

## Development of Interactive Media Based on Project Based Learning (PjBL) Assisted by Scratch in Islamic Religious Education Subject

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**Abstract.** This study aims to develop an interactive learning media based on Project Based Learning (PjBL) assisted by the Scratch application in the Islamic Religious Education subject, particularly on the topic of the Six Pillars of Faith for students of SDIT Izzatul Islam Getasan. The background of this research stems from the need for innovative and engaging learning media that suit the characteristics of 21st-century learners who are familiar with digital technology. The research model used is Research and Development (R&D), adapting the steps of Borg and Gall, which include: (1) needs analysis and preliminary study, (2) product planning, (3) initial product development, (4) expert validation, (5) product revision, (6) individual trials, (7) small group trials, and (8) field (operational) trials. The test subjects consisted of material experts, media experts, educational practitioners, and first-grade

students of SDIT Izzatul Islam Getasan. The results show that the interactive learning media based on PjBL assisted by Scratch is considered feasible and effective as a learning tool. Material expert validation achieved an average score of 4.00 (Good category), media experts 3.25 and 3.75 (Good category), and practitioner validation 4.00 (Good category). Individual trials obtained an average score of 35, small group trials 55, and operational field trials 114.5 — all in the Good category. Therefore, the interactive media based on PjBL assisted by Scratch is effective in improving students' understanding and learning motivation on the topic of the Six Pillars of Faith, and can serve as an innovative, creative, and technology-based alternative for Islamic Religious Education learning.

## Introduction

Religious education obtained by children from the family environment plays an important role in equipping them to face rapid progress. Muslim families, as part of society, have a great responsibility in educating the next generation so they are protected from various deviant behaviors. Therefore, improving educational patterns within the family is very important and requires serious attention, as stated in QS At-Taubah 122. "And it is not for the believers to go forth [to battle] all at once. For there should separate from every division of them a group [remaining] to obtain understanding in the religion and warn their people when they return to them that they might be cautious." (Setyawan, 2021)

The development of information and communication technology has had a significant impact on various aspects of life, including the education sector. Upon closer observation, we can see the behavior and tendencies of the millennial generation in interacting with the internet related to education. They tend to prefer visually presented information, such as through YouTube platforms and online games, compared to traditional narrative and textual forms, such as reading printed books or listening to lecturers (Yumarni, 2019).

Education today is strongly influenced by advancements and discoveries in science and technology (IPTEK). The more advanced the application of science and technology in the learning process, the higher the quality of education in a country. The impact of these developments is clearly seen in various efforts to reform education systems and learning methods, both in physical aspects such as educational facilities and non-physical aspects such as improving the quality of educators (Amatullah et al., 2022). In this modern and continuously evolving era, we witness the emergence of generations that adapt and change according to the characteristics of their time. Previously, education was often divided by dualism that created groupings within the education system. The social impact of this dualism can lead to fragmented levels of public knowledge, resulting in diverse perspectives on what is considered ideal education, depending on their educational background (Jurnal, 2025).

Over time, the world of education has undergone very rapid changes, especially with the emergence of various technological innovations that play an important role in supporting and improving the quality of learning. Advances in information technology are progressing rapidly, transforming many aspects of modern life (Pitri et al., 2022). In this context, teachers update the learning process through the development of learning media. Therefore, the role of media in the teaching and learning process is very important. One method that can be applied by teachers to increase students' learning motivation is by using interesting and effective learning media. This will make students more interested and motivated during the learning process (Maimunah & Rosadi, 2021).

Based on the essence of the learning process, learning media function as tools for sending and receiving messages, where the recipients are students and even educators themselves. These messages are delivered by educators or other sources through verbal means, both spoken and written, as well as through nonverbal or visual communication symbols (Arif & Dian Hidayati, 2024). The use of interactive learning media can facilitate the teaching and learning process by making the meaning of the message clearer. This helps achieve educational goals effectively and efficiently. Media, in this case, serve as tools used to convey information to recipients so they can understand it well (Ayu Peritami et al., 2021). Technology offers various ways that make it easier for us to access and acquire new knowledge in daily life. In education, there are many diverse learning applications that can be used for both independent and group learning (Rusyd et al., 2024).

