# JOSAR

## JOURNAL OF STUDENTS ACADEMIC RESEARCH

# DAFTAR ISI

# Editorial Team

# Development of Smart Games Themes The Beauty of Diversity in My Country for Grade IV SD/MI students

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**Abstract**

*Based on the results of observations at UPT SDN Sumberdiren 02, it is known that the learning media used so far are still less varied, so creative and interesting media are needed. At that school the Smart Game Media had never been used. The purpose of this study is to explain the development of Smart Games for SD/MI students. The research design used is Research and Development (R&D). The development model used is the Borg and Gall model proposed by Sugiyono which is limited to the seventh stage, namely product revision. The results showed that the assessments of media experts, linguists and material experts were respectively 85.5%, 87% and 80%. Student response 89%. Students' reading interest increased by 99%, from the average result of 2.63 to 5.27. The results of this study have reached the criteria set out in previous studies, namely 9.3%. 87% student interest in reading questionnaire. So it is known that Smart Games can increase the learning interest of SD/MI students.*

**Keywords:** Development, Smart Game, SD/MI Students.

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## 1. INTRODUCTION

Learning media has an important role in the teaching and learning process. Each medium has its own advantages and disadvantages. Teachers can choose and use media according to the needs, characteristics of students, and the material to be delivered. The existence of media in learning will greatly assist students in understanding the material provided, especially material in certain lessons that are considered difficult for students, such as in learning that needs to memorize or emphasize certain concepts.

Azhar Arsyad (2002) suggests that the practical benefits of the use of learning media in the teaching and learning process is to be able to clarify the presentation of messages and information so that it can facilitate and improve learning processes and outcomes. Appropriate and interesting learning media can increase and direct children's attention so that it can lead to learning motivation. According to Mulyani Sumantri (2001:154)

Based on the results of observations made by researchers on teachers regarding how teachers teach at UPT SDN Sumberdiren 02, information is obtained that teachers use teacher-centered learning strategies. Teachers more often apply the lecture method and directed reading assignments/assignments to students. The teacher adopts cognitive learning theory in its application, which is concerned with the learning process rather than learning outcomes and the knowledge possessed by students is in accordance with their learning situation so that what students already know will determine what they will pay attention to, learn and remember.

In the learning process, teachers use textbooks in the form of textbooks from the government. The book consists of a teacher's book and a student's book. The teacher's book contains a learning guide that is adapted to the 2013 curriculum. The student book contains material and practice questions. The student book used by students only has a brief description of the material and has thin paper quality and less bright colors. The size of the book is too big and thick, the appearance of the book is not colorful, the pictures contained in the book are very limited and the pictures do not explain the content of the material. The pictures in the book are less varied, there are no real pictures or photos of the material discussed in the chapter.

During teaching and learning activities, when the teacher explained the material using textbooks, students did not respond very well. Students tend to be bored with the way teachers teach using the lecture method. This can be seen from the behavior of students when learning takes place they are more cool talking with friends, walking here and there, and many are allowed to leave class for various reasons. When the teacher gave questions according to the textbook to students, many could not answer. They are not enthusiastic to read and look for

answers in student books, they lack mastery of the subject matter that has been delivered by the teacher. This is because a lot of rote material is only delivered using the lecture method without actively involving students.

Based on the background of the problem above, a smart circuit children's game media was developed which is expected to add references and provide learning media facilities for students and teachers in the teaching and learning process. This smart circuit media is expected to be able to improve the understanding and quality of learning for SD/MI students.

## 2.    RESEARCH METHODS

This type of research is Research and Development (R&D) with the Borg and Gall development model (in Sugiyono, 2016) starting from stages 1 to 7 of a total of 10 stages, due to time, energy, and cost limitations. The seven stages are: (1) Looking for potentials and problems; (2) Conduct research and data collection; (3) Product design; (4) Design validation; (5) Design revision; (6) Conduct product trials; (7) Product revision. The seven steps are described in the following figure.



This research data collection using instruments in the form of questionnaires and interview sheets. In the validation process, the validator consists of 3 experts, namely linguists, material experts and media experts. Furthermore, a readability test was conducted to determine the students' readability of the smart game media and a response test was carried out to determine the student's response to the suitability of the appearance and content of the smart game media. Furthermore, an interest test was conducted to obtain data on increasing students' interest and understanding of the material before and after using the Smart Circuit media.

Qualitative data analysis in the form of interviews with teachers and students to find out criticism and suggestions about smart circuit media as an improvement. Analysis of quantitative data in this smart circuit game media research was obtained from the results of distributing questionnaires to students. The student response analysis questionnaire was measured by the Guttman scale according to Sugiyono (2016).

