

Developing Interactive Learning Media Based on Macromedia Flash Profesional 8 to Improve Students' Achievement of Civics in Grade IV SDN 024183 Kec. Binjai Timur

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Abstract : *This research is motivated by the importance of using learning media in teaching and learning process in the classroom. This research is a type of research and development study (Research and Development) which aims to identify the feasibility and effectiveness of interactive learning media developed. The development of student interactive learning media used ADDIE's model of development. The development procedure which used in the research consists of five steps, namely: (1) analyze, (2) design, (3) development, (4) implementation, (5) evaluation. This research subject is 39 students in grade four at SD Negeri 024183 Kec. Binjai Timur. The data collecting instruments were assessment sheets for the material experts, instructional design experts, media experts, class teacher, a questionnaire for the students and achievement test that first conducted empirical validation. The data analysis technique was the qualitative descriptive technique using score distributions and assessment scale categories. The result of research producing products that meet the content validity by the material experts with an average 4,63, instructional design experts with an average 4,50, media experts with an average 4,71 in very good categories that have a valid criteria and fit for use, also effectively used to improve students learning outcomes include mastery learning individual reach 83,42%, completeness of classical study reach 82,1% with N-gain percentage reach 0,75, also received a positive response from students reach 85,1% with a good criteria.*

Keywords - *development, interactive learning media, learning outcomes*

I. INTRODUCTION

Along with the rapid development of science and technology is also required to improve the quality of education to compensate, so will produce human resources (HR) quality and ready to compete with other nations. Because education is a conscious effort that aims to develop human quality, as an activity that is aware of the purpose of education that is conducive and can compete in the midst of global competition.

Education should be designed to provide insight and can improve student achievement that is seen from the results of student learning in school. This student achievement is inseparable from the understanding of the students in understanding the material given by teachers in the process of learning activities. In the learning process the main task of a teacher is to teach, educate and train learners in achieving the optimal cognitive, affective and psychomotor intelligence in accordance with the predetermined competency. In order to carry out their duties properly, a teacher must have the skills and abilities to master the subject matter, deliver the lessons and evaluate the learning process that has been done well [1].

Teaching and learning process is very influential on the success of students in receiving and understanding the material presented by the teacher. For that, it is necessary media as an intermediary of delivery of materials that can improve student achievement in learning. Along with the development of science and technology increasingly rapidly, then the world of education also needs innovation in various fields including learning media, methods appropriate to the material to be delivered and also the media used can make it easier for students to understand the material [2]. But in fact in the process of learning, especially civic education, there are still many teachers who are monotonous and less creative in using learning media, sometimes making students feel bored and bored. And many students are sleepy when taught, not concentrated, busy alone, and not interested to pay attention to the learning process that takes place in the classroom. which resulted in students' understanding of the material less than the maximum. For that we need a method and instructional media that match and appropriate target for each class according to condition of student.

According Kunandar learning is the process of interaction between students with the environment so that there is a change in behavior towards the better [3]. For that in learning communication required in the process of delivering messages from the source message through a channel / a particular media to the recipient of the message. Messages, message sources, channels / media and message recipients are the components of the communication process. The message to be communicated is the content of teaching or upbringing that is in the

curriculum. The source of the message can be teachers, students, other people or authors of books and media procedures. The channel is a learning medium and the recipient of the message is a student or a teacher. In this condition, there will be two-way communication. A learning activity requires appropriate learning media to improve effectiveness in achieving competence or goals to be achieved [4].

According Kunandar Curriculum EULC is an operational curriculum that is prepared and implemented by each educational unit. EULC is developed by each group or unit of education and school or madrasah committee under the coordination and supervision of the education office or the kemenag office for secondary education and special education [5]. Curriculum EULC 2006 which covers the competence of attitudes, knowledge, and skills in an integrated manner. EULC learning is learning where the learning outcomes or competencies expected to be achieved by students, delivery systems, and indicators of achievement of learning outcomes formulated in writing since planning began.

