

DEVELOPMENT OF CHARACTER VALUE-BASED EDUCATION GAMES FOR ELEMENTARY SCHOOL (SD) STUDENTS

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Abstract: This study aims to determine the feasibility, practicality and effectiveness of the educational game "Warrior Adventure" based on the nationalist character of the struggle for Indonesian independence for elementary school students in grade V. This study uses the ADDIE development model with five stages, namely analysis, design, development, implementation, and evaluation. The data collection instrument used was a questionnaire. The subjects of this research trial were students of class V SDN Tempurejo 02 totaling 12 students. Material expert validation obtained a percentage of 94% categorized as very feasible, 97% linguistic experts categorized as very feasible, 96% media experts categorized as very feasible. The teacher's practicality test obtained a percentage of 93% categorized as very good, and students' practicality 92.5% categorized as very good. The effectiveness test of students obtained an average score of 88 which was categorized as very effective. Based on the research data, it was concluded that the educational game "Warrior Adventure" based on nationalist characters was declared feasible, practical and effective to be used as a learning medium in supporting the learning process.

Keywords: *Educational Game, Nationalist Character, The Struggle for Indonesian Independence*

INTRODUCTION

The era of the industrial revolution 4.0 or the fourth world industrial revolution where information technology has become the basis of human life (Hadayani et al., 2020). At this time there was a shift in lifestyle in various fields, without exception in the field of education. In the world of education, learning is required to adapt to the times by following the latest technological developments. Learning in the 21st century is carried out using technology to support the learning process (Syahputra, 2018).

In addition to being a manager, psychologist, counselor, motivator, facilitator, evaluator, the teacher's role is expected to be able to deliver skilled, communicative, critical and collaborative graduation achievements in addressing the challenges of the development of the digital world (Tarihoran, 2019). The end of the 2013 curriculum demands the pedagogical abilities of teachers as

teachers who are better able to design more effective and innovative learning that can be according to the needs of the times as a support for the learning process with character (Keraf & Komalasari, 2019). In 21st century learning, learning must be student-centered. Thus, when students encounter difficulties during the learning process, the teacher plays a role in helping students (Effendi & Wahidy, 2019).

The application of Social Sciences is not only focused on the material, but also must be able to develop students into citizens who have responsibility for the nation and state (Afandi, 2011). A lot of learning often only focuses on delivering material, so that it affects the cultivation of student character, especially the lack of nationalist character cultivation. Nationalist character is a way of thinking, acting, and acting that shows loyalty, care and respect for the nation (Siagian & Alia, 2020)

Based on the results of observations at SDN Tempurejo 02 conducted on January 28, 2022, the problems that often arise are in the matter of the struggle to defend independence because students do not understand about the events that occurred while defending independence, who were the figures involved, and how the nationalist character possessed each figure. Students also do not understand and memorize the national anthem. This has an impact on students' lack of understanding about the application of nationalist characters in everyday life. The explanation of the nationalist character is only done orally, so it is less interesting for students and causes a lack of student understanding. The lessons conveyed and the planting of nationalist characters were less impressive. The reason is that the learning media used are still limited, and many still use print media such as thematic books. In addition, the teacher has not been able to develop learning media that allows students not only to pay attention to the media, but also to interact during the learning process.

One solution to this problem is to make the educational game "Warrior Adventure" based on nationalist characters. Games used in the learning process increase students' motivation and interest (Ucus, 2015). Educational games have advantages, one of which is that the visualization of problems looks more real. Another advantage of educational games is that they involve students in an active learning process. Educational games are an efficient and effective tool to motivate students and involve students in active learning (Cojocariu & Boghian, 2014).

Nationalist character is a way of thinking and acting that reflects an attitude of caring, pride, and respect for the nation and state, the physical, socio-cultural, economic and political environment of the nation, prioritizing the interests of the nation over its own interests (Deviana & Sulistyani, 2019). Indicators of nationalist character include: (1) appreciating the services of national heroes; (2) using domestically made products; (3) appreciate Indonesian culture; (4) understand and memorize the national anthems; (5) choosing to travel within the country (Mustari, 2017).

This educational game "Warrior Adventure" emphasizes the nationalist character. This can be seen from the use of red and white ribbons, the use of warrior clothes on animated characters, the presentation of interesting materials and questions, the instrument for the song Halo-halo Bandung, as

well as fun games. By using the educational game "Warrior Adventure" it is hoped that learning can attract students' interest and students are able to understand the material.

