

Civics Learning Media Development For Fourth Graders of Primary School Based on Multimedia

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Abstract

Based on initial observation at fourth grade of Plalangan Pubic Primary School 04, through documentation, observation, and interview, it was found that the students' civics learning outcomes were the lowest one. It was caused by lack of appropriate learning media to Civics lesson. Therefore, there is a need of multimedia based learning media by using flash macromedia with cultural material. This research aims to find out effectiveness of multimedia based learning media by using macromedia flash toward Civics learning outcomes at Primary School. This research and development used waterfall development method. The method consists of analysis, design, implementation, test, and maintenance. The findings showed that: learning multimedia by using macromedia flash with cultural material influenced cognitive learning outcomes as proven by differences of students' understanding averages through t-test. It is shown by t count > t table (13.479 > 2.034) and Sig score 0.000 < 0.05 and average of gain score is 0.44 with moderate criterion. The conclusion tells that learning multimedia by using macromedia flash was effective to improve the fourth graders' civics learning outcomes.

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INTRODUCTION

National education which is based on Pancasila and the Constitution 1945 function to develop skill, character, and civilization of nation which are beneficial in order to teach the life of nation. It has purpose to develop learners' potencies to be faithful and adhere humans to God the Almighty, to have good attitudes, to stay healthy, to be knowledgeable, creative, independent, democratic, and responsible citizens. To carry out the function, the government promotes an educational system as stated in Regulation Number 20 Year 2003 about National Educational System.

Civics is a lesson functioning as a meant to develop and keep valuable virtues which are based on Indonesia cultures. Valuable virtues and morals are expected to be realized in students' behavioral lives both as individual and society members, and as creatures of the only one God. It is an effort to prepare learners with knowledge and basic skill dealing with inter-citizen relationship and to country as well as pre-emptive national defense education to make its citizens reliable by both the nation and the country (Susanto, 2013).

In Regulation of Educational and Cultural Ministry Number 22 Year 2006, Civics has purpose to teach students having following skills: (1) Thinking critically, rationally, and creatively in responding to civics issues. (2) Participating actively and responsibly, and acting brilliantly in social, national, and civilized lives as well as to have anti-corruption manner. (3) Developing positively and being democratic to improve our own selves based on Indonesia civilized characters so that we could live with other nations. (4) Interacting with other nations in a global life both directly and indirectly by using communication and information technologies.

Based on previous study done by International *Civics and Citizenship Education Study* (ICCS), Indonesia is in 36th rank out of 38 countries dealing with national average of civics knowledge based on the first school year, average of age, and percentage graphic with average score 4.33. Indonesia achievement is lower than ICCS'

average score. The development of regulation and citizenship from civics is a response of young generation preparation in facing 21st century social life changes.

Learning media, according to Gerlach & Ely in Asyhar (2012) has wide scope, included human, material, or review which builds certain condition. This condition make students able to receive knowledge, skill, or attitude. Learning media covers all required sources to communicate in learning so the realization may take form into *hardware*, such as computer, television, and projector; and *software* which is used in the hardware. In this case, educators may be included as a learning medium so reviews of learning mode strategies are needed. Thus, learning media are not only non-living objects but also living objects, such as humans. As a living object, medium could take form as message that can be learned.

The implementation of Civics at fourth grade of Pubic Primary School 04 Plalangan Semarang was based on educational process standard but it was not optimal. In the implementation process, teacher had not maximized the use of media. Students, in the learning, were not enthusiast and active. They preferred playing by themselves and got crowded in the class. Such problems caused low Civics learning outcome and based on the first semester report in academic year 2015/2016, the average score of civics was lower than Indonesian, Mathematics, Science, Social study, and other lessons. Based on final term test, the average score of the fourth graders' civics learning outcomes were low with 68. Meanwhile, the lowest score was found to be 60 and the higher was 90. It was also shown by the data of 34 students, 18 of them (56.25%) obtained scores under the passing grade criteria, 64. Meanwhile, 16 students (43.75%) obtained scores higher than the passing grade.