The results of interviews with the fourth grade teacher can be concluded that the problems that occur in the field is the interest of students in learning Citizenship Education is still lacking and students are still passive in the implementation of learning. Teachers have not yet used intrative instructional media as teaching aids and which has been used is lecture method. Whereas there are computer facilities to be used as supporting teaching and learning. The potential that is and has not been empowered then it can cause problems [6]

Media is one of the factors that contribute to the success of teaching because it helps students and teachers in delivering the subject matter in connection with the teaching objectives that have been formulated in the planning of teaching. In these conditions the use of learning media can improve the process efficiency and quality of teaching and learning outcomes. In addition, creative use of the media will enable learners to learn better and can improve their performance in accordance with the goals to be achieved [7].

Proper use of media can be useful for students to learn according to their abilities, and can clarify the presentation of messages. In addition, the media can represent what a less capable spoken of a teacher through certain words or sentences even abstract material can be concreted through the media [8]. Learning media also as a communication tool to further streamline the learning process and also very helpful in the effort to achieve the success of the learning process in school. Differences in learning styles, interests, intelligence, limited sense of power, disability or distance geographic barriers, time spacing etc. can be helped overcome by the use of instructional media [9]. In the process of learning is no exception Civic Education learning, the presence of learning media can generate new desires and interests, increase motivation, and provide their own stimulus [10].

In this research that will be developed is a multimedia media-based educational learning media that uses professional macromedia flash 8 software that is presented in the form of animated images, text and sound. This software is a program to design animated graphics are very popular and widely used graphic designers. The excess flash lies in its ability to generate motion and sound animations [11].

Based on the background of problems that have been described above, the researchers intend to do research on the development of interactive learning media based on Macromedia Flash on the subjects of civic education for fourth grade students of SD Negeri 024183 Kec. Binjai Timur. With the development of this learning media, it is hoped that it will produce the Civic Education learning process which is effective, efficient and interesting and can improve the learning result better than before. This is because of some research that has been done by other researchers is research conducted by Eka is still the least utilization of the use of multimedia media, especially multimedia learning during the learning process [12]. The developed model is Lee and Owens model. From the recapitulation of pre-test and post-test score during field trial, it appears that there is an improvement after using the product of learning media based on Macromedia Director, from the original average 60,8 at the pre-test, after post- test value increased to an average of 77.6. This shows that the average level of learners' understanding is good although some still get unsatisfactory value.

II. METHOD

This type of research is research and development or R n D which means this research is product-oriented research. The product developed in this research is learning media. The subject of this research is the fourth grade students of SD Negeri 024138 located in East Binjai Subdistrict by taking as many as 39 students as big group and class V test as many as 10 students for small group test. The development model that the researcher references is the development model of ADDIE. The research instrument uses a questionnaire that is adapted to the respondents from the research. The questionnaire is a questionnaire for a material expert (lecturer), questionnaire design learning design, questionnaires for media experts (professional), teacher assessment sheets and questionnaires for student eligibility tests.

III. RESULT AND DISCUSSION

Result

The development of civic education media based on computer animation learning using macromedia flash 8 in this research is media used in teaching and learning process. Learning media is based on the ADDIE development model.

Analyze Stage

The analysis has been done to generate observation data which then used as the basis of the formulation of media based learning macromedia flash professional 8 developed. Stages of analysis in this study include:

1. Curriculum Analysis

In social science learning, SD Negeri 024138 uses Education Unit Level Curriculum (EULC). In the competency analysis phase, the researcher identifies the competency standard and basic competence required in the development of instructional media. The following table is the competence in the EULC:

Table 1 Competency in EULC

Competency standards	Basic competencies	Indicator
1. Show attitude towards globalization in its environment.	1. Provide a simple example of the influence of globalization in its environment.	1. Telling the process of globalization in the economic field 2. To mention positive and negative globalization in the economic field 3. Describe attitudes toward the effects of globalization

2. Characteristic Analysis of Students

Based on interviews with students of Elementary School 024138 and the observation of learning activities meengajar, researchers concluded some characteristics of students in civic education learning, among others:

- a. Students are less active in learning.
- b. The process of learning in the classroom is still using the lecture method.
- c. Teaching materials used in the classroom only book package set by the school is the book Citizenship Education Class IV Elementary School EULC 2006 Character Nations Publisher Arya Duta by: Desmiwati
- d. Students are less able if they have to do exercises related to everyday life without doing it directly.
- e. Each student has different characteristics, it is seen from the questions given with various answers

Based on some of the characteristics of the student, it needs a learning media to overcome the existing problems and to direct the creativity and curiosity of students in civic education learning in the classroom. Therefore, researchers develop macromedia-based learning media.

3. Needs Analysis

Identify the needs of instructional media in teachers is the author's activity to obtain information by providing questionnaires and conducting interviews. The results of the questionnaire activity is the teacher's understanding of the function of learning media quite well. Understanding of instructional media is still very superficial, besides that teachers also expect learning media that is easily understood by teachers and students. Teachers never make flash-based learning media and instructional media used often do not interest students learning, but teachers expect the resulting learning media will be different and better than the existing ones. Based on the identification of instructional media needs above, the researcher followed up with the design of instructional media in accordance with what is expected by the teacher of Elementary School 024138.

Stage Design

After analyzing the media that will be developed based on observation data. The stages of the development of macromedia flash professional-based learning media 8 is as follows:

1. Formulation of Learning Media Development

The presentation of learning media based on macromedia flash professional 8 is arranged in sequence consisting of initial appearance, menu, competence, content, simulation and evaluation.



1a. Initial View



1b. Menu View



1c. Competency Menu Display



1d. Content View



1e. Simulation Display



1f. Evaluation View

Figure 1 The Presentation of Learning Media Based on Macromedia Flash Profesional 8

Stage Development

As a follow up to the design that has been done in the design phase, then carried out the development step. Data obtained in this research that is qualitative data and quantitative data. The data is obtained through two stages of assessment, namely expert validation and testing. The validation data on learning media based on macromedia flash profesional 8 developed by 3 (three) validator consisting of material expert validator, expert of media and validator of instructional design expert. Qualitative data in the form of additional valuations or suggestions from the validator, while the quantitative data derived from the Likert scale assessment questionnaire. Product development tested to Mr. Ramli Nur, MA is a learning media based on macromedia flash profesional 8 material globalization. Based on the calculation of validation then the observations made by the experts materipada validation I77% and after the revision reached 93% after adjusted with the table eligibility criteria, then this score is included in the criteria is very valid or very feasible, but according to the material experts operational words on the media should be reinforced or sharpened and declare this medium to be used without revision.

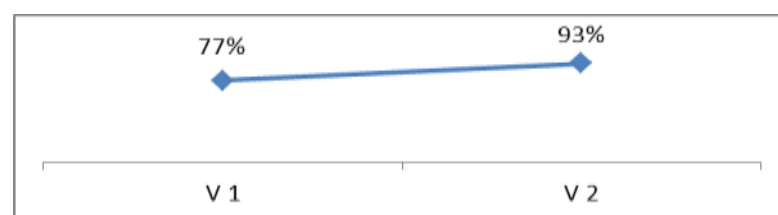


Figure 2 Diagram of Expert Material Validation Results

Product development of teaching materials that tested to Mrs. Dr. Naeklan Simbolon, M.Pd is a macromedia flash professional based learning media 8 material globalization. Based on the calculation then the observations made by the design expert learning on the validation of 76% and after validationII reached 90%. If it is matched with the eligibility criteria table, then this score is included in the criterion is very valid or very feasible but according to the instructional design expert learning materials, the learning and evaluation objectives are more adjusted again and declare this media feasible to use with revision.