To address existing problems, the development of appropriate learning media is essential. Teachers need to innovate by using engaging learning media. The use of media has several benefits, such as overcoming limitations of space, time, and teaching resources, as well as maximizing sensory functions. Media can also clarify messages, enable independent learning, create shared perceptions, and increase learning enthusiasm. Educational media function as tools, methods, and techniques used to facilitate communication and interaction between teachers and students during the learning process in schools (Mulanisya et al., 2022). Currently, the role of educators is not limited to delivering material or acting as facilitators who rely solely on textbooks. Educators are expected to be more thorough in implementing the learning process, including in selecting methods, learning models, and media used. This is intended to make teaching and learning activities more effective and engaging (Belajar, 2024).

Project-Based Learning (PjBL) has great potential to activate motivational factors and increase students' learning motivation by giving them responsibility for the projects they work on

and opportunities to develop their skills (Iv, 2024). The Project-Based Learning (PjBL) model is an approach that encourages students to develop decision-making, problem-solving, and creative skills. Through this model, students are trained to think creatively and develop a strong sense of curiosity. They are encouraged to explore and overcome various challenges, allowing their creativity to grow optimally. This creative thinking ability is especially important in mathematics learning (Pjbl et al., 2022).

One of the causes of the low average scores in Islamic Religious Education for second-grade students at SDIT Izzatul Islam Getasan is the lack of interactive learning and engaging learning models. Based on data obtained from 112 students, the average score for Islamic Religious Education in learning achievements related to understanding the Pillars of Faith is only 78. In addition, many Islamic Education teachers have not utilized available media such as smart TVs. They tend to teach using traditional methods that rely on lectures or teacher-centered approaches. This also contributes to the low average scores in Islamic Religious Education. Therefore, the author is motivated to conduct research entitled: “Development of Interactive Learning Media Based on Project-Based Learning (PjBL) Method in Islamic Religious Education Subjects” to increase student engagement in the learning process and improve learning outcomes.

## Method

This study employed a Research and Development (R&D) approach aimed at producing and validating an educational product in the form of interactive learning media. In line with the objectives of this development research, the data collected consisted of two main types. First, data related to the process of developing the interactive learning media based on Project-Based Learning (PjBL) assisted by Scratch. This data included information gathered during the design, development, and validation stages of the media, particularly for the topic of recognizing the Pillars of Faith in Islamic Religious Education (PAI) for first-grade students at SDIT Izzatul Islam Getasan. The data also encompassed feedback, suggestions, and evaluations provided by media experts and subject matter experts, which were used as a basis for revising and improving the product. Second, data related to the feasibility of the developed media. This data was obtained from the results of product trials involving both teachers and students. The trials were conducted in stages, including limited trials and broader field testing, to evaluate the practicality, effectiveness, and attractiveness of the interactive media when used in real classroom settings.

The primary data collection technique used in this study was a questionnaire. The instruments were adapted from previous Research and Development studies (Nuryani, 2013) and modified to suit the context of this research. The questionnaire for media experts and practitioners was designed to assess the quality of the media in terms of its physical appearance, color composition, proportionality, and usability. This instrument evaluated aspects such as the type of media used, ease of access, practicality in use, and suitability with students' developmental levels. The questionnaire for subject matter experts focused on evaluating the appropriateness of the content. It examined the alignment between core competencies and basic competencies, the suitability of indicators with competencies, the relevance of learning activities to the indicators, and the compatibility between the material and the developed learning media. Meanwhile, the questionnaire for students was intended to capture their responses toward the use of the media. It assessed whether the media helped them understand the material, the clarity of usage instructions, the ease of accessing the media, and the attractiveness of the media during the learning process.

The data collected in this study were categorized into qualitative and quantitative data. Qualitative data were obtained from expert validation results in the form of comments, suggestions, and feedback, which were used as references for revising and improving the product. Quantitative data were obtained from the scores given by experts, teachers, and students during validation and

field trials. The data analysis in this study employed descriptive analysis techniques, which were used to interpret the results of expert validation, small group trials, and field testing. The qualitative data obtained from questionnaires were first converted into quantitative data using a four-point rating scale, consisting of categories: very good, good, poor, and very poor, with corresponding scores of 4, 3, 2, and 1.