Dealing with the condition, to improve learning process as expected to improve learning outcomes, then there would be a need of interesting media to motivate, attract, and activate them in learning process. One of the alternatives to solve the problems of Civics lesson

learning was by using Multimedia based learning with *Macromedia Flash*. By using this software, we could foster and create various things concerning with graphics of computer, such as presentation, *multimedia*, *interactive CD*, *animation* (animation of web page, based movie, advertisement, and so on), *photo sideshow*, and many more. The strengths of *macromedia flash* are the figures or animation produced by the software are in the forms of vectors. So the pictures will be much more smoother even when they are zoomed out.

This research is strengthened by relevant studies by Ni Made Mas Yoni Pradesa, Nyoman Jampel and Wayan Suwatra (2014) titled "Pengembangan Multimedia Pembelajaran Interaktif berbasis Flash Mata Pelajaran Pkn Kelas VI SD". The findings showed that: (1) the content expert's judgment of Civics lesson was qualified excellent (percentage = 93%), (2) the learning media expert's judgment qualified it excellent (percentage = 82%), (3) the graphic design expert's judgment qualified it excellent (percentage = 80%), (4) the trial test of individuals qualified it very excellent (percentage = 90%), and (5) small group test qualified it very excellent (percentage = 90%).

Other study was done by Alif Aditya Candra and Muhsinatun Siasah Masruri (2015) titled "Pengembangan Multimedia Interaktif Dengan Pendekatan *saintifik* Untuk Pembelajaran PKn SMP". The findings showed that: (1) Interactive multimedia with scientific approach on Civics lesson of JHS was successfully developed; (2) media quality based on expert of media validation obtained average score 4.16 (excellent), the quality of the learning materials based on content expert's validation obtained average score 3.95 (excellent), based on students' assessments toward media aspect, material aspect, and learning aspect obtained average score 4.13 (excellent). Therefore, the developed media was reliable to use; (3) cognitive learning outcome average of the students improved from 69.6 into 93.1 (94%) (very excellent). The findings showed that the developed interactive multimedia product was reliable and effective to use in Civics learning with scientific approach at JHS.

Based on the benefits of multimedia based learning media by using *Macromedia Flash*, it would very suit to be used in learning Civics. Based on the background, the researcher conducted a research titled "Civics Learning Media Development for Fourth Graders of Primary School based on Multimedia (A study case: of fourth graders at Public Primary School 04 Plalangan, Semarang)"

METHOD

This *Research and Development* is a systematic reviews about how to create a certain product design, to develop/produce it, and to evaluate the performance with purpose to obtain empirical data which could be used as basis to create products, instruments, and models to be used in learning. (Sugiyono, 2015).

The subjects of this research consisted of fourth graders of Public Primary School 04 Plalangan, Gunungpati district, Semarang in 2015/2016. The numbers of the participants consisted of 34 students from 17 male and 17 female students. The students became the objects while collecting information and having test.

The model of this research is *waterfall* model. Waterfall model is a method of *System Development Life Cycle* (SDLC) which has several features to do it on each stage. It should be completed first before getting into the next phase. It means to focus on each phase could be done maximally because there is no parallel task. In the development of *waterfall* method, there are several systematic stages: *Analysis, Design, Implementation, Testing, and Maintenance*.

The techniques of collecting data were open interview, open questionnaire, document data, and *pretest-posttest*. The research uses saturated sample by all fourth graders of the school. The numbers of the participants consisted of 34 students from 17 male and 17 female students. The independent variable is *Multimedia* based learning media by using *Macromedia Flash*. The dependent variable in this research is Civics with culture as the material. The statistics data analysis consisted of validity and reliability tests, product data analysis, initial data analysis, and

final data analysis. The initial data analysis uses normality test while the final data analysis uses *N-gain* test and *t-test* to examine the hypothesis. In statistics analysis calculation, the researcher uses *SPSS* program (*Statistical Package for Social Science*).

FINDINGS AND DISCUSSION

Multimedia based learning media development is started on *analysis* stage which collect the data by using teacher and student need questionnaires. In this initial stage, it resulted recapitulation data of visual communication display aspect needs.

Learning multimedia consists of usage of bright colors, existence of sound effects or music, existence of animation, usage of *Comic Sans MS* font, and existence of interesting icon. The data could be seen on Table 1.

The second stage is *design*. The researcher needs to create *prototype design* of the learning media which would be used as framework. The *prototype* design was based on recapitulation formulation of teacher - student need questionnaires. The aspect of media design arrangement was considered based on aspects of content, visual communication or display, and the result of the *prototype*.