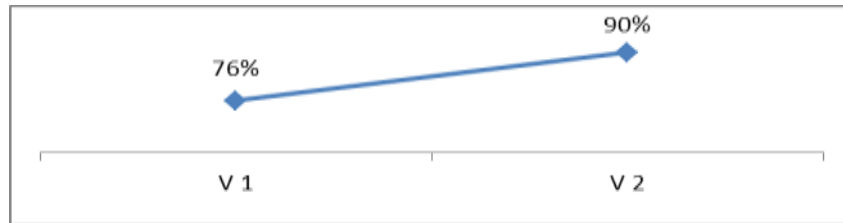


Figure 3 Diagram of Expert Study Design Validation Results

Product development of teaching materials that tested to Dr. Hermawan Syahputra, M.Si is a learning media based on macromedia flash professional 8 material globalization. Based on the calculation then the observations made by the design expert learning on the 80% validation and after validationII reached 94%. If matched to the eligibility criteria table, then this score falls within criteria very valid or highly eligible. However, according to media experts, more reproduced illustrations and backsound customize with the media and declare this media feasible use with revision.

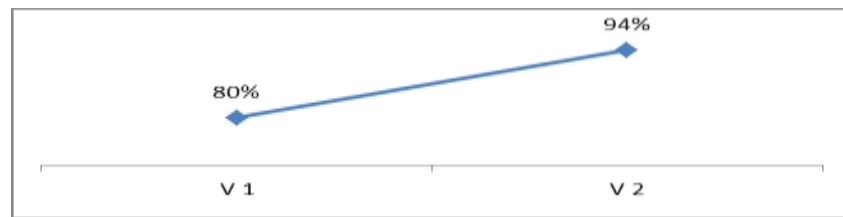


Figure 4 Diagrams of Experts Design Study Validation Results

After the product validation stage based on the validation of the experts the next step is to test the product. The small scale test was conducted by involving 2 (two) fourth grade teachers (Widya Mayanti, S.Pd) and class V teacher (Rena Esdelina, S.Pd) at SD Negeri 024138 by giving teacher's assessment sheet to macromedia flash professional based learning media 8 material of globalization. The results of small group trials in the form of opinions and suggestions will be the basis of product revisions that will be tested at a later stage. Based on the calculation, the observations made by fourth grade teacher (Widya Mayanti, S.Pd) and class V teacher (Rena Esdelina, S.Pd) in Elementary School 024138 reach 86% and 82% .If the matched with eligibility criteria table, this is included in criteria very valid or very feasible.

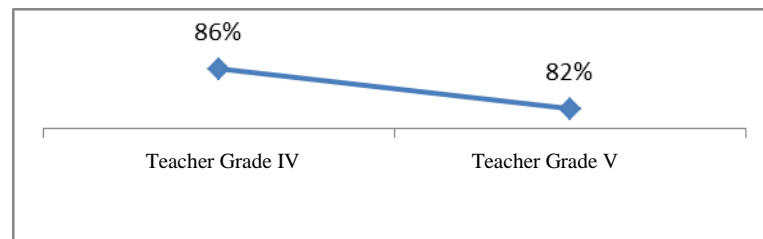


Figure 5 Diagram of the teacher grade assessment sheets

After the product revision phase based on the validation of the experts the next step is to test the product on a small group. Small scale test is done by involving 10 students of class V in Elementary School 024138 by giving a questionnaire of student responses that will be filled by each Student. The results of small group trials in the form of opinions and suggestions will be used as the basis of product input to be tested in the next stage. Based on the calculation then the observations made by the students after the learning process at the level of the kevalidan reach 83.7%. If matched to the eligibility criteria table, then this score is included in valid or eligible criteria.

Based on individual learning completeness criteria compiled based on students' ability then the percentage is classified in complete criteria. Based on the data of individual learning completeness that can be based on the student's ability it can be seen that there are 3 (three) students "unfinished" and there are 7 (seven) students "thorough". Based on the data above there are 70% of students who have reached $\geq 65\%$. After completion of students in individual and classical learning are analyzed, the results of pre-test and post-test are calculated with gain score.