The purpose of this study is to determine the feasibility, practicality, and effectiveness of the educational game product "Warrior Adventure" based on nationalist characters. By carrying out this research, it is hoped that it will be useful for various parties. For teachers, it is hoped that they can provide innovation in the learning process so that learning is not monotonous and is used as a reference for games that students can play to increase knowledge. For students, this research seeks to produce an educational game "Warrior Adventure" that is interesting and can increase students' interest in learning. For further researchers, it is hoped that it can be a reference to find out the practicality and effectiveness of the educational game "Warrior Adventure" based on nationalist characters.

METHOD

The research was conducted at SDN Tempurejo 02, Kec. Tempursari, Kab. Lumajang, East Java. The implementation of this research is in the even semester of the 2021/2022 academic year. The research subjects were the fifth grade students of SDN Tempurejo 02, totaling 12 students. This research is a research development or Research and Development (R&D). Research and development Research and Development (R&D) is research that aims to produce certain products and test their effectiveness (Purnama, 2016). This study uses the ADDIE model with five stages, namely, analysis (analyze), design (design), development (development), implementation (implementation), and evaluation (evaluate) (Sugiyono, 2015). The explanation of the stages in the ADDIE model is as follows.

- a. Analysis (Analyze). The activities carried out are curriculum analysis, needs analysis, and analysis of student characteristics.
- b. Design (Design). At this stage, it is focused on finding references and making materials according to basic competencies and making concept designs regarding the development products to be developed. Then the researcher made a research instrument.
- c. Development (Development). The activities carried out are making the product concept design that has been made along with the content of the material into a real product design. Then validate and revise according to expert input.
- d. Implementation (Implement). Products that have been developed and revised are applied in the learning process to determine the effectiveness and practicality of the media.
- e. Evaluation (Evaluate). The activities carried out include formative evaluation which is used as a reference in product improvement.

The data collection instrument used was a questionnaire. Questionnaires were used as material validation, language validation, media validation, and practicality questionnaires. Data analysis used

descriptive qualitative and quantitative. The questionnaire was made using a Likert scale (Sugiyono, 2015) which is presented in

Table 1 Score Classification Guidelines

Classification	Score
Very Good	5
good	4
Enough	3
Less	2
Very Less	1

Then the research data is calculated using the calculation technique according to Riduwan (2015), namely:

$$\text{Score} = \frac{\text{score obtained}}{\text{maximum score}} \times 100\%$$

RESULTS

The results of this development research are the educational game "Warrior Adventure" based on nationalist characters using the ADDIE model which has five stages, namely:

Analysis Stage

The first activity, the researcher conducted a curriculum analysis. Based on the results of the analysis, it is known that the curriculum applied at SDN Tempurejo 02 is the 2013 curriculum. The 2013 curriculum is a curriculum that applies the learning process in one theme that includes several subjects (Kemdikbud, 2014). Then the researcher analyzed the core competencies and basic competencies of class V theme 7 sub theme 2 with the aim of determining the basic competencies that would be applied in the educational game "Warrior Adventure" based on nationalist characters. Based on the results of the analysis, the basic competencies applied are 3.4 to identify the efforts of the Indonesian people to defend their sovereignty, and to focus on the material on the struggle to defend Indonesia's independence.

Second, the researchers conducted a needs analysis including the analysis of learning media and their use in learning. The learning media used at SDN Tempurejo 02 is still simple, namely using blackboard media and print media in the form of thematic books and pictures. In the learning process in class V SDN Tempurejo 02 theme 7 sub theme 2 the material for the struggle to defend Indonesia's independence has not used IT-based media which is fun for students. Learning using IT-based media can improve the quality of students' abilities. Learning becomes more interesting, not monotonous, and fun for students (Tarigan, 2019)

Third, the researcher analyzed the characteristics of the fifth grade students at SDN Tempurejo 02. Based on the results of observations and interviews, it was found that fifth grade students had a character who liked to play games, students were less enthusiastic when learning social

studies, especially the material for the struggle to defend Indonesia's independence because the learning carried out was not fun and interesting for students. students, causing students to not understand the material.

Fourth, the researcher analyzes the cultivation of nationalist character. Information was obtained through interviews with school principals and fifth grade teachers at SDN Tempurejo 02. Based on the results of interviews related to the forms of inculcating nationalist characters at SDN Tempurejo 02, it was found that the form of inculcating nationalist characters at SDN Tempurejo 02 was the implementation of a flag ceremony every Monday but the implementation was still ongoing. not maximal. Likewise, interviews with fifth grade teachers related to the cultivation of nationalist characters showed that the form of instilling nationalist characters was only conveyed orally. In this analysis, it was found the problem of lack of nationalist character cultivation. The explanation of the nationalist character is carried out verbally and not directly, causing students to lack understanding of the nationalist character and its application in everyday life.