## 3. RESULTS AND DISCUSSION

### A. Validation Test

Product development is carried out through validation to experts consisting of linguists, material experts, and media experts. Each validator consists of 3 experts, lecturers and teachers as practitioners.

#### 1. Material Validator

The results of the assessment of 3 material experts on learning and curriculum on smart circuit games obtained a percentage of 85.5% with a category of 80% - 100% with a very feasible category to be used as reading material in learning because the smart circuit contains a collection of educational questions that are in accordance with the learning material in the 2013 curriculum with the theme The Beauty of Diversity in My Country.

#### 2. Media Validators

The results of the assessment of 3 media experts on the suitability of the media with learning to smart game media obtained a percentage of 87%, while for the attractiveness of the media obtained a percentage of 85%. In general, the 3 media experts obtained a percentage of 87% with a very decent category. Based on these results, it is known that smart games have been packaged in an attractive appearance and according to the needs of elementary school students. This is in accordance with the opinion of Kokom (2010) which suggests that several things must be considered in choosing learning resources, one of which is an attractive appearance, because it is accompanied by illustrated pictures and reminder knick-knacks.

#### 3. Language Validator

The results of the assessment of 3 linguists obtained a percentage of 80%, so that the value in the range of 80% - 100% is included in the very feasible category. Based on these results, it can be seen that Smart Game uses standard language and uses correct spelling so that it is easily understood by elementary students. This is in accordance with the opinion of Kokom

(2010) which suggests that textbooks as a learning resource must have a sentence structure that uses standard Indonesian, and a language style that is easily understood by students.

Based on the results of validation by three expert validators, it is known that the Smart Game developed can be categorized as very feasible. The results of the validation are shown in the following table.

**Tabel 4.3 Validation Result**

| No | Validator | Presentage |
|----|-----------|------------|
| 1 | Material Expert | 85,5% |
| 2 | Media Expert | 87% |
| 3 | Language Expert | 80% |
| **Average** | | **84,1 %** |
| **Category** | | **Very Eligible** |

B.      Small Group Trial

After the validation test was carried out, the small group test was then carried out. The small group test begins with a readability test, then a response test and finally a reading interest test. The three test results are presented as follows.

1.      Student Readability Test Results

The readability test was conducted to determine the level of students' understanding of appearance, sentence structure, and language. The results of the readability test questionnaire are described in Table 4.4 as follows

| No | Students | | | | | | | | Total |
|----|----|----|----|----|----|----|----|----|----|
|    | 1  | 2  | 3  | 4  | 5  | 6  | 7  | 8  |    |
| 1. | 4 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 39 |
| 2. | 4 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 39 |
| 3. | 4 | 4 | 5 | 5 | 4 | 5 | 5 | 5 | 37 |
| 4. | 4 | 4 | 4 | 4 | 4 | 4 | 5 | 4 | 33 |
| 5. | 5 | 4 | 4 | 4 | 4 | 5 | 4 | 4 | 34 |
| 6. | 4 | 4 | 4 | 4 | 5 | 4 | 4 | 4 | 33 |
| 7. | 5 | 4 | 5 | 5 | 4 | 5 | 4 | 5 | 37 |
| 8. | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 32 |
| 9. | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 32 |
| 10. | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 32 |
| Total | | | | | | | | | 348 |
| Maximum | | | | | | | | | 400 |
| Presentage | | | | | | | | | 87% |

**. Tabel 4.4 Questionaire Result of Students Readability**

Based on Table 4.4, the results of the student's readability test obtained a score of 348, thus getting a percentage of 87% in the appropriate category, so that the Smart Game media in terms of readability includes sentence structure and language that is easily understood by students, suitable for use as learning material. This is in accordance with the opinion of Kokom (2010) which states that the principles of writing textbooks including reading materials must use sentences that are in accordance with good and correct Indonesian language rules and sentence structures according to the level of students' language mastery.

2.    Student Response Test Results

Students fill out a response questionnaire to find out students' interest in the use of Majasda including the physical form and overall content of the Smart Game. The response questionnaire was filled out after filling out the readability questionnaire. Response questionnaires were given to 8 fourth grade students. The results of the response test are described in Table 4.5 as follows.

| No | Students | | | | | | | | Total |
|---|---|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | |
| 1. | 4 | 4 | 5 | 5 | 4 | 5 | 4 | 5 | 36 |
| 2. | 4 | 4 | 5 | 5 | 4 | 5 | 4 | 5 | 36 |
| 3. | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 40 |
| 4. | 5 | 5 | 4 | 4 | 5 | 4 | 5 | 4 | 36 |
| 5. | 5 | 5 | 4 | 4 | 5 | 5 | 5 | 4 | 37 |
| 6. | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 32 |
| 7. | 4 | 4 | 5 | 5 | 4 | 5 | 4 | 5 | 36 |
| 8. | 5 | 5 | 4 | 4 | 5 | 4 | 5 | 4 | 36 |
| 9. | 5 | 5 | 4 | 4 | 5 | 4 | 5 | 4 | 36 |
| 10. | 5 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 33 |
| Total | | | | | | | | | 358 |
| Maximum | | | | | | | | | 400 |
| Presentage | | | | | | | | | 89% |