Table 2 Results of pre test and post test Small-scale test students

Pre Test				Post Test				Exp.
Value (X)	F	Mean	SD	Value (X)	F	Mean	SD	
13.3	1	37.0	15.98	67.7	1	81.4	9.19	BT
20.0	1			73.3	2			BT
31.5	2			82.3	3			T
33.3	3			88.5	1			T
55.5	2			91.5	2			T
62.7	1			93.3	1			T

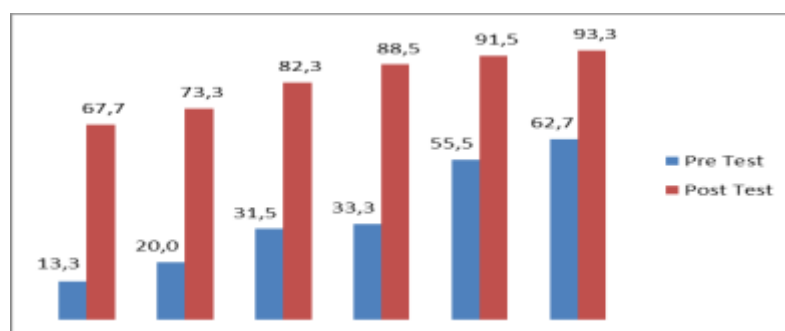


Figure 6 Diagram of pre test -post test Small-scale test students

Based on the gain score in the results can be 0.73 then the gain score is high.

Stage Implementation

1. Large Scale Test

In learning using learning media based on macromedia flash professional 8, it appears that students are interested and motivated to be able to finish the existing lesson on the learning media. This can be seen when students have difficulties in completing the activities on learning media based on macromedia flash professional 8, the students will ask the teacher about the solution or the way they must to be able to solve the difficulties they are facing.

At the end of the meeting, the researcher gives post test to the students, this is done to know the students' ability after learning using learning media based on macromedia flash professional 8. The result of the post test shows the students' learning achievement increase. This can be seen from the steps of students in working on a problem and the answers have been written in a systematic, coherent, and clear. At the last meeting of learning activities using learning media based on macromedia flash professional 8 on the material of globalization, the researcher gave questionnaire to the students to know the student's response to learning media based on macromedia flash professional 8 in learning.

Stage Evaluation

The final stage of the ADDIE development model is the evaluation, which is done by the researcher by analyzing the data of the research results obtained that is the analysis of the validity of the expert lecturer, the teacher grade assessment sheet and the students' feasibility questionnaire, and the analysis of the pre test result - post test is needed to know the effectiveness of the learning media based macromedia flash professional 8 to the learning activities. Using the results of the post test can be seen the success of learning media developed in the learning in the classroom. Data of expert validation results are used to determine the feasibility of learning media based on macromedia flash professional 8 viewed from the feasibility of content, feasibility of presentation, language feasibility and image feasibility. The questionnaire of the students' feasibility test is used

to find out the responses or responses of the students to the learning media developed in the learning in the classroom.

1. Data Analysis of Macromedia Flash Professional Media Based Feasibility Data 8

a. Data Analysis Expert Validation

The result of the validation data of the lecturers of the experts obtained a total score of 4.61 with a very good qualitative criteria. Aspects of grain assessment experts can be seen in the following table:

Table 3 Analysis of material expert validation

No	Identity	Exp.	V 1	V 2
1	Dr. Ramli Nur, MA	Master of Materials	3.83	4.63
2	Dr. Naeklan Simbolon, M.Pd	Learning Design Expert	3.78	4.50
3	Dr. Hermawan Syahputra, M.Si	Media Expert	4.00	4.71
		Mean		4.61