The total score obtained from the questionnaire responses was calculated by summing all item scores. With a total of 12 items, the maximum possible score was 48. The obtained scores were then converted into percentages using the formula:

$$\text{Percentage} = \frac{\text{Total Score Obtained}}{\text{Maximum Score}} \times 100\%$$

The resulting percentages were interpreted based on predetermined criteria: a score of 86 – 100% was categorized as very good, 71 – 85% as good, 56 – 70% as poor, and ≤55% as very poor. A product was considered feasible if it met at least the “good” category. Through this analysis process, the researcher was able to determine the level of validity and feasibility of the developed interactive learning media and make necessary revisions to improve its quality before final implementation.

## Results and Discussion

### Results of Initial Product Development

Development Procedure of Interactive Learning Media Based on Project-Based Learning (PjBL) Assisted by Scratch. The development procedure of interactive learning media based on Project-Based Learning (PjBL) assisted by Scratch follows the steps proposed by Borg and Gall as follows:

#### 1. Conducting Information Gathering and Preliminary Study

Information was collected through literature studies and expert consultations. Data related to media were obtained through literature review on Scratch-based learning media models, while data related to the material were gathered by examining the 2013 Curriculum for Grade I, particularly the theme of the Pillars of Faith, sub-theme mentioning the Pillars of Faith. The basic competencies and indicators used in this learning media are as follows:

**Table 1.** Learning Material on the Pillars of Faith

| Learning Subject            | Basic Competency                 | Indicator                                                   |
|-----------------------------|----------------------------------|-------------------------------------------------------------|
| Islamic Religious Education | Recognizing the Pillars of Faith | Students are able to correctly mention the Pillars of Faith |

#### 2. Conducting Product Planning

Product planning was carried out through the following stages:

##### a. Planning Materials and Equipment

Planning and selecting appropriate materials and equipment are important aspects in developing a media product. The development of interactive learning media based on Project-Based Learning (PjBL) assisted by Scratch began with planning the required materials and tools. The materials and equipment used are as follows:

##### 1) Materials:

##### a) Images related to the Pillars of Faith

- b) Music relevant to the Pillars of Faith
- c) Texts supporting the Pillars of Faith

2) Equipment:

Laptop/computer, mobile phone, recording microphone, and internet connection

b. Planning the Development Process

Before carrying out the development process, careful planning is required to ensure that the process runs smoothly and produces a product that meets needs and is feasible for use. The planning stage includes the development of the initial product and continues until field feasibility testing.

3. Developing the Initial Product Form

The steps in developing the initial product are as follows:

- a. Open the website <http://scratch.mit.edu>
- b. Log in first to ensure the project is saved
- c. Click to remove the default cat sprite
- d. Click "Choose a Backdrop" in the bottom-right corner, then select a background image related to the Pillars of Faith
- e. Click "Control," then select "When clicked"
- f. Click "Looks," then select "Hide"
- g. Click "Control," then select "When I receive"

4. Conducting Expert Validation

Validation testing was conducted by an expert team consisting of:

a. Material Expert

The material expert was Mrs. Winarni, S.Pd., M.Pd., a tutor at Universitas Terbuka and Vice Principal of Curriculum at SDIT Izzatul Islam Getasan. Material validation was conducted in one stage. The purpose of this validation was to assess the feasibility of the media in terms of the content presented during the learning process. The validation was conducted using a material expert questionnaire.

b. Media Expert

The media expert was Mr. Muhamad Busro, S.Pd., an ICT teacher at SDIT Izzatul Islam Getasan. The media expert evaluated the feasibility of the interactive learning media in terms of physical appearance, safety, durability of materials, and suitability with the characteristics of first-grade elementary students.

c. Practitioner

The practitioner involved in validating the media was the principal of SDIT Izzatul Islam Getasan, Mr. Burhannudin, S.Pd. The practitioner validation was conducted in one stage.

5. Conducting Product Trials and Revisions

The data collection instrument used in the trials was a closed-ended questionnaire (attached). The product trials were conducted in three stages: individual trials, small group trials, and operational trials. The individual trial was conducted on October 15, 2025, involving 10 students. The findings indicated that some students had difficulty understanding the instructions because they were not yet able to read. This issue was addressed by simplifying the questions into shorter answers. The small group trial was conducted on October 17, 2025, involving 15 students. Similar issues were found, where some students still had difficulty understanding the instructions. This was addressed by reading the questions aloud to the students. The operational trial was conducted on October 20, 2025,

involving 29 students. The revision notes indicated that some students were still confused about how to complete the tasks. This issue was resolved by providing a tutorial on how to complete the tasks. The subjects in all three trial stages were selected randomly.