**Tabel 4.5 Questionaire Result of Students'Respon**

Based on Table 4.5, the student response assessment has a total score of 358 and a percentage value of 89% is obtained. This value is included in the 80%-100% category with a very decent description, because the initial appearance of the Smart Game really attracts students' attention to read it, the writing can be read clearly, and the material highlights the natural wealth of the environment around students so that it is easy to understand.

So that the student's response to the Smart Game is very positive. This is in accordance with the opinion of Rudi and Cepi (2014) that the content design and media design provide a direct response to the stimulus given by students, so that students get clarity and truth/certainty about the results studied appropriately.

C.    Product Revision

At the validation stage to the validators, researchers obtained several revisions that must be refined to achieve feasibility. The revision from the linguist suggested to improve the use of standard language in some sentence questions in the Smart Game. In addition, the validator also suggests paying attention to the correct writing of the word. The principles of writing texts,

including reading materials, include using sentences that are in accordance with good and correct Indonesian language rules (Kokom, 2010).

## 4. CONCLUSION

Based on the results of research and development of learning media products With this Smart Circuit, it can be concluded that the resulting product is an educational game media, a smart circuit learning theme 7 sub-themes 1 and 2 for 4th grade elementary school which aims to make it easier for students and increase students' understanding of learning materials. This media has been validated by media and material experts and has been tested on students of UPT SD Negeri Sumberdiren 02, and the final data results obtained are 87% for media experts, 85.5% for material experts and 80% for linguists. Based on the results of the validation test, it is known that the smart circuit educational game media developed is categorized as good with an average percentage of 86.5% and is suitable for use. For the media readability trial, it was considered feasible with a percentage of 87% and student responses were considered appropriate with a percentage of 89%. Based on the results of these studies, it can be concluded that the Smart Circuit Game media is very suitable to be used to support learning in class IV at the SD/MI level.

## ACKNOWLEDGMENTS

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# Development of Smart Games Themes.pdf

*by* Turn 2

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| 9. | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 32 |
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| | Total | | | | | | | | 348 |
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| | Presentage | | | | | | | | 87% |

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Based on Table 4.4, the results of the student's readability test obtained a score of 348, thus getting a percentage of 87% in the appropriate category, so that the Smart Game media in terms of readability includes sentence structure and language that is easily understood by students, suitable for use as learning material. This is in accordance with the opinion of Kokom (2010) which states that the principles of writing textbooks including reading materials must use sentences that are in accordance with good and correct Indonesian language rules and sentence structures according to the level of students' language mastery.

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| 2. | 4 | 4 | 5 | 3 | 4 | 3 | 4 | 5 | 36 |
| 3. | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 40 |
| 4. | 5 | 5 | 4 | 4 | 5 | 4 | 5 | 4 | 36 |
| 5. | 5 | 5 | 4 | 4 | 5 | 5 | 5 | 4 | 37 |
| 6. | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 32 |
| 7. | 4 | 4 | 5 | 5 | 4 | 5 | 4 | 5 | 36 |
| 8. | 5 | 5 | 4 | 4 | 5 | 4 | 5 | 4 | 36 |
| 9. | 5 | 5 | 4 | 4 | 5 | 4 | 5 | 4 | 36 |
| 10. | 5 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 33 |
| Total | | | | | | | | | 358 |
| Maximum | | | | | | | | | 400 |
| Percentage | | | | | | | | | 89% |

**Tabel 4.5 Questionaire Result of Students'Respon**

Based on Table 4.5, the student response assessment has a total score of 358 and a percentage value of 89% is obtained. This value is included in the 80%-100% category with a very decent description, because the initial appearance of the Smart Game really attracts students' attention to read it, the writing can be read clearly, and the material highlights the natural wealth of the environment around students so that it is easy to understand.

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C. Product Revision

At the validation stage to the validators, researchers obtained several revisions that must be refined to achieve feasibility. The revision from the linguist suggested to improve the use of standard language in some sentence questions in the Smart Game. In addition, the validator also suggests paying attention to the correct writing of the word. The principles of writing texts,

including reading materials, include using sentences that are in accordance with good and correct Indonesian language rules (Kokom, 2010).

## 4. CONCLUSION

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