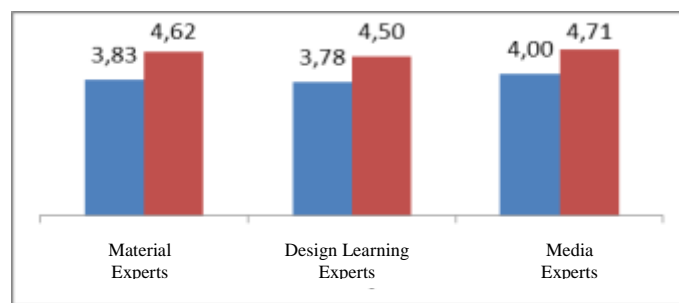


Figure 7 Diagram of the validation analysis of experts

The criteria for the feasibility of learning media based on macromedia flash professional 8 is obtained by converting the total score of each aspect in the feasibility conversion table. Judging from the feasibility, every aspect assessed in the developed product has met the eligibility criteria because the material used is good according to SK and KD, the material is quite accurate, has good learning support material through material upgrades, and fulfills all the specified aspects.

b. Data Analysis of Teacher Assessment Sheet

Macromedia flash professional-based learning media 8 that has been developed, also validated to teachers of class IV and V in SD Negeri 024138. In general the overall score of the average teacher's score sheets is 4.19 with good qualitative criteria. Data validated by the teacher is shown by the following table:

Table 4 Analysis of validation of grade teacher grade sheets

No	Identity	Exp	V
1	Widya Mayanti, S.Pd	Class IV Teacher	4.29
2	Rena Esdelina, S.Pd	Class V Teacher	4.10
		Mean	4.19

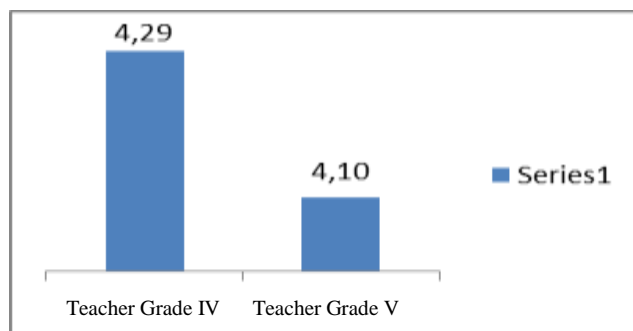


Figure 8 Diagram of the validation analysis of teacher grade sheets

The criteria of feasibility of developed learning media is obtained by converting qualitative data in the form of score of each aspect of eligibility and total score into the feasibility conversion table, so as to obtain qualitative results in the table. In the scoring table above, it can be concluded that the media based learning macromedia flash professional 8 that has been developed can be said to be valid.

2. Data Analysis of Effectiveness of Macromedia Flash Professional Based Learning Media 8

The effectiveness of instructional media developed is measured using the analysis (1) the success of learning or completeness of student learning and (2) student response. The effectiveness of the use of learning media developed is achieved if it meets the second most indicator, provided that the success of learning or completeness of student learning complete. The test results obtained and then analyzed by researchers to see the mastery of students in learning individually and classically. Based on individual learning completeness criteria compiled based on students' ability then the percentage is classified in complete criteria. Based on the data of individual learning based on the students' ability, there are 7 (seven) students who are "unfinished" and there are 32 (thirty two) students who are "finished".

Based on the completion of classical learning data there are 82.1% of students who have achieved $\geq 65\%$. After completion of students in individual and classical learning are analyzed, the results of pre-test and post-test are calculated with gain score. To assess the improvement and effectiveness of instructional media developed between before and after using instructional media developed in the learning process calculated using a normalized gain score formula:

Table 5 Results of pre test and post test Large scale test students

No	Pre Test				Post Test				Exp.
	Value (X)	F	Mean	SD	Value (X)	F	Mean	SD	
1	20.00	3	33,5	11,3	66.70	2	83.42	7.9	BT
2	33.30	6			73.30	5			BT
3	40.00	8			80.00	12			T
4	46.70	11			86.70	13			T
5	66.70	6			93.30	5			T
6	73.30	5			100.00	2			T

