

## **Spin Roll Board as Media for Developing the Introduction Pancasila Principles in Elementary School**

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### Abstract

Pancasila education is very important subject to learn for an early age. Students' knowledge and understanding of the symbols and symbols of Pancasila are still quite low. One of them is influenced by the use of media to arouse students' enthusiasm and interest. So there needs to be innovation in media development, namely developing spin roll board media. The objectives of this research and development are: 1) explain the procedure for developing spin roll board media, 2) determine the attractiveness of spin roll board media. The research used a research and development method adapting the Borg & Gall model. Data collection techniques were used through interviews, observations, and questionnaires. The subjects in this study were 24 students of class 2B at Islamic Elementary School Bani Hasyim Singosari. The results of the material expert validation assessment obtained a percentage of 94%, 96% from media experts, 88% from learning practitioners, and the percentage of attractiveness from students was 91%.

**Keywords:** Media Development, Spin Roll Board Media, Pancasila Principles, Elementary School

## A. Introduction

The Industrial Revolution 4.0 has indirectly changed how 21<sup>st</sup>-century education is viewed today (Mardhiyah dkk., 2021). The era of the Industrial Revolution 4.0 brings its demands to the world of education (Hajriyah, 2020). This condition requires every educational institution to prepare literacy skills with a new orientation in education (Hermann, M., Pentek, T., & Otto, 2016). These literacy skills are in the form of data literacy, technology and human resources (Wijaya dkk., 2016). Education in the 4.0 era transforms of information to be more practical and digital-based (Heryani dkk., 2022). But not all digitization programs have a positive impact on the environment (Susanti, E., Rifa'atul Maulidah, 2019). Hani and Richardus revealed that the role of educators will be replaced by robots before 2027 and Silicon Valley is developing programs to be able to read children's brain waves and facial expressions (Sabaruddin, 2022).

This is the impact of digitalization where educators must compete with robots or machines (Fitriyah, 2019) (Sabaruddin, 2022). In addition to the professionalism of educators in improving the competence of digitalization, educators are also required to develop and instill the character values of students in life (Lubis, 2020). For this reason, in the educational process, the role of educators cannot be replaced by robots or machines (Lubis, 2019). In the face of technological developments, educators must always support the learning process by integrating more innovative methods (Halili, 2019). The pattern of interaction between educators and students will tend to get bored more quickly when learning runs conventionally (Massie & Nababan, 2021). There is a need for creativity and innovation in the learning process by utilizing technology (Junaidi, 2019). According to Sudiarta, educators need to increase creativity to be able to create a good (Oktiani, 2017) and active (Rasam & Sari, 2018) learning environment by utilizing various sources to improve their competence as a whole (Sabaruddin, 2022).

However, there are still many educators who have not been able to upgrade their potential by the existing era (Muhlis, 2023). Many educators are still using products from the 80s (Sonia dkk., t.t.). If left unchecked, educators will find it difficult to balance the demands of education in the current era. One of the causes of the low level of education in Indonesia is the mismatch between the discipline and the teaching field (Dito & Pujiastuti, 2021). Many educators teach but not by their field of study (Kurniawan, 2016). This is due to the uneven distribution of educators in all regions. The mismatch has an impact on the learning process that is not maximized and the overall mastery of the material. (Sonia dkk., t.t.). The application of media is very important to make the learning process more meaningful and enjoyable. (Dewi, 2015).

Spin roll board media can make new things for them in learning. Especially in the subject of Pancasila Education. But the subject is considered quite difficult for some learners. The spin roll board media developed aims to assist educators in the teaching and learning process and make it easier for grade 2 students at SDI Bani

Hasyim to understand the material. This is by research conducted by Fitria Rahayu with the title "Development of Contextual Learning-Based Spin Media as a Class IV Thematic Learning Media at SD Negeri 25 Pagar Alam". The results of the study showed a practicality percentage of 94.6% and the students' response was 96.4%. The data shows that the media is very practical and suitable for use. (Rahayu, 2022).