## Product Trial Results

The interactive learning media based on Project-Based Learning (PjBL) assisted by Scratch was validated by material experts and media experts. The validation results were used as a basis for revising and improving the developed media. The media product that passed validation in terms of both material and media aspects was then tested in the field through individual trials, small group trials, and operational trials. Students not only acted as trial subjects but also as validators. They were given the opportunity to provide comments and suggestions on the interactive learning media, which were then used as a reference for product improvement. The instrument used in the trials was a questionnaire, and the data obtained were qualitative. The inclusion of suggestion and comment sections was intended to strengthen the validator assessment questionnaire.

### 1. Material Expert Validation Data

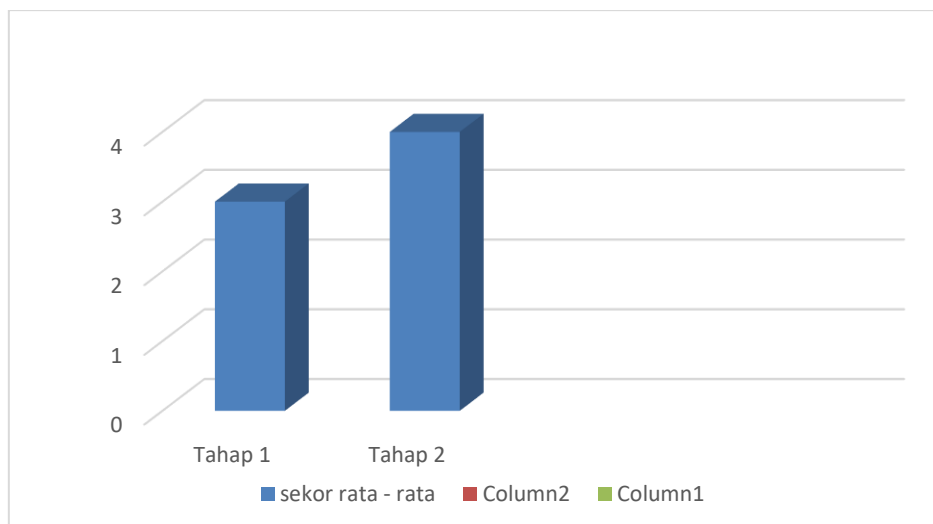
The first material expert validation was conducted by Mrs. Winarni, M.Pd., as the curriculum coordinator and Al-Qur'an teacher at SDIT Izzatul Islam Getasan on October 1, 2025. The assessment used a scale of 1 = very poor, 2 = poor, 3 = fairly good, and 4 = good. The results are as follows:

| No | Assessed Aspects                                       | Score | Category    |
|----|--------------------------------------------------------|-------|-------------|
| 1  | Alignment of Basic Competencies with Core Competencies | 3     | Fairly Good |
| 2  | Alignment of Indicators with Basic Competencies        | 3     | Fairly Good |
| 3  | Alignment of Learning Activities with Indicators       | 3     | Fairly Good |
| 4  | Suitability of the material with the developed media   | 3     | Fairly Good |
|    | Total                                                  | 12    | Fairly Good |
|    | Average                                                | 3     |             |

Based on these results, the material was categorized as "Fairly Good," therefore revision was required. The revision note indicated that the indicators were not specific enough. After revision, the second validation was conducted on October 7, 2025, with the following results:

| No | Assessed Aspects                                       | Score | Category |
|----|--------------------------------------------------------|-------|----------|
| 1  | Alignment of Basic Competencies with Core Competencies | 4     | Good     |
| 2  | Alignment of Indicators with Basic Competencies        | 4     | Good     |
| 3  | Alignment of Learning Activities with Indicators       | 4     | Good     |
| 4  | Suitability of the material with the developed media   | 4     | Good     |
|    | Total                                                  | 16    | Good     |
|    | Average                                                | 4     |          |

The second-stage material validation data above indicate that the material accompanying the Interactive Learning Media based on Project-Based Learning (PjBL) assisted by Scratch falls into the "Good" category with an average score of 4. The results of the validation from the material expert state that the material can be tested in the field without revision. The chart illustrating the development of the material validation results of the product is presented as follows:



