

DEVELOPMENT OF INTERACTIVE DIGITAL MAP TO IMPROVE CRITICAL THINKING SKILLS ABOUT NATIONALIST CHARACTER OF CLASS V ELEMENTARY SCHOOL STUDENTS

Agung Priyambodo¹, Prof. Dr. Wahyu Sukartiningsih, M. Pd² and Dr. Hendratno, M. Hum³

^{1,2,3}Department of Postgraduate, Universitas Negeri Surabaya, Indonesia

DOI: <http://dx.doi.org/10.37500/IJESSR.2021.4306>

ABSTRACT

This study aims to produce interactive digital map learning media of national heroes to improve the critical thinking skills of fifth grade elementary school students. This development research was carried out in four stages following the 4-D design of the Thiagarajan model, such as defining, designing, developing and distributing. The development carried out in this research includes the Interactive Digital Map Media of National Heroes and Critical Thinking Skills Test. This type of research is R&D with a one group pretest posttest design. The subjects in this study were students of class V-C for the 2020/2021 school year. The research data collection was obtained through observation, tests and questionnaires. The data from the validation of learning media from media expert validators, social studies material experts were valid. The practicality of learning media in terms of the implementation of learning is 96.43% in the very good category, student activities in learning show a figure of 93.75%. The effectiveness of the learning tools when viewed from the responses of students who are very interested, the results of the tests of students' critical thinking skills with an average increase in the pretest and posttest scores from 71.81 to 84.58 based on the N-gain analysis of 0.5 in the medium category. Thus, the development of interactive digital map media with heroes in order to improve critical thinking skills about the nationalist character of grade V elementary school students has met the criteria of being valid, practical and effective.

KEYWORDS: Learning Media, Digital Map Media, Critical Thinking Skills

1. INTRODUCTION

Education is something that is very important in the context of shaping the character of the nation's generation to become more dignified. According to Karima and Ramdani (2017, p.8-9) the role of education in realizing a dignified Indonesian Golden Generation, among others, is through 1) education for character building that leads to the formation of school culture, namely the values that underlie behavior, traditions, habits. everyday life, as well as symbols that are applied by all school members, and the surrounding community, 2) increasing the independence of the nation where education is a process in which a nation prepares its young generation to live life and to fulfill life's goals effectively and efficiently

by means of develop self-awareness of citizens and train each person physically, mentally and morally so that they become cultured human beings, 3) planting cultural values through a cultural approach through traditions, norms, habits, language and beliefs that exist in the school environment.

The main objective of learning in schools is to achieve good learning outcomes. According to Purwanto (2014: 87), learning and experience are a process of changing one's attitudes, behavior and knowledge. Behavior changes caused by experiences and the results of individual interactions with their environment can be interpreted as learning. Everyone will be required to have a skill in deciding what to do in addressing a problem (Akyuz and Keser, 2015). Thinking skills are one of the things that students should have in order to welcome technological advances today (Dwijananti & Yulianti, 2010: 111). Critical thinking is applied by students in learning in order to solve problems appropriately and be able to describe the right and fundamental solutions (Nurhayati, 2011: 67).

Learning in schools is taught a variety of subjects that are useful for developing learners' knowledge, skills and morale. Social Sciences is a subject in the school curriculum that is taught from grade I to grade VI. The study of Social Sciences subjects in elementary schools is all areas of life that humans do in society. Then the purpose of learning social science according to Rahmad (2016: 68) is the development of existing abilities in students to be critical of problems that exist in themselves and society, be able to be positive about social inequalities that occur, and have the skills to overcome all problems. kinds of problems that exist both to yourself, family, and the environment.

With social science, it is hoped that a teacher will be able to direct students to become citizens of Indonesia who are democratic, have an attitude of responsibility, and love world peace (Ahmadi and Amri, 2014: 10). One of the values instilled in social science learning is Nationalism. Nationalism is an understanding in which every citizen realizes that they are a nation that is part of the state, for that they are obliged to love and defend their country, so that this obligation is used as the basis for shaping the spirit of Indonesian nationality (Permanto, 2012: 86). This is clarified by Sadikin (2008, p.18) a nationalist attitude, such as the behavior of loving the state and nation as the embodiment of goals and ideals consisting of political, economic, social and cultural behavior as a manifestation of state unity or independence using the principle of independence. and the principle of equal citizenship. Therefore, this nationalist attitude must be developed in all citizens.