In line with research by Alfika, et al on the title "Development of Spin Game Media Learning Media on the Material of My Obligatory Prayer for Class III Students in Elementary Schools" shows that Spin Game learning media is very valid for use in My Obligatory Prayer material, based on the assessment of media experts (94.2%), material experts (91.7%), and linguists (87.5%), with an average of 91.5%. This media is also very practical, as seen from the responses of students (95%) and teachers (88.4%). So, Spin Game is declared very valid and very practical for third-grade students of SDN 042 Radda (Iswar & Riawarda, 2024).

In addition, research by Irham, et al under the title "The Use of Rotating Wheel Media in Increasing Interest and Mathematics Learning Outcomes in Students" showed that the class average value at the time of the pre-test reached 27.14 and the average value in the cycle 1 test results reached 62.14 increased in cycle II by 81.42. While pre-action student learning interest reached 73.15 and after-action increased to 82.91 It can be concluded that the use of rotating wheel media can increase interest and learning outcomes in mathematics in class V UPT SPF SD Inpres Jongaya (Irham & Firdaus, 2024).

Spin roll media is adapted to the characteristics of elementary school children who are still in the concrete operational stage (Faizah dkk., 2023). Educators must be able to design learning that can build learners' curiosity (Hidayati, 2008). The advantages of spin roll media include being able to provide stimulus to students (Zuha Prisma dkk., 2023); creating a relaxed and fun learning process (Share, 2009); and arousing students' curiosity and enthusiasm (Wohlwend, 2013); and stimulate students' interest in learning and motivation to learn (Puspitasari & Rochmawati, 2022). The spin roll board media developed has been adapted to the characteristics of elementary school children and modified with games.

In addition to looking at student characteristics, age, and gender factors are some of the causes of the lack of learning media innovation by educators to create interesting learning. As happened to the homeroom teacher 2, who is a male teacher. He said that the lack of diligence and creativity in making learning media so that the learning process mostly uses the lecture method. In addition, the supporting media has not been maximized so students pay less attention to the educator's explanation. Educators also do not take advantage of the facilities available at school, such as the availability of printing machines. So learning activities make students bored, pay less attention to educators' explanations, and learning less meaningful. From these problems, researchers try to increase enthusiasm and interest in learning through the development of spin-roll board game media.

## B. Research Methods

The type of research that researchers use is a type of research with a research and development model or R&D (Research and Development) to create a product with appropriate provisions and stages. Media development in this study is to apply a development model that refers to the steps owned by Borg & Gall (Sugiyono, 2008).

This research is a small-scale research that is hindered by limited time. So the researcher simplified it into 6 stages of research. Among them are potential and problem analysis, product design, product development, product validation, product revision, product trial, and product revision.

The research subjects were 24 2<sup>nd</sup>-grade students of Bani Hasyim Singosari Islamic Elementary School. The objectives of the research development were (1) to determine the validity of the media developed through validation instruments given to material experts, media design experts, and learning practitioners and (2) to determine the attractiveness of the media through the attractiveness instrument given to 2<sup>nd</sup> grade students of SDI Bani Hasyim.

The data collection technique was carried out by asking written questions to the research subjects. The research data collection instrument used a Likert scale questionnaire with a scale range of 1-5. The validation results were analyzed by calculating the percentage with the following formula.

$$P = \frac{X_a}{X_m} \times 100\%$$

Description:

P = Total score of the assessment results by each validator

$X_a$  = sum of the scores of each parameter of the validation item results

$X_m$  = sum of the maximum scores of the validation results.

After data analysis was carried out, to determine the validity of the media developed, the average analysis score interpretation criteria were carried out as in the following table.

