to generate moving animation and sound can be used website maker software and many other advantages compared with other animation software. By the advantages of the Macromedia Flash as Audiovisual technology, it is able to produce new features which can be utilized in education. Based on some definitions exposed by experts, it can be concluded that Macromedia Flash in learning is learning media animation software to help teachers in delivering the learning to be more interesting and easy to be understood by the students and the implementation uses computer and imager projector. The software is very useful in supporting the success of a presentation and teaching-learning process. In Macromedia Flash, we can include some elements, like image or movie, animation, presentation, game that can be used as a tool to design web and various other multimedia applications. It is software designed to make vector-based animation which has small size result. Initially, the software is directed to create internet (online)-based application or animation, but it is widely used to produce animation or application which was not based on internet offline. With Action script 2.0, Flash 8 can be applied to develop game or teaching material such as quiz or simulation. In addition, there was also research about the Development of Macromedia Flash-based reading for Grade VII Junior High School Students by Ratna Dewi Astutik, 2012. The result of the study was interactive CD product of learning macromedia flash-based-Java reading. The product has been tested on the students of Grade VII Senior High School 19 Malang. Based on the test result, the product was valid. From the relevant result above, it could be concluded that the use of Macromedia Flash-based-learning media was able to increase students’ mean score and become an interesting media, fun to be studied on Indonesia language subject, and also able to improve the score result before and after applying the learning model independently by each student.

The development of Indonesian language learning media based on different theories so that to produce the learning model form implemented by learning principles. It functions to guide us to design the learning which
used as the guidance in the organization in order to achieve effective, efficient and useful learning. Macromedia flash is often used by animator to create interactive and non-interactive animation, like animation on web page and cartoon animation. The software has many advantages compared with others such as object-oriented program that able to design vector-based-image, the ability to create motion and sound animation. Learning media is very important to attract students’ learning interest and respond the advanced globalization of technology and information. So, it is appropriate if the macromedia flash-based learning media on Indonesia language subject is chosen in the development of learning media. The media is used more proper than text (note) that students’ learning result will be higher than the result taught by conventional media (note).

The expectation to be achieved after the students took this learning was they were able to master the learning material indicator and able to show the effective, useful and interesting learning media. The result would be developed in tutorial learning CD and the material was adjusted by basic competency. The research was conducted through some stages; analysis, design, development, implementation, and evaluation. This media was expected to be suitable to be used as Indonesia language learning media that has been validated by some experts, such as material, design, media expert and the user (student). The multimedia would be also tested to the students of Elementary School Pondok Geulumbang and obtained more effective learning result.

**METHODS**

This research used research and development model. The product developed in this research was multimedia in Indonesia language learning.

The development of learning, media was conducted by using Borg and Gall Research and Development model which combined with Dick & Carey learning model. The learning model was a model arranged by systematic sequence and occupying students’ characteristics in learning. There were several steps that could be made to produce macromedia flash-based-interactive multimedia in Indonesian language learning, as follows: (1) requirement analysis and students’ characteristics stage. This stage was made to collect information regarding literature review, Core Competency and Basic Competency, and observation on the text applied in the learning. After conducting the requirement analysis, then conducted interview orally
with the students which aimed to know their characteristics both advantages and weaknesses from the material that has been received by the text-based learning. (2) Writing script and designing the learning media. It aimed as guidance for the user and also media maker in order to the media did not deviate from the expected material content and goal so that the media user is able to choose the appropriate material. (3) Stage of product validation conducted by material and design experts. The stage intended knowing the appropriateness of the media that would be used in the learning process. (4) Stage of product testing made by individual product and small group test, and product usage test that was in limited field test. This stage intended knowing the appropriateness of the product that would be used, whether the media was good or not to be displayed as text-based media in learning process. (5) Revision stage. It was conducted to improve product quality based on revision suggestion of material and media expert, and trial which has been done until resulted the final product.

The purpose of experimental class in this research was in accordance with the objectives formulated by the curriculum of Indonesia language subject. The students who became the sample were the students who learned in the same semester. The circumstance and condition of the learning environment for both groups were considered equally because they were studying in the same school. The treatment was conducted in two meetings and tested the outcome of Indonesian language learning about 2x35 minutes. Before doing the treatment, the teacher gave the same material to the control and experimental class, the material given to the control class was without using media while the experimental class was given the macromedia flash-based learning media material. Learning activity was implemented in accordance with the lesson plan. It was used three data collection techniques, as follows (1) the test which aimed to capture the writing letter learning result, (2) observation sheet to find narrative text writing outcome, (3) questionnaire which was to obtain the students of Grade IV Elementary School Pondok Geulumbung data result from material and learning design expert.