Design Stage

The activity carried out by the first researcher was to prepare the material according to the basic competencies. The basic competencies used are the basic competencies of IPS 3.4 identifying the efforts of the Indonesian people in defending their sovereignty. The material is focused on the struggle for independence. Based on basic competencies, the material that will be displayed in the game is five events to maintain independence in various regions. The five events were the Battle of November 10, Palagan Ambarawa, Bandung Lautan Api, Medan Area, and the General Offensive on March 1, 1949.

Second, the researcher determines the concept of the media to be developed. Determination of the media concept is based on the needs analysis that has been done by the researcher. Based on the needs analysis, the researcher determined that the media to be developed was a game. In the educational game "Warrior Adventure" there are five events to defend Indonesia's independence. Each event is characterized by a monument associated with that event. In every monument there is material. Around the monument there is a mission box containing practice questions.

Third, the researcher prepares practice questions related to the material. The difficulty of the questions is in accordance with Bloom's Taxonomy guidelines. These questions are used as a reference to measure the effectiveness of the educational game "Warrior Adventure" in the learning process.

Fourth, the researcher made a research instrument in the form of a questionnaire. The questionnaires were in the form of media, language, material validation questionnaires, teacher practicality questionnaires and student practicality questionnaires.

Development Stage

The activity carried out by the researcher is to apply the game design that has been made.

The researcher also carried out several validations, namely media validation, material validation, and language validation before implementing the developed product. Responses from experts are used as a reference for revising product development. The following is a display of the products that have been developed which are presented in the table.

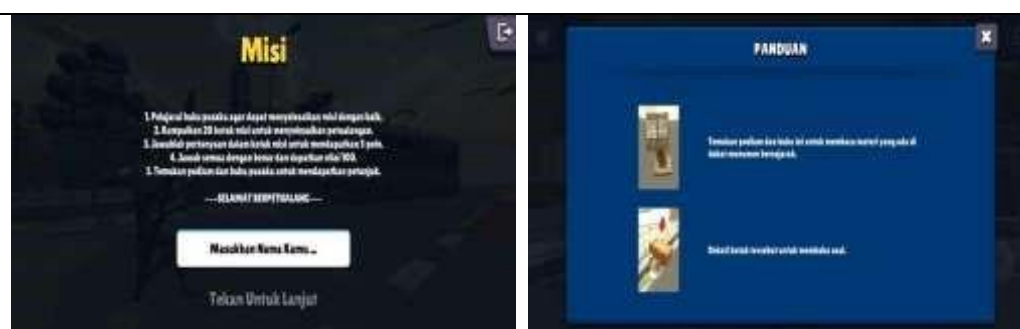
Table 2 Display of “Warrior Adventure” Educational Game

Game start



The initial screen of the game contains the name of the game, namely “Warrior Adventure”, a developer profile information button and a start button. At the beginning of the game, there are also animated characters that are characterized by wearing warrior clothes, pointed bamboo and red and white ribbons.

Mission view and game guide



The mission view and game guide contain missions to complete and guides for completing those missions.

Playground view



The display of the game arena contains five events of the struggle to defend Indonesia's independence, namely the Battle of November 10, Palagan Ambarawa, Bandung Lautan Api,

Medan Area, General Attack on March 1, 1949. These five events are characterized by monuments related to these events.

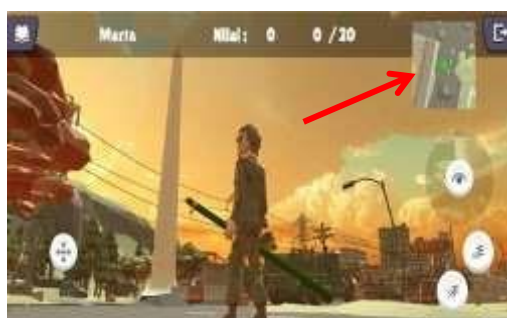
Explanation of the buttons on the playing field



An explanation of the function of the buttons on the game arena is as follows.