## 2. Media Expert Validation Data

The media expert validation was conducted by Mr. Muhamad Busro, S.Pd., an ICT teacher at SDIT Izzatul Islam Getasan, in two stages. The first stage was carried out on October 8, 2025. The media was assessed using a rating scale of 1 = very poor, 2 = poor, 3 = fairly good, and 4 = good. The results of the media expert's evaluation are presented as follows:

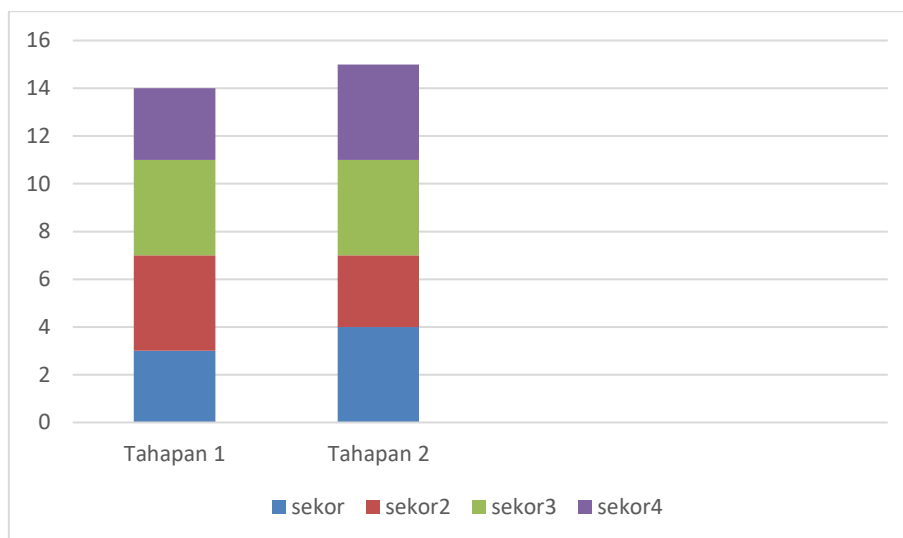
| No      | Assessed Aspects                                        | Score | Category    |
|---------|---------------------------------------------------------|-------|-------------|
| 1       | Type of media used                                      | 3     | Fairly Good |
| 2       | Ease of media access                                    | 3     | Fairly Good |
| 3       | Practicality of media usage                             | 3     | Fairly Good |
| 4       | Suitability of media with students' developmental level | 4     | Good        |
| Total   |                                                         | 13    | Fairly Good |
| Average |                                                         | 3.25  |             |

The results of the first-stage media expert validation indicate that the Interactive Learning Media based on Project-Based Learning (PjBL) assisted by Scratch falls into the "Fairly Good" category with an average score of 3.25. The revision notes provided by the media expert included the need to add audio to the questions and to adjust the background sound to better match the theme. The next step after revision was the second-stage media expert validation, which was conducted on October 14, 2025. The results of the second validation are as follows:

| No      | Assessed Aspects                                        | Score | Category    |
|---------|---------------------------------------------------------|-------|-------------|
| 1       | Type of media used                                      | 4     | Fairly Good |
| 2       | Ease of media access                                    | 3     | Fairly Good |
| 3       | Practicality of media usage                             | 4     | Fairly Good |
| 4       | Suitability of media with students' developmental level | 4     | Good        |
| Total   |                                                         | 15    | Good        |
| Average |                                                         | 3.75  |             |

The second-stage media validation data above indicate that the Interactive Learning Media based on Project-Based Learning (PjBL) assisted by Scratch falls into the "Good" category with an average score of 3.75. The results of the validation from Media Expert I state that

the media can be tested in the field without revision. The chart illustrating the development of the Scratch media product validation results is presented as follows:



### 3. Practitioner Validation Data

The practitioner validation was conducted by Mr. Ahmad Burhanudin, S.Pd., the Principal of SDIT Izzatul Islam Getasan, in one stage on October 2, 2025. The media was assessed using a rating scale of 1 = very poor, 2 = poor, 3 = fairly good, and 4 = good. The results of the practitioner's evaluation are presented as follows:

| No      | Assessed Aspects                                        | Score | Category    |
|---------|---------------------------------------------------------|-------|-------------|
| 1       | Type of media used                                      | 4     | Fairly Good |
| 2       | Ease of media access                                    | 4     | Fairly Good |
| 3       | Practicality of media usage                             | 4     | Fairly Good |
| 4       | Suitability of media with students' developmental level | 4     | Good        |
| Total   |                                                         | 16    | Good        |
| Average |                                                         | 4     |             |

The results of the practitioner validation indicate that the Interactive Learning Media based on Project-Based Learning (PjBL) assisted by Scratch falls into the "Good" category with an average score of 4.