RESULTS AND DISCUSSION

Material expert validation result on the teaching media content developed showed that: (1) the learning material was considered good by
88% mean percentage, (2) its depth was very good about 88%, (3) the learning fact and concept accuracy was considered very good by 88%, the science and technology development compatibility was good with 100% average percentage, (5) the updated feature, sample, and reference was very good by 75% and (6) the material showed that the contextual was rated very good in the amount of 88%. Thus, *macromedia flash*-based-interactive multimedia developed based on the content properness was categorized as “Very Good.” Therefore, its content properness in Indonesian language learning developed was able to be implemented as learning material in delivering to the students of Grade IV Elementary School Pondok Geulumbang. The validation result percentage by expert material as follows:

![Chart 1. The Percentage of Content Properness Empirical Score of *macromedia flash*-based-multimedia interactive Grade IV Elementary School Pondok Geulumbang](image)

The validation result from the learning design expert showed that; (1) Learning presentation technique was rated very good in the amount of 94% average percentage, (2) learning presentation was very good as much 91 %, (3) the presentation completeness was considered very good by 75 %. Based on the validation result, it could be concluded that *macromedia flash*-
based-interactive multimedia developed was categorized very good so that it could be accepted and suitable to be used in learning process. The percentage of validation result by expert material as follows:

![Chart 2. The Percentage of Properness Empirical Score of macromedia flash-based-multimedia interactive Grade IV Elementary School Pondok Geulumbang](image)

After obtaining validation result from the experts, there were some revisions, such as: (1) Adjusting video with learning theme, (2) Adding audio/sound which was appropriate with material, (3) Adapting text content with students’ daily environment, (4) Adjusting the text with the image presented, (5) Using communicative language, (6) Adding the material which was suitable with Core and Basic Competency, and (7) Fixing learning media display.

Based on the data response of students Grade IV Elementary School Pondok Geulumbang on the individual text, it was stated that macromedia flash-based-interactive multimedia on writing narrative text material developed was considered very good as much 81% average percentage. After doing the revision from the weakness included in the test, then it was conducted small group test. From the data, it showed that the media developed was very good by 83%.
Furthermore, a limited field test was conducted. Based on the data obtained from the students’ response, it showed that this test was categorized very good about 84%.

After the test, the product effectiveness was done by comparing students’ learning outcome between class taught by macromedia flash-based-interactive multimedia and class taught by textbook on writing narrative text material. The comparison of their learning outcome by using the media and textbook could be found in table 1 below.

<table>
<thead>
<tr>
<th>Class</th>
<th>$\bar{x}$</th>
<th>$s_1$</th>
<th>DOF</th>
<th>$T_{count}$</th>
<th>$t_{table}$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental</td>
<td>77.67</td>
<td>11.68</td>
<td>58</td>
<td>7.30</td>
<td>1.67</td>
</tr>
<tr>
<td>Control</td>
<td>55.9</td>
<td>11.32</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Based on the research result obtained, there was a significant difference between students’ learning outcome taught by macromedia flash-based-interactive multimedia and textbook. It could be seen that their result taught by the media was higher than by the textbook. It was proven by examining t-test, with the testing criteria was accepted if $H_a$ jika $t_{count} > t_{table}$ at significant level $\alpha = 0.05$.

From the data obtained, it was known that $t_{table} = 1.67$ with d.o.f = 58 while $t_{0.05} = 8.75$, so it was obtained $t_{count} > t_{table} = 7.30 > 1.67$. It means that $H_o$ was rejected dan $H_a$ was accepted. Therefore, the conclusion was the learning by using the media was more effective and bale to improve students’ outcome on writing narrative text material in Grade IV Elementary School Pondok Geulumbang.

Furthermore, macromedia flash-based-interactive multimedia on writing narrative text material in Grade IV Elementary School Pondok Geulumbang developed based on the content appropriateness and presentation technique gained about 88% and considered as “Very Good” category. Therefore, the media developed could be used as a learning media in the material.

**CONCLUSION**

Based on the development of macromedia flash-based-interactive multimedia as learning media for students of Grade IV Elementaru School
Pondok Geulumbang and research discussion that has been discussed before, it could be concluded that the research conducted resulted a CD learning product for the students by *Microsoft PowerPoint* software. The product quality was considered “very good” by average about 87% from material expert validation, learning design, and students’ response result. The expert material validation result showed “very good” criteria about 89%. Learning design expert validation result showed “very good” by 83%. Then, students’ response result on individual, small groups, and field test showed that score percentage by average 84%. So, it was stated that *macromedia flash*-based-interactive multimedia on writing narrative text material for students of Grade IV Elementary School Pondok Geulumbang developed was considered “Very Good.”

In terms of effectiveness, the use of the media had a very good effectiveness. It was proven from effectiveness test result; there was a difference between students’ learning outcome who used the media and textbook as learning media. Based on the data, it was known that $t_{\text{table}} = 1.67$ with d.o.f = 58 while $t_{0.05} = 8.75$, so it was obtained that $t_{\text{count}} > t_{\text{table}} = 7.30 > 1.67$. It means that $H_0$ was rejected dan $H_a$ was accepted. Therefore, it could concluded that learning by using *macromedia flash*-based-interactive multimedia was more effective than using textbook as learning media. It showed that the development of the media was able to increase students’ learning output on writing narrative text material in Grade IV Elementary School Pondok Geulumbang.

**REFERENCES**