**Table 1.** Product Validity Percentage Assessment Criteria

Percentage (%)	Criteria
0 – 20	Very weak / unworthy / Invalid
21 – 40	Weak / Less Worthy / Less Valid
41 – 60	Sufficient / Adequate / Valid Enough
61 – 80	Strong / Eligible / Valid
81 – 100	Very Strong / Very Worthy / Very Valid

## C. Results and Discussion

### Media Development Process of Spin Roll Board

This research is research that produces a product. The development product is a spin roll board media in learning Pancasila Education on the material of symbols and symbols. To produce the media, researchers conducted a development process based on the Brog & Gall model with the following steps:

1) Potential and Problem Analysis

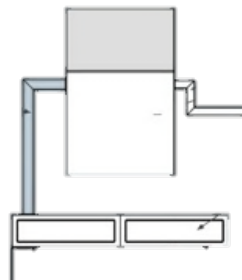
Problem analysis is obtained from the results of observations and interviews with researchers looking for problems in the learning process. The interview was conducted with the 2B homeroom teacher at SDI Bani Hasyim Singosari. The results of the interview with one of the teachers conveyed that the learning process of Pancasila Education subject material the symbols and symbols of Pancasila only utilized the package book. In addition, the learning method used is the drill method. One of the reasons he uses the drill method is because there are still many students who are weak in reading and writing sentences. The application of the drill method can improve writing skills (Natalita, R. K., Situngkir, N., & Rabbani, 2019).

The results of researchers' observations in the field show that there are still many class 2B students who do not pay attention to the teacher's explanations. Students' weak interest in learning makes the material still not understood by students. Based on the results of observations and interviews, it was a problem for the researcher. Based on the results of the needs analysis, researchers developed media that was able to generate student interest so that students could easily remember and understand the material.

## 2) Design

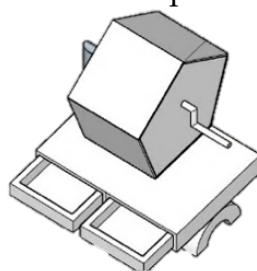
At this stage the researcher makes the initial series of media developed. Selection of components and materials used and determining material, outcomes, and learning objectives. The spin roll board media design is as follows:

- a) The spin roll board media development product is made of a combination of wood, iron, and acrylic. This media includes a type of 3 Dimensions in the form of a table board and if combined in the form of a pentagon.
- b) Media The spin roll board is in the form of a pentagon which is divided into 5 plots. Each plot has a picture of the Pancasila Symbol



**Figure 1:** Media Design from the Front

- c) Figure 1 is the front view of the spin roll board media design. The design is designed using the sketch up application. The purpose of this design is to facilitate researchers in further development.



**Figure 2.** Media Design from the Side

d) In Figure 2 is the rear view of the spin roll board media design. On the spin roll board media, two drawers are used for storage of material books, instruction manuals, and question cards. The question card is printed using art paper.

### 3) Development of

At this stage, the researchers carried out the following activities:

a) Developing spin roll board media is designed through sketching up in making designs to produce the following products:



**Figure 3.** Spin Roll Board Media

Figure 3 is the result of media development developed by researchers. On the spin roll board media, there is a QR code that contains a material guidebook and user manual so that the media can be accessed by anyone.

### b) Product Validation

#### 1) Material Expert Validation

The material validation results are obtained based on the questionnaire results. The following is a presentation of material expert validation data:

**Table 2.** Material Expert Validation Results

No.	Assessed Aspects	Score	Max Score	Category
1	The material presented is by the learning outcomes	5	5	Very appropriate
2	The material presented is by the learning objectives	5	5	Very appropriate
3	The material presented through the spin roll board media is easily understood by students	4	5	Appropriate
4	The material presented is by the characteristics of the learners	5	5	Very appropriate
5	The material is presented coherently	5	5	Very appropriate
6	The material presented is by the concept of Pancasila	5	5	Very appropriate
7	The material presented uses good and correct language	5	5	Very appropriate
8	The material is presented by the evaluation exercises	4	5	Appropriate

9	The evaluation exercises provided vary	4	5	Appropriate
10	The game instructions provide clear and easy-to-understand information.	5	5	Very appropriate
<b>Total</b>		<b>47</b>	<b>50</b>	<b>Valid</b>

Source: Author document

From Table 2, the questionnaire results are obtained as follows:

$$\rho = \frac{\sum x_i}{\sum x} \times 100 \%$$

$$\rho = \frac{47}{50} \times 100 \%$$

$$\rho = 94\%$$

Based on the results of the material expert validation, it shows that the overall score results obtained validity and suitability with a percentage of 94%. This shows that the media has valid qualifications and is suitable for application in the learning process.