Nationalism is a fundamental problem for a country, even if the country has primordial and pluralistic (plural) citizens. Therefore, Abdullah (2015) hopes that all kinds of problems related to ethnicity, race, religion and class (SARA) do not stick to the general public, this is because Indonesia is a country that is rich in ethnic, racial and religious diversity. Through the attitude of nationalism owned by citizens, these problems can be avoided. Therefore, critical thinking is needed so that in the future these problems will not occur so that the Indonesian nation becomes smarter and loves peace.

Based on the results of observations in Class V Sukomanunggal III / 107 Elementary School, it shows that critical thinking skills about students' nationalist character are still lacking, this can be seen (1) 58% of students do not know the name of the hero and the area of origin of the hero, (2) 64% are more fond of soap opera artists or singers compared to examining the struggles of national heroes, (3) 44% of students do not have a strong sense of unity, this can be seen from some students who are reluctant to make friends with other friends, one of the causes is gender differences, (4) 31% students do not have a sense of help and responsibility, this can be seen when parents complain about their sons / daughters who are reluctant to do homework. (5) 47% of students are still easily persuaded by their friends to do something that is not commendable, for example disturbing their friends.

In order to improve critical thinking skills about nationalist character in students, learning media that attracts students' attention is needed, namely by developing an interactive digital map of national heroes. This media can attract students' attention so that social studies learning no longer seems boring and monotonous. With the development of the interactive digital map of national heroes, it is hoped that it can make it easier for students to understand the material during the learning process and help students improve critical thinking skills about nationalist characters.

Therefore, it is necessary to design a study that can facilitate the problems mentioned above so that it can be applied validly and authentically so that the resulting product can be achieved correctly and in accordance with the desired expectations. Based on the explanation above, the researcher will study through development research with the title Development of the National Hero Interactive Digital Map to Improve Critical Thinking Skills of Class V Elementary School Students.

2. METHODOLOGY

The type of research belongs to the type of research and development. This research uses the Thiagarajan 4-D model which consists of the definition stage, the design stage, the development stage and the last is the distribution stage. For field application, researchers used a one group pretest posttest design. According to Suryabrata (2014: 101), the first use of this design for a group of subjects is to take initial measurements then subject to treatment within a certain period of time, then the measurement is carried out a second time. Learning media can be said to be of quality if it meets the following criteria: (1) valid, based on the assessment of experts (validators) and users (users), (2) practical, which is marked by the ability of the teacher to manage learning in the minimal category of good enough, and student activity is said to be effective, (3) effective, if classically the critical thinking skills test of students about nationalist character is complete and students respond to learning positively.

3. RESULTS AND DISCUSSION

This research is a development research carried out in two stages consisting of the media development stage and the trial phase. Before the media is tested on students, it is validated by two experts. Furthermore, the media that has been validated and declared feasible are tried out on students. The

trial was carried out at SDN Sukomanunggal III / 107 in the city of Surabaya, to be precise for fifth grade students using interactive digital map media with the sub-theme of national events during the colonial period which has the aim of improving students' critical thinking skills about nationalist character.

3.1 Validation Results

One way to obtain the validity of learning media is to validate learning media. In this study, the learning media was validated by the expert validator of the learning media, the validator of the Social Science material expert. The results of the validation of the Interactive Digital Map media are as follow.

Table 1. The Results of the Learning Media Expert Validation

No.	Item	Score
A.	Display and Content	
1.	Color composition	4
2.	Figure	4
3.	Letter	4
4.	Layout	4
B	Characteristics	
5.	Usage	4
6.	Attracton	4
7.	Elements of Animation	4
	Total	28
	Average of All Aspects	4

Based from data above, we can see that the results of the validation from instructional media experts from a score of 1 to 4 obtained an average score of 4. Based on the categorization criteria, the validation is categorized as very good / valid so that it can be applied in learning. In addition, the results of the social studies material expert validation are as follows:

Table 2. Results of the Validation of Social Science Materials

No.	Indicator	Score
A.	Content Feasibility Aspects	
1.	The suitability of the material with the indicators and learning objectives	4
2.	The depth of the material is in accordance with the development cognitive learners	3
3.	The correctness of the concepts presented	3
4.	Fulfillment of nationalism values on the interactive digital map media of national heroes	3
B	Linguistic Aspects	
1.	Conformity with Indonesian language rules	3
2.	Effectiveness and efficiency of language	4
C.	Aspek Penyajian	
1.	Completeness of information	4
2.	Presentation of material in a logical and systematic manner	4
3.	Presentation of material motivates students	4
	Total	32
	Average All Aspects	3,55

From table 2, the validation results of the validator on the media that have been developed have an average score of 3.55. This value is categorized as very good / valid, in other words, it is very feasible to be used in learning.