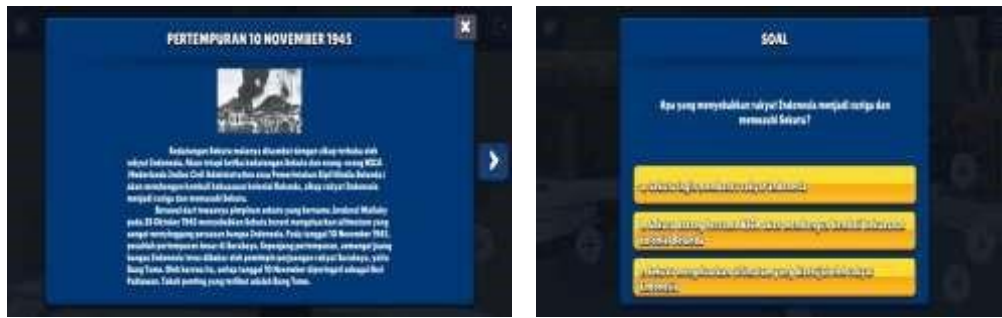
- a. The number 1 key functions to move the animated character left, right, and walking.
- b. The number 2 button serves to see the surrounding arena.
- c. Number 3 button is used to jump.
- d. The number 4 button is for running.

Game arena floor plan



The floor plan of the game arena can be displayed by clicking on the mini map in the game arena. The game arena floor plan view contains five events developed in the game. This game arena plan is used as a guide that aims to make it easier for players to play the game.

Display material and questions



This display contains material about events in the struggle for independence, profiles of figures, nationalist characters, and questions related to the material.

Then the researcher conducted a validation test. Material expert validation obtained a percentage of 94% categorized as very feasible, 97% linguistic experts categorized as very feasible, 96% media experts categorized as very feasible.

Implementation Stage

The activity carried out by the researcher was to test the educational game "Warrior Adventure" based on nationalist characters to fifth graders at SDN Tempurejo 02 to determine the effectiveness of the media. In the trial of the educational game "Warrior Adventure" based on nationalist characters, it was found that the average score of 88 students was categorized as very effective. At the implementation stage, the researcher gave a questionnaire to students to measure the practicality of the media. The results of the students' practicality questionnaire got a percentage of 92.5% categorized as very good. In addition, the researcher also gave a questionnaire to the fifth grade teacher at SDN Tempurejo 02 to measure the practicality of the media. The results are presented in the following table.

Table 3 Student Practicality Assessment

No	Criteria	Indicator	Score obtained	Maximum score
1.	Motivation	1. Attention	56	60
		2. Interest	51	60
2.	Attractiveness	3. Display quality	54	60
		4. Gives Attractiveness to student	56	60
3.	Convenience	5. Ease of understanding the material	57	60
		6. Ease of Operation	54	60

4.	Benefits	7.	Providing new knowledge to students	57	60
		8.	Adding new skills for student	59	60
	amount			444	480
	Persentase			92,5% (very good)	

Evaluation Stage

Material expert validation obtained a percentage of 94% categorized as very feasible, 97% linguistic experts categorized as very feasible, 96% media experts categorized as very feasible. The teacher's practicality test obtained a percentage of 93% categorized as very good, and 92.5% students' practicality categorized as very good. The effectiveness test of students obtained an average score of 88 which was categorized as very effective. In each test, researchers also get suggestions and comments that can be used as a reference for improving the media to make it better. The evaluation stage is the last stage carried out in the ADDIE model research.

DISCUSSION

Research on the development of the "Warrior Adventure" educational game based on nationalist characters uses the ADDIE "development" model. According to Irawati & Mahmudah, (2020) the development of the ADDIE model has five systematic stages in producing a product with the following stages: analysis (analyze), design (design), development (development), implementation (implementation), and evaluation (evaluate).). The product discussion is as follows.

- a. The feasibility of developing the educational game "Warrior Adventure" based on nationalist characters "struggle material" for defending Indonesia's independence for "elementary school students" class V."

Learning media is a means of delivering planned information, so that it can create a good "learning" atmosphere and learning is carried out effectively and efficiently (Asyhar, 2012). Media "learning plays a very important role in the "process" of learning (Rahayu et al., 2022). The benefits of learning media are increasing student motivation, improving the quality of learning" and making it easier for teachers to deliver "learning materials that make "abstract" things "concrete". The "learning media" must be validated first to "know the feasibility" of the learning media. The feasibility of developing the educational game "Warrior Adventure" based on nationalist characters can be determined through "test results" validation by "experts" in the material, validation by language experts, and "validation" by media experts. The results of "expert validation" of the material get a percentage of 94%, linguistic expert validation 97.5%, and media "expert validation" 96%. Based on the results of the "validation" it can be concluded that "the development of the educational game "Warrior Adventure" based on nationalist characters for "elementary school students in grade V is categorized as

"very feasible" to be used as a "media" for learning. This is "same as the research" Amirulloh (2019) with "Development title" Mathematics Educational Game" (Operation of Numbers" Fraction) Based" Android for "Elementary Schools getting an average validation test of 89.3% so that it is categorized as very feasible.