## 2) Media Design Expert Validation

The results of the design expert validation were obtained based on the questionnaire results. The following is a presentation of media design expert validation data:

**Table 3: Media Expert Validation Results**

No	Assessed Aspects	Score	Max Score	Category
1	Design by the characteristics of students	5	5	Very appropriate
2	The accuracy of the selection of the size of the spin roll board media	5	5	Very appropriate
3	The images used are by the material	5	5	Very appropriate
4	Instructions for using the media are clear and can be understood by educators and students	4	5	Appropriate
5	There is an agency logo and developer profile	5	5	Very appropriate
6	The material used is durable	5	5	Very appropriate
7	Spin roll board media is child friendly and not dangerous to use	5	5	Very appropriate
8	The spin roll board media is child-friendly and not dangerous to use	5	5	Very appropriate
9	Ease of use of learning media	4	5	Appropriate

10	The accuracy of the layout of each media component	5	5	Very appropriate
<b>Total</b>		<b>48</b>	<b>50</b>	<b>Valid</b>

Source: Author document

From Table 3, the questionnaire results are obtained as follows:

$$\rho = \frac{\sum x_i}{\sum x} \times 100 \%$$

$$\rho = \frac{48}{50} \times 100 \%$$

$$\rho = 96\%$$

Based on the results of the material expert validation, it shows that the overall score results obtained validity and suitability with a percentage of 96%. This shows that the media has valid qualifications and is suitable for application in the learning process (Arikunto, 2019).

### 3) Learning practitioner

The spin roll board media was tested for feasibility and validity by learning practitioners, namely Karjono, S.Pd. The following is a presentation of learning practitioner validation data:

**Table 4.** Learning Practitioner Validation Results

No	Aspects Assessed	Score	Max Score	Category
1	Spin roll board media is suitable for use in Pancasila material	4	5	Appropriate
2	Papa spin roll media presented according to the needs of students	4	5	Appropriate
3	Spin roll board media is easy for educators and students to use	5	5	Very appropriate
4	He guidebook on the media is easy to understand	4	5	Appropriate
5	Spin roll board media can attract students' attention to learning	5	5	Very appropriate
6	He suitability of the question items with the contents of the material guidebook	4	5	Appropriate
7	Spin roll board media can help educators in teaching understanding of Pancasila material	4	5	Appropriate
8	Does not require special skills in using the media.	5	5	Very appropriate
9	The materials used in the media are not harmful to students	5	5	Very appropriate



10	The material used in the media is by the learning outcomes	4	5	Appropriate
<b>Total</b>		<b>44</b>	<b>50</b>	<b>Valid</b>

Source: Author document

From table 4, the questionnaire results are obtained as follows:

$$\rho = \frac{\sum x_i}{\sum x} \times 100 \%$$

$$\rho = \frac{44}{50} \times 100 \%$$

$$\rho = 88\%$$

Based on the overall score, the learning practitioner validation results obtained a percentage of 88%. This shows that the spin roll board media has valid qualifications and is suitable for implementation. It can be summarized the results of the validator's assessment in table 4:


**Table 4.** Validator Assessment Results

No	Validator	Percentage	Description
1	Material expert	94%	Valid
2	Media design expert	96%	Valid
3	Learning practitioner	88%	Valid

#### c) Product Revision

Revisions are made on suggestions and criticisms from material experts, media design experts, and learning practitioners. The revision aims to correct the shortcomings and errors of the developed product. (Sugiyono, 2013). Revisions in this development take the form of changes to material sentences and media appearance. The following is advice from validators regarding spin roll board media:

**Table 5.** Product Revision

No	Description	Before	After
1	Adding barcode to media display		

2	Adding questions in the form of a story	
3	Improve learning objectives and add content on the value and application of the Pancasila precepts in the material guidebook.	
4	Added an example of the flow of media usage	