The development contained in this learning media is the use of interactive macromedia Flash in the form of maps by displaying national hero figures along with forms of struggle and exemplary values that can be emulated by students so that they can dig up information related to these heroes and apply exemplary values in daily life so that they can improve their critical thinking skills in accordance with transformative pedagogical principles and foster students' enthusiasm for learning.

3.2 Practical Results

3.2.1 Teacher Activity

In learning to use the Interactive Digital Map media, the teacher must become an intentional figure who helps students to be able to use the media properly. The learning paradigm that is built is Student Center learning or student-centered learning which is important in improving critical thinking skills. Observations of the implementation of this learning were carried out by 2 observing teachers, namely the fifth grade teacher at SDN Sukomanunggal III / 107 Surabaya. The criteria for each stage that are

assessed have a range of 1-4 to assess whether or not each stage of learning is implemented. The result of implementation is 96.43% with the implementation of the learning going well, it can be concluded that the learning implementation goes well with little input from the observer.

The criteria for each stage that is assessed have a range of 1-4 to assess the implementation or not of each learning stage. The activities carried out are as follows.

1. Preliminary activities are carried out by researchers to motivate students, make perceptions, convey learning objectives and connect with previous material. So, the activity of opening lessons got a score of 3.88 with a percentage of 96.88%.
2. The core activities carried out by researchers as teachers include preparing students to learn, presenting knowledge, checking student understanding, demonstrating the use of Interactive Digital Map media, guiding students using media. The results of the assessment carried out by 2 observing teachers indicated that the implementation of the core activities had an average score of 3.90 with a percentage of 97.50% and was carried out well.
3. There are 4 activities to close the learning carried out by the researcher as a teacher, namely concluding the material, conducting evaluation, reflecting, and ending the lesson. Then the average value of closing learning activities is 3.75 with a percentage of 93.75% and the category of implementation is good.

3.2.2 Student Activities

In observing student activity, the researcher was assisted by two observers. Some of the activities observed by observers included students' readiness in taking lessons, enthusiasm in preparing for learning, student activities in listening to the material presented, student activities in asking questions that were relevant to the material, student involvement in using Interactive Digital Map media, working on LKPD, student activities in presenting work results, mastering learning materials, showing self-confidence in learning activities, student involvement in drawing conclusions, and student enthusiasm in doing evaluation.

The result of the implementation is 93.75% with the implementation of the learning going well, it can be concluded that the learning implementation goes well with little input from the observer. The criteria for each stage that is assessed have a range of 1-4 to assess the implementation or not of each learning stage. The activities carried out are as follows.

1. Preliminary activities carried out by students include readiness to take part in learning, and enthusiasm for learning. So, the preliminary activity gets a score of 3.75 with a percentage of 93.75%.
2. The core activities carried out by students include listening to the material presented, asking questions, expressing opinions, being open to other people's opinions, working on LKPD, using Interactive Digital Map media. The results of the assessment carried out by 2 observing

teachers showed that the implementation of the core activities had an average score of 3.75 with a percentage of 93.75% and was carried out well.

- The final activity of learning carried out by students, namely concluding the material, working on the evaluation sheet, Then the average value of the final learning activity is 3.75 with a percentage of 93.75% and the category of implementation is good.

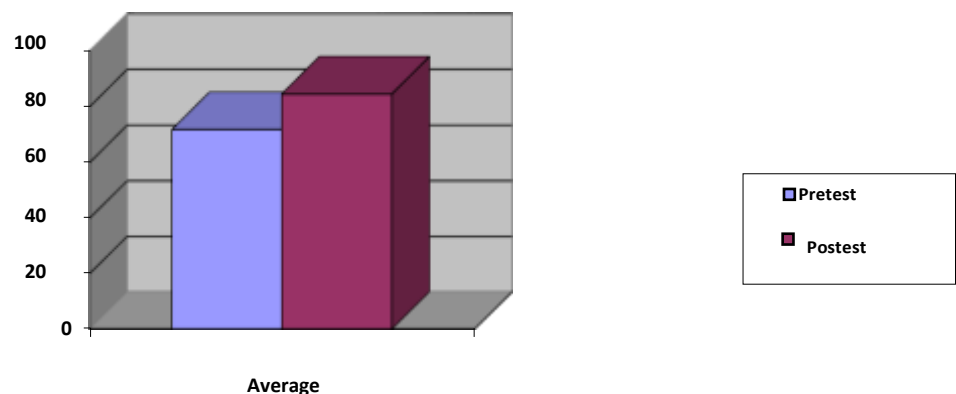
4. EFFECTIVENESS RESULTS

The trial was carried out after the development of learning tools was revised and validated. The trial was carried out at SDN Sukomanunggal III / 107 Surabaya with the aim of knowing the effectiveness of the learning tools that have been developed. The effectiveness of the learning tools can be seen from the test results of students' critical thinking skills and student responses.