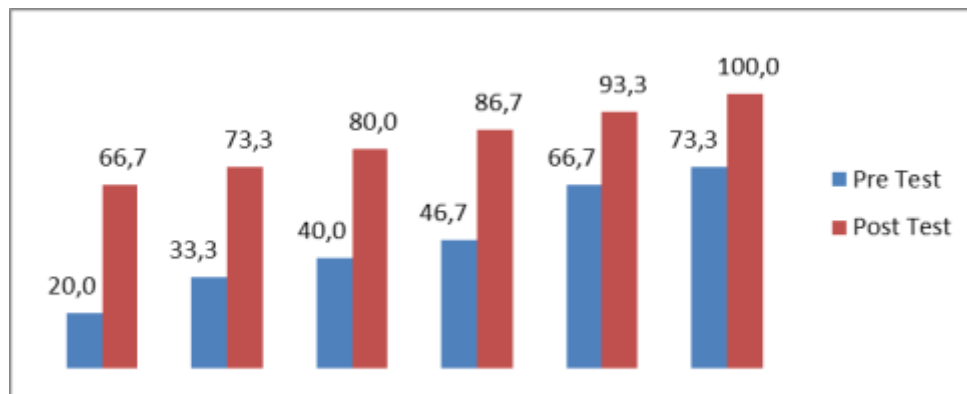


Figure 9 Diagram of pre test - post test Large scale test students

Based on the gain score in the results of 0.75, the gain score of students is high. Questionnaires of large-scale student feasibility tests are given when the learning activities with learning media based on macromedia flash professional 8 is done. The result of the analysis of the questionnaire of student responses by 39 students after the use of learning media developed in the average grade all aspects of grain assessment is 85.1% which is in good qualitative criteria.

Thus, it can be concluded that; (1) macromedia flash professional based learning media developed in accordance with the steps of developing and developing the model of ADDIE, ie analysis, design, development, implementation, and evaluation,) macromedia flash professional-based learning media 8 developed has met the criteria of prevalence and effectiveness.

Discussion

Based on expert material validation by Dr. Ramli Nur, MA is known to evaluate the validation phase based on content aspect, learning and have component of competence assessment, motivation, presentation of

material, exercises, test, material content, example, visualization and clarity of sentence achieve average score 3,83 with percentage of validity and 77% with the criteria valid enough so that made improvements based on suggestions and input from material experts. The validator suggests using simpler, clearer phrases to make it easier for students to understand and understand them. After discussing with the material expert, the professional macromedia flash 8 based flash learning media was revised based on feedback and validator suggestions.

Based on the design expert's validation by Dr. Naeklan Simbolon, M.Pd, in the first phase validation based on the content, presentation, linguistic, display and component of learning approach, the correctness of concept, depth of concept, conformity of concepts, learning activities, implementation, assessment, content, visualization and clarity of sentences with an average score of 3.78 with a prevalence percentage of 76%. The validator also suggests that the learning media be revised and preferably use more colorful colors and not too colorful. Based on the validation of media experts by Dr. Hermawan Syahputra, M.Si, on the first phase validation based on display aspect, programming and has component of design, animation, navigation, visualization and usage with average score 4,00 with percentage of validity and reach 80%. In addition, the validator suggests adding a variety of animations to the learning medium developed due to the power of the media is in the visualization and animation.

Furthermore, an assessment of learning media based on macromedia flash professional 8 developed by the fourth grade teacher, Widya Mayanti, S.Pd. The teacher gives an assessment based on the aspects of use, materials, techniques, communication and display with an average of 4.29 with 86% percentage. The class V teacher Rena Esdelina, S.Pd gave an assessment based on the aspects of use, materials, techniques, communication and display with an average of 4.10 with 82% percentage, the teacher also gave suggestions and suggestions that the description of images in the media should be written in sentence short so that students more quickly understand.

The effectiveness of learning media based on macromedia flash professional 8 is measured using analysis of test result of learning in the form of pre test and post test at the beginning of learning and end of learning activity which have been implemented. Data from test result of learning given to student before using media of learning based on macromedia flash professional 8 in the form of pre test which amounted to 30 (thirty) multiple choice questions consisting of five pilihan namely a, b, c, d and e. Student learning outcomes are still low with an average of 33.5 with a standard deviation of 11.3 this is seen based on the minimum mastery criteria based on the reference of the minimum completeness of school criteria for citizenship education subjects is 75. After learning activities using learning media based on macromedia flash professional 8 finished then done post test to see student learning result. From the implementation of the post test that is done then it can be seen the result of the student's post test reaches an average of 83.42 with standard deviation reaches 7.9.