- b. The practicality of developing the educational game "Warrior Adventure" based on nationalist characters "struggle material" for defending Indonesia's independence for "elementary school students" class V. Game is a game in the form of electronic media that can be played and has certain rules to get a goal that can give inner satisfaction to the players. Educational games are games that contain education (Aditya et al., 2019). Educational games are games that aim to increase thinking power, concentration, and problem solving skills (Ucus, 2015). The development of the educational game "Warrior Adventure" must be tested for practicality to determine the practicality of the game when used as a learning medium. In this study, the "practical" test was carried out by distributing questionnaires to the "class V teacher" and "class V students" at SDN Tempurejo 02, totaling 12 students. The teacher's practicality questionnaire got a percentage of 93% and the student's practicality questionnaire got a percentage of 92.5%. The results of the practicality test are categorized as very good for use as a learning medium. This "is in line" with the research "Rokhman & Ahmadi (2020) entitled "Development of "Educational Game" Si Gelis "Based on Android" To Improve "Language Vocabulary" English Students get a practicality test score of "94.5% and is categorized as very" good (Atika et al., 2019).
- c. The effectiveness of the development of the educational game "Warrior Adventure" based on the nationalist character of the material "struggle to defend Indonesia's independence" for "elementary school students" V. Social studies learning in elementary schools is a simplification of social sciences, namely "sociology, anthropology," history, and economics. Social studies studies do not only emphasize social science but are also based on social phenomena that occur in society. By understanding the phenomena that occur in the community, students are expected to have sensitivity to the problems that occur in their environment and dare to solve these problems. "Social Sciences" (IPS) is a group of sciences "that examines human activities and has values and characters that are able to strengthen the unity and integrity of the nation. "Character education" is an attempt to "help prepare the nation's generation" to face the "future" (Gestiardi & Suyitno, 2021). Through "education, students must be able to become someone who is independent in developing their knowledge, as well as carrying out the values of "character in everyday life" (Rachmadyanti, 2017). According to Presidential Regulation No. 87 of 2017 concerning Strengthening Character Education (PPK). Strengthening Character Education, which is abbreviated as PPK, is an educational movement under the education unit to strengthen the character of students (Deviana & Sulistyani, 2019). This movement has been in effect since 2016. The Movement

for Strengthening Character Education (PPK) is not only focused on thinking but national education must also heed the heart, taste, and sports. In the Movement for Strengthening Character Education (PPK) there are main character values that are rooted in Pancasila, namely religious, nationalist, independent, mutual cooperation, integrity.

Nationalist character is a way of thinking and acting that reflects an attitude of caring, pride, and respect for the nation and state, the physical, socio-cultural, economic and political environment of the nation, prioritizing the interests of the nation over its own interests (Deviana & Sulistyani, 2019). Indicators of nationalist character include: 1) appreciating "the services of "national heroes," 2) using "domestic" products, 3) respecting "Indonesian culture," 4) understanding and memorizing "national anthems," 5) voting. travel in "domestic" (Mustari, 2017). Planting nationalist characters can be done by increasing students' knowledge using educational games (Widiatmaka, 2016). The development of the educational game "Warrior Adventure" must be tested for effectiveness to determine the effectiveness of the game when used as a learning medium (Keraf & Komalasari, 2019). Effectiveness data were obtained from the implementation of the educational game "Warrior Adventure" based on nationalist characters to fifth grade students at SDN Tempurejo 02. The trial of the educational game "Warrior Adventure" for "students was carried out with the aim of" knowing "to what extent" students could understand "the material with the help of games.

The results of "trial" to students "get an average value of 88 so that the educational game "Warrior Adventure" is categorized as "very effective to use as a medium of learning". This "is in line" with the research "Rokhman & Ahmadi (2020) entitled "Development of "Educational Games" Si Gelis "Based on Android" To Improve "English Vocabulary" Students get 77 effectiveness test scores obtained from the "average value" students amounted to 88 "and included" categorized "very" effective.

CONCLUSION

Based on the results of the study, it can be concluded that the educational game "Warrior Adventure" was declared feasible, practical, and effective to be used as a learning medium in supporting the learning process, especially in the material for the struggle to defend Indonesia's independence. This research is only limited to these materials. It is hoped that further researchers can develop broader material by digging more in-depth information.

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