### 4. Individual Trial Data

The individual trial of the Interactive Learning Media based on Project-Based Learning (PjBL) assisted by Scratch was conducted after the validation process was completed and showed that the media was feasible to be tested in the field without revision. The individual trial involved ten students of SDIT Izzatul Islam Getasan on October 15, 2025. The following are the scoring categories for the individual trial:

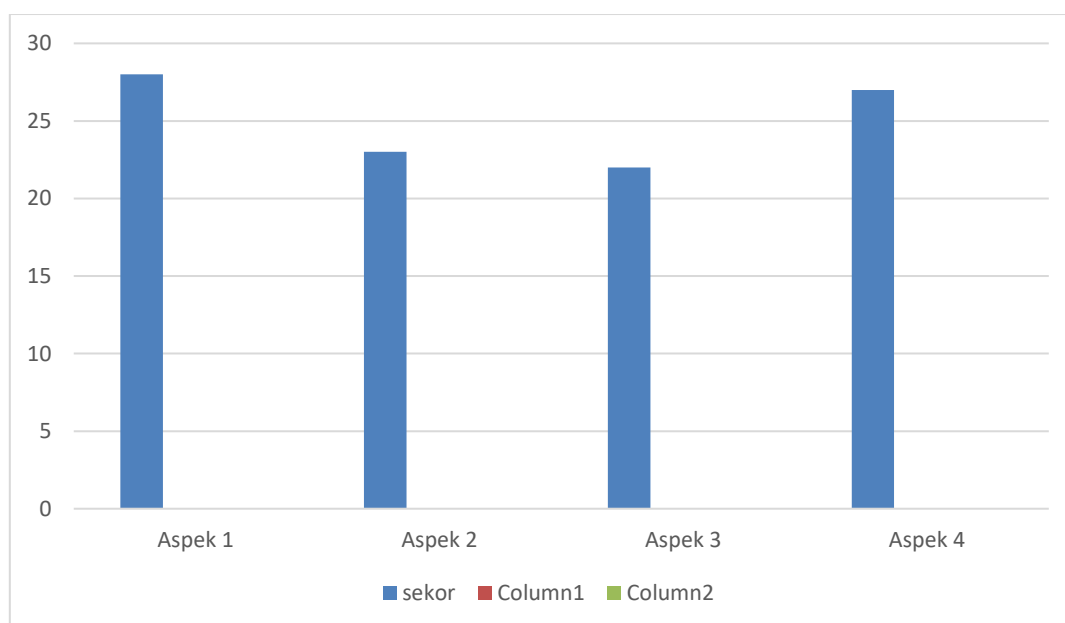
| Score | Category    |
|-------|-------------|
| 31–40 | Good        |
| 21–30 | Fairly Good |
| 11–20 | Poor        |
| 1–10  | Very Poor   |

The scoring categories are based on Suharsimi Arikunto (2010: 192), who divides the maximum score by the number of predetermined categories. In the individual trial involving

seven students, the maximum score obtained was 40, and since there are four categories, the scoring is divided into four intervals. The results of the individual trial are presented in the following table:

| No          | Assessed Aspects                    | Total Score | Category |
|-------------|-------------------------------------|-------------|----------|
| 1           | Helps in understanding the material | 38          | Good     |
| 2           | Clarity of media usage instructions | 33          | Good     |
| 3           | Ease of media access                | 32          | Good     |
| 4           | Media attractiveness                | 37          | Good     |
| Total Score |                                     | 140         | Good     |
| Average     |                                     | 35          |          |

The results of the individual trial above indicate that the Interactive Learning Media based on Project-Based Learning (PjBL) assisted by Scratch falls into the "Good" category with an average score of 35. The results of the individual trial can be presented in the form of the following chart:



## 5. Small Group Trial Data

The small group trial of the Interactive Learning Media based on Project-Based Learning (PjBL) assisted by Scratch was conducted after the individual trial stage was completed. The small group trial involved fifteen students of SDIT Izzatul Islam Getasan on