Based on the reference of the minimum school completeness criteria for the subject of natural science is 75 then it can be seen that the student learning outcomes increase and can be said to have reached the minimum criterion value of mastery. Based on the completeness of classical learning of students it can be seen classical learning completeness data reached 83.42 students who have achieved $\geq 65\%$ KB. After the students' completeness in individual and classical study were analyzed, the result of pre-test and post-test was calculated with gain score to assess the improvement and effectiveness of learning media based on macromedia flash professional on globalization materials between before and after using macromedia flash professional based learning media 8 in the learning process is calculated by gain score formula in the results can be 0.75 then the gain score students are high. A study conducted by Eka that was able to improve learning outcomes with an average pre-test of the students was 63, after using the developed medium, the average posttest result of the students was 81.65. It shows that the learning media using macromedia flash pro 8 is feasible to apply [13].

Furthermore, seen from the completeness of individual learning there are 39 students, it can be seen that there are 7 students who are "not yet complete" and there are 32 students "complete". With students' individual learning mastery reaches an average of 83.42%. Previously there has been research that has been done by Naniek K (2015) who said that the completeness of student learning outcomes after using the media of learning animation macromedia flash based on direct instructional model based on data analysis of student learning outcomes obtained results as many as 28 students complete individual, 8 students are not complete individuals from 36 students who followed the post-test. The completeness of students' cognitive learning outcomes classical by 77.78%. This means that grade V students have achieved a complete learning outcome classically [14].

As well as Naniek K's (2015) research gets excellent enthusiasm by students. This is evidenced by the results of student questionnaires in the next learning using animated media macromedia flash as developed data obtained as many as 36 students (100%) expressed interest. The questionnaire data of students' responses to the language used in textbooks and animation media obtained data as many as 32 students (88.9%) stated easy to understand and 4siswa (11.1%) stated difficult to understand. Student response questionnaire data to illustration

in textbook and animation media obtained data as many as 35 students (97,2%) express happy and 1 student (2,7%) expressed not happy.

Based on the purpose of this development research is to determine the feasibility and effectiveness of learning media based on macromedia flash professional 8, then the learning media based on macromedia flash professional 8 ini already can be said effectively used for all students and teachers. Because based on the data in can show that the media based learning macromedia flash professional 8 is effective to improve student learning outcomes.

IV. CONCLUSION

The conclusion of this research is based on the findings from the data of research result, the systematic of the presentation is done by taking into account the research objectives that have been formulated. The conclusions obtained include:

1. The feasibility of macromedia flash professional based learning media 8 that developed based on the validation result has a high level of validity. Based on the results of the assessment, critics and suggestions from the material experts obtained criteria with a percentage of 4.63 with validity 93%, learning designers obtained criteria 4.50 with a percentage of prevalence reached 90%, media experts obtained criteria 4.71 with a percentage of validity and reach 94% and grade 4 teacher assessment get criterion 4.29 with percentage of kevalidan reach 86% and teacher of class V get criterion 4.10 with percentage of validity and reach 82% Based on validation result data then media learning based on macromedia flash professional 8 developed in valid criteria and proper to use.
2. The effectiveness of learning media based on macromedia flash professional 8 based on achievement test of learning result. Based on individual student learning completeness data reach 83,42% with 32 (thirty two) students complete and 7 (seven) student unfinished. Based on the completeness of learning classical learners reached 82.1% with the percentage increase in gain score reached 0.75 with high category then it can be said that TPK achieved. Based on the questionnaire of student response, this is indicated by the number of students who strongly agree to the media-based learning macromedia flash professional 8 with the number of positive responses from students reached 85.1% with good criteria. Based on this data learning media based on macromedia flash professional 8 is said to be used in effectiveness in learning.

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