4.1 Analysis of Critical Thinking Skills

The effectiveness of the learning tools developed in this study can be seen from the assessment of student learning outcomes. Completeness of learning is measured using the cognitive domain which is done by pretest and posttest. Pretest and posttest are carried out to determine the level of learning outcomes from pretest to posttest and to determine the increase in the value (gain-score) of each student. The pretest is carried out before using the interactive digital map media which means heroes and the results will be compared with the values obtained from the posttest. The following are the results of students' critical thinking skills in the following graph:

Graph 1. Students' Pretest and Posttest Results



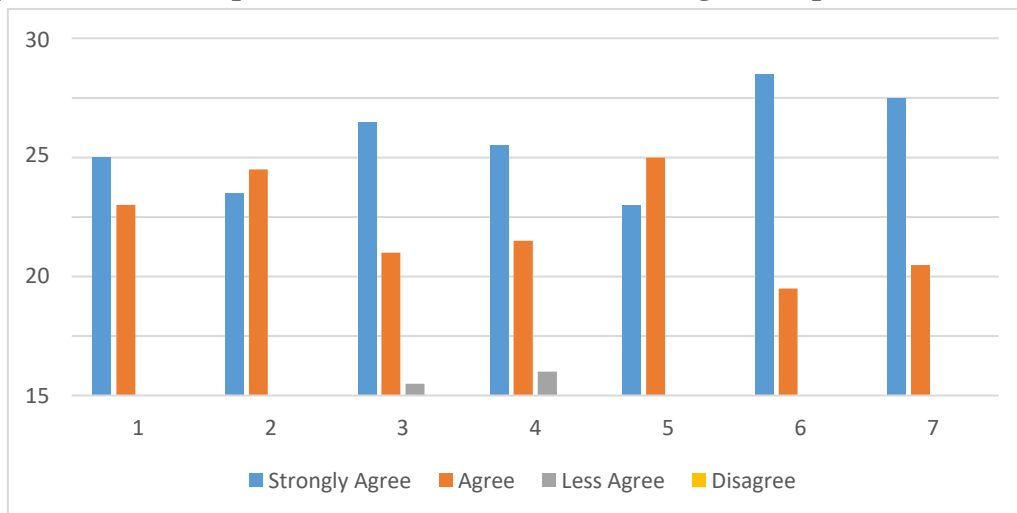
From graph 1, it can be seen that the pretest average value of critical thinking skills is 71.81, while the number of values in the posttest is 84.58 with an N-gain of 0.50 in the moderate category. The N-gain criterion according to Sundayana (2014, p.151), is converted to the following criteria (1) "there is a decrease" if $-1.00 < g < 0.00$, (2) "there is no increase" if $g = 0, 00$, (3) "low" if $0.00 < g < 0.30$, (4) "moderate", if $0.30 < g < 0.70$, (5) "high" if $0.70 < g < 1.00$.

Learning by presenting real problems to students in accordance with Ausubel's theory of meaningful learning and Vygotsky's theory of learning, both theories emphasize that in learning students are required to acquire their own knowledge by connecting new information with relevant concepts found in students' cognitive structures. This knowledge is obtained by looking for information to solve problems related to the learning material.

4.2 Student Response Analysis

Student response data to the components of learning activities using Interactive Digital Map media were collected in the form of student questionnaires. Data on student response results Appear in the graph below:

Graph 2. Student Responses to the Use of Interactive Digital Map Media with Heroes



Information

1. Happiness feeling
2. Retention of material
3. Boredom
4. Eager to learn
5. Confident when Presenting
6. Focus on studying
7. Appropriateness of the use of media in learning

When viewed from the students' happy feelings towards the Interactive Digital Map media, the response of 20 students felt strongly that they agreed, while 16 students agreed to the use of this media in learning. Student responses when viewed from the aspect of

ease of understanding the material were 17 students felt strongly agreed and 19 students answered agreed with the statement.

In the statement aspect, they did not feel bored in learning after using the media, among others, 23 students felt strongly agreed, while 12 students answered agreed, but 1 person answered less agree. Furthermore, student responses when viewed from the aspect of enthusiasm in learning after using the media, among others, 21 students answered strongly agree, 13 students answered agree but 2 students answered disagree.

Student responses when viewed from the aspect of self-confidence when presenting work results after using media, among others, 16 students strongly agree, and 20 students agree on this aspect. Then on the focus aspect in learning when using Interactive Digital Map media, among others, 27 students felt strongly agreed and 9 students agreed with this aspect. Furthermore, on the aspect of the suitability of the media applied to learning, student responses included 25 students feeling strongly agree and 11 students agreeing on this aspect.