The third stage is *implementation* which is relationship of design need in the form of application program or software components through programming. This fase is in which the actual codes are written and compiled into operational application and in which the database and text files are made. With another word, this stage is a translating stage of the design into the demanded - made product. In this stage, the researcher worked on learning media product by using *adobe flash professional CS6*.

The final stage is *testing*. It is a processing stage to check whether the product was appropriately made based on the determined objectives. Verification is software evaluating process to determine whether a product of a development which is given phase met the expected conditions to initial stage. Meanwhile, validation is a evaluating process of product

within or in the end of the development process to determine whether it met the requirements or not. In this stage, product test, consisted of media and material experts' judgments, was done. On this stage, the implementation of the developed media was done.

The product data analysis was done by material and media experts. The material expert's judgment obtained score 47 with reliability percentage 78%, considered reliable.

Table 1. Material Expert's Judgment.

Score	Percentage	Criteria
47	78	Reliable

The product analysis of material expert's judgment obtained score 51 with reliability percentage 73%, considered reliable.

Table 2. Media Expert's Judgment.

Score	Percentage	Criteria
51	73	Reliable

This research is strengthened by relevant studies by Ni Made Mas Yoni Pradesa, Nyoman Jampel and Wayan Suwatra (2014) titled "Pengembangan Multimedia Pembelajaran Interaktif berbasis Flash Mata Pelajaran Pkn Kelas VI SD". The findings showed that: (1) the Civics content expert judgment result was on excellent qualification (percentage = 93%), (2) the learning media expert judgment result was on excellent (percentage = 82%).

The final judgment of the experts showed that the media for Civics by using *Macromedia Flash* had met reliability criteria of learning media, so it was representative to be tested.

The response results show most of students shared positive responses to the learning media by using *Macromedia Flash* on culture as the materials of fourth graders' Civics lesson. The students' responses individually are categorized into fives: very excellent, excellent, sufficient, insufficient, and very insufficient. The students' responses were from 34 students of the school fourth grade, 19 of them considered it very excellent and 15 students considered it excellent. Here is the percentage of the student response

analysis results classically. From the student response result, it was in line with previous study that satisfaction evaluation of multimedia element users on course were obtained positive responses. Teaching with multimedia strategy was effective to improve students' cognitions and to develop creative active learning.

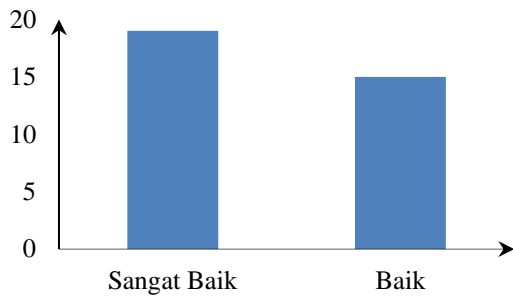


Figure 1. Student Response Diagram

The analysis of the teacher's responses dealing with the media on culture as the materials of Civics for fourth graders showed positive responses and the judgment score was 90%, with very excellent criterion.

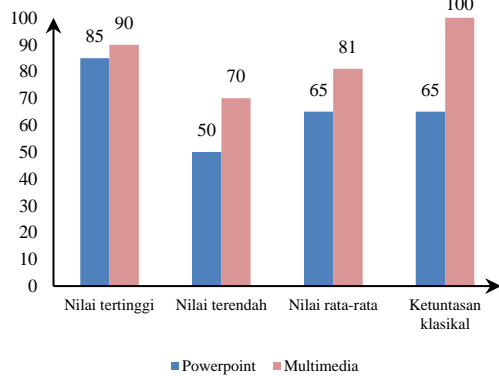


Figure 2. Student Learning Outcome Diagram

The field test was done to find out effectiveness of the learning media with culture as the material of Civics by using Macromedia Flash. The effectiveness of multimedia based learning media with culture as the material of Civics by using macromedia flash was proven effective toward the students' learning outcomes.