Source: Author document

#### d) Product Trial

Media products that have been validated are tested on 24 students in class 2B SDI Bani Hasyim Singosari. This trial was conducted to determine student responses to the media developed. The application of this media was carried out in two meetings. In the first meeting, learning was carried out for the initial introduction of students to the media by reviewing the previous material. In the second meeting, students were given a questionnaire regarding student responses to the attractiveness of the spin roll board media with 24 student respondents. The media attractiveness questionnaire consists of two answers "Yes" with a score of 10 and an answer "No" with a score of 0. The following are the results of the spin roll board media attractiveness questionnaire:

**Table 6:** Results of Media Attractiveness Questionnaire of Spin Roll Board

No	Student Name	Assessment Score							Score	Score Max	Value (%)
		1	2	3	4	5	6	7			
1	Ak	10	10	10	10	10	0	10	60	70	86
2	Al	10	10	0	10	10	10	10	60	70	86
3	Dk	10	0	10	10	10	10	10	60	70	86
4	Ab	10	10	10	0	10	10	0	50	70	71
5	Fi	10	10	10	10	10	10	10	70	70	100
6	Bl	10	10	10	10	10	0	10	60	70	86

7	Ks	10	10	10	10	10	10	10	70	70	100
8	Mq	10	10	10	10	10	10	10	70	70	100
9	Am	10	10	10	10	10	0	10	60	70	86
10	Fq	10	0	10	10	10	10	10	60	70	86
11	Fl	10	10	10	10	10	10	10	70	70	100
12	Fr	10	10	10	10	10	10	10	70	70	100
13	Nr	10	10	10	10	10	0	10	60	70	86
14	Rr	10	10	10	10	10	10	10	70	70	100
15	Az	10	10	10	10	10	10	10	70	70	100
16	Sn	10	10	10	0	10	10	10	60	70	86
17	Sr	10	10	10	10	0	10	10	60	70	86
18	As	10	10	10	10	0	10	10	60	70	86
19	Af	10	10	10	10	10	10	10	70	70	100
20	Ay	10	10	10	10	10	10	10	70	70	100
21	Ar	10	10	10	10	10	10	0	60	70	86
22	Jh	10	10	10	10	10	10	10	70	70	100
23	Rf	10	10	10	0	10	10	10	60	70	86
24	Dz	10	10	10	10	10	10	0	60	70	86
<b>Total</b>									<b>1530</b>	<b>1680</b>	

Source: Author document

From Table 6, the questionnaire results are as follows:

$$\rho = \frac{\sum x_i}{\sum x} \times 100 \%$$

$$\rho = \frac{1530}{1680} \times 100 \%$$

$$\rho = 91\%$$

Based on the questionnaire data, it shows that the spin roll board media is exciting with a percentage of 91%. This indicates that the learning media is included in a very interesting category.

#### D. Conclusion

Based on the results of research on the development of spin roll board media, it can be concluded as follows:

1. The development of spin roll board media was developed using the Borg & Gall method consisting of ten stages which were then simplified into 6 steps by considering the limitations of time and cost. The six stages are analysis, design, development, validation, revision, and trial, The media developed has gone through the validation stages of material experts, media experts, and learning practitioners with the results: 1) The percentage value of material expert validation is 94% which shows the results that the material in the media is valid with no revisions. 2) The percentage value of media expert validation of 96% indicates that the media is valid for use in the learning process with no revisions. 3) The percentage value of learning practitioner validation obtained a value of

- 88%. This indicates that the media is valid to be applied in learning in grade 2. From the three validators, it shows that the spin roll board media is in the valid category and is suitable for use in the learning process on the material of the symbols and symbols of Pancasila in grade 2.
2. The results of the media attractiveness questionnaire response obtained a total score of 1,530 with a percentage of 91%. Entered in a very interesting category. This shows that students are enthusiastic when using the media. In addition, the aspect of time constraints causes several aspects of media development and evaluation to be less than optimal.

#### **E. Author Contribution Statement**

This research was conducted by NF as the first author who contributed in creating media and conducting research. MF as the second author who contributed in providing direction for media development and writing articles. KJ as a teacher who provided input on the learning process. Students as objects and respondents of the research.

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