Based on the results and discussion of the research, it can be stated that the development of Interactive Digital Map media (valid, practical, and effective) can be used to improve students' critical thinking skills about nationalist characters.

5. CONCLUSION AND SUGGESTION

5.1 Conclusion

Based on the description of the research results and discussion of the research results, the following conclusions can be drawn: 1) Based on the assessment of the learning media validator, social studies material and 5 users that the Interactive Digital Map media is declared valid and suitable for use in learning activities 2) The practicality of learning tools is categorized as good when viewed from the implementation of the Learning Implementation Plan (RPP) and student activities during learning activities based on observations by observers. Overall, the stages in the learning process are fulfilled. 3) Based on the results of the post test regarding critical thinking skills and student responses to the use of Interactive Digital Map media, it is stated to be very effective. This is in accordance with the results of data analysis on the critical thinking skills test of students. The results of the analysis of student responses to the use of Interactive Digital Map media as much as 59.13% strongly agree and 39.68% of all students as respondents feel interested in learning using Interactive Digital Map media.

5.2 Suggestion

Based on the conclusions that have been explained, the researcher provides the following suggestions: 1) Interactive Digital Map Media produced in this study should be used as an alternative learning media for class V teachers in teaching material on national events during the colonial period. 2) In order for all stages of learning to be carried out, it is hoped that the teacher or prospective teacher will be able to optimize the ability to manage time so that learning runs according to the lesson plan. 3) The

Interactive Digital Map Media produced in this study should be used as an alternative learning tool in improving students' critical thinking skills about nationalist characters in the material of national events during the colonial period.

REFERENCES

- [1] Abdullah, J. 2015. Peran Guru dalam Menumbuhkan Sikap Nasionalisme pada Siswa SMP Negeri 1 Babang Kecamatan Bacan Timur. *Edukasi-Jurnal Pendidikan*, 13, 462- 466.
- [2] Ahmadi & Amri Sofyan. (2014). *Pengembangan Bahan Ajar dan Model Pembelajaran Tematik Integratif*. Jakarta: PT. Prestasi Pustakaraya.
- [3] Akyuz. H.I dan Keser. H. (2015). Effect of Educational Agent and Its Form Characteristics on Problem Solving Ability Perception of Students in Online Task Based Learning Media. *Cypriot Journal of Education Science*, 10 (3), 265-281.
- [3] Dwijananti, P dan Yulianti, D. (2010). Pengembangan Kemampuan Berpikir Kritis Mahasiswa Melalui Pembelajaran Problem Based Instruction Pada Mata Kuliah Fisika Lingkungan. *Jurnal Pendidikan Fisika Indonesia*, 6 (2), 108-114.
- [4] Karima, Muhammad Kaulan & Ramadhani. (2017). Peran Pendidikan Dalam Mewujudkan Generasi Emas Indonesia yang Bermartabat. *IJTIMAIYAH: Jurnal Program Studi Pendidikan Ilmu Pengetahuan Sosial*, 1(1), 53-78.
- [5] Nurhayati, Eti. (2011). *Psikologi Pendidikan Inovatif*. Yogyakarta: Pustaka Pelajar.
- [6] Permanto, Toto. (2012). *Perilaku Nasionalistik Masa Kini dan Ketahanan Nasional: Penerapan Perilaku Nasionalistik Masa Kini*. Yogyakarta: Mata Bangsa.
- [7] Purwanto, Ngalim. (2012). *Prinsip-prinsip dan Teknik Evaluasi Pengajaran*. Bandung: ROSDA.
- [8] Rahmad. (2016). Kedudukan Ilmu Pengetahuan Sosial (IPS) pada Sekolah Dasar. *Muallimuna Jurnal Pendidikan Madrasah dan Ibtidaiyah*, 2 (1), 67-78.
- [9] Sadikin. (2008). *Peningkatan Sikap Nasionalisme Melalui Pembelajaran IPS Dengan Metode Sosial Drama Di SD Cikembulan Banyumas*. Tesis. Yogyakarta: Universitas Negeri Yogyakarta.
- [10] Suryabrata, Sumadi. (2014). *Metodologi Penelitian*. Jakarta: PT Rajagrafindo Persada.

Author Profile



Agung Priyambodo. Born in Samarinda, March 21, 1989. Currently working as a teacher at Sukomanunggal III / 107 Public Elementary School. Has taken postgraduate education (S2) basic education at the State University of Surabaya.