The test was done twice learning by using power point media (pretest) and multimedia based learning media (posttest). Then, the data was collected from responses and the students' learning outcomes. The learning outcome was obtained by giving pretest and posttest to the students. The pretest score was obtained from evaluation result on the learning by using *power point*, with average score 68. Meanwhile, the posttest could be seen from the evaluation result on the learning by using multimedia with average score 82. The learning accomplishment with Passing Grade ≥ 64 was obtained on learning with Powerpoint with 65%. Meanwhile, the learning with Multimedia was 100%. The percentage shows that multimedia based learning media was effective toward the students' learning outcomes.

The data of pretest and posttest determined the hypothesis test by using SPSS program (*Statistical Package for Social Science*) with Two Paired Sample T-test. The test was done by using two parties with significant level $\alpha = 5\%$ or 0.005. The results showed significant score 0.000 and t count 13.479. Meanwhile, the t table is 2.034. Based on the result, it could be compared that t count $>$ t table ($13.479 > 2.034$) and the significant level $0.000 < 0.05$. Thus, H_0 is denied. It could be concluded that H_a was accepted. It meant there were differences of Civics average scores between pre- and post - interventions of multimedia learning. The analysis of *Two Paired Sample T-test* is summarized in this table:

Table 3. T-test

N =	Sig. (2-tailed)	t count	t table
34	0.000	-13.479	-2.034

Multimedia based learning media implementation with culture as the material for Civics was effective toward learning outcomes of the students. The learning outcome was obtained by giving pretest and posttest to the students. The pretest score was obtained from evaluation result on the learning by using *power point*, with average score 68. Meanwhile, the posttest could be seen from the evaluation result on the learning by using multimedia with average score 82. The

learning accomplishment with Passing Grade ≥ 64 was obtained on learning with Powerpoint with 65%. Meanwhile, the learning with Multimedia was 100%.

From the results, they strengthen the previous educational researches that the use of multimedia could influence positively to reading practice improvement based on socio-psycholinguistics, improve critical thinking and historical reasoning learning, improve high order thinking skill in studying respiration. It was also found that performance of learning multimedia and learning style could trigger students' creative thoughts. Then, from the existing researches, they showed that multimedia integration with real objects could improve interest and preschool students' learning performances. The method of multimedia and networking teaching could improve activity, participation, interest, and creativity of students. The use of Geogebra application could facilitate students in understanding mathematics materials, especially geometry. Geogebra could be used as supportive media in teaching and learning which is useful not only for students but also teachers. Interactive multimedia could be used to introduce religious and moral values.

The *N-gain* test was used to analyze learning outcomes. It was to find out the discrepancy between posttest and pretest scores. *N-gain* shows improvement of understanding and conceptual mastery of the students after intervention of multimedia based learning media by using *macromedia flash* with culture as the material. The classical average of pretest score by using PowerPoint media was 68 and the posttest average score by using multimedia based learning media with *macromedia flash* with culture as the material was 82. The *N-gain* calculation is 0.44, categorized moderate.

Table 4. *N-Gain* Test Analysis Results

Classical Pretest Average Score	Classical Post-test Average Score	<i>N-Gain</i>	Criteria
68	82	0.44	Moderate

The improvement of the students' learning outcome averages were in line with a study by Alif Aditya Candra and Muhsinatun Siasah Masruri (2015) titled "Pengembangan Multimedia Interaktif Dengan Pendekatan saintifik Untuk Pembelajaran PKn SMP". The findings showed that cognitive learning outcomes of the students were improved from 69.6 into 93.1 (94.4%), very excellent. The findings showed that the developed interactive multimedia product was reliable and effective to use in Civics learning with scientific approach at JHS.

This finding generally showed that multimedia based learning media with culture as the material of Civics was reliable to use based on consideration of media and content experts, as well as it was effective toward the students' learning outcomes. The effectiveness was shown by classical learning outcomes. The learning accomplishment with Passing Grade ≥ 64 was obtained on learning with Powerpoint with 65%. Meanwhile, the learning with Multimedia was 100%. The students' responses toward the use of media were categorized into excellent and very excellent.

CONCLUSION

Based on the analysis and discussion, it could be concluded that (1) the model and design of multimedia based learning media by using *macromedia flash* on Civics at the Primary School was developed based on Core Competence/Basic Competence and teacher - student needs of Public Primary School 04 Plalangan Semarang. (2) Based on media expert, the product was considered to be sufficiently reliable with percentage 73%, meanwhile the material expert considered it sufficiently reliable with percentage 78%. Multimedia based learning media by using *macromedia flash* on Civics was reliable to use. (3) Based on the fourth graders' civics learning outcomes, it showed the accomplishment score was 100% on learning with multimedia based learning media by using *macromedia flas* on Civics lesson at Primary School.

REFERENCE

- Arikunto, S. 2010. *Prosedur Penelitian*. Jakarta: Rineka Cipta
- Ashari, Y. Z., & Pariatin, Y. 2014. "Perancangan Media Pembelajaran Interaktif Mata Pelajaran PKn Untuk Penyandang Tunarungu Berbasis Multimedia". *Jurnal Algoritma Sekolah Tinggi Teknologi Garut*, 11(1).
- Barzegar, N., Farjad, S., & Hosseini, N. 2012. "The effect of teaching model based on multimedia and network on the student learning (case study: Guidance schools in Iran)". *Social and Behavioral Sciences*, 47. 1263-1267.
- Candra, A. A., & Masruri, M. S. 2015. "Pengembangan Multimedia Interaktif Dengan Pendekatan Saintifik Untuk Pembelajaran PKn SMP". *Jurnal Tekno Pedagogi*, (4) : 1-6.
- Chomariyah, S., Fakhrudin., & Supriyadi. 2019. "Development of Interactive Multimedia on Ablution and Prayer Learning to Introduce Religions and Moral Value for Kindergarten". *Journal of Primary Education*, 8(3). 270-280.
- Goodova, M., Rubtsova, E., & Fernandez, R. F. F. 2015. "Multimedia Resources as Examples of Polymorphic Educational Hypertexts in the Post-Literacy Era". *Social and Behavioral Sciences*, 214. 952-957.
- Jusuf, H. 2011. "Perencanaan Aplikasi Sistem Ajar Tematik Berbasis Multimedia". *Jurnal Artificial ICT Research Center UNAS*, 3(1).
- Kassim, H. 2013. "The relationship between learning styles, creative thinking performance and multimedia learning materials". *Social and Behavioral Sciences*, 97. 229-237.
- Khan, F. M. A., & Masood, M. 2015. "The effectiveness of an interactive multimedia courseware with cooperative mastery approach in enhancing higher order thinking skills in learning cellular respiration". *Social and Behavioral Sciences*, 176. 977-984.
- Khedif, L. Y. B., Engkamat, A., & Jack, Suriani. 2014. "The Evaluation of Users' Satisfaction towards the Multimedia Elements in a Courseware". *Social and Behavioral Sciences*, 123. 249-255.
- Pariyatin, Y. 2015. "Perancangan Media Pembelajaran Interaktif Pendidikan Pancasila Berbasis Multimedia". *Jurnal Algoritma Jurusan Informatika Sekolah Tinggi Teknologi Garut*, 12(1).
- Pradesa, N. M. M. Y., Jampel, N., & Suwatra, W. 2014. "Pengembangan Multimedia Pembelajaran Interaktif berbasis Flash Mata Pelajaran PKn Kelas VI SD". *Jurnal Tekno Pedagogi*, (4) : 16-20.
- Sudhata., Wawan, I. G., & Tegeh, I. M. 2015. *Desain Multimedia Pembelajaran*. Yogyakarta: Media Akademi
- Sugiyono. 2015. *Metode Penelitian dan Pengembangan (Research and Development/R&D)*. Bandung: C.V Alfabeta
- Sylviani, S., & Permana, F. C. 2019. "Pembelajaran Matematika Tingkat Sekolah Dasar Menggunakan Aplikasi Geogebra Sebagai Alat Bantu Siswa Dalam Memahami Materi Geometri". *Jurnal Pendidikan Multimedia*, 1(1). 1-8.
- Tsong, C. K., Chong, T. S., & Samsudin, Z. 2012. "Tangible Multimedia: A Case Study for Bringing Tangibility into Multimedia Learning". *Social and Behavioral Sciences*, 64. 382-391.
- Tudor, S. M. 2013. "The Role of Multimedia Strategies in Educational Process". *Social and Behavioral Sciences*, 78.682-686.
- Weay, A. L., & Masood, M. 2015. "The Big Pictures of Thematic Multimedia Information Representation in Enhancing Learners Critical Thinking and History Reasoning". *Social and Behavioral Sciences*, 197. 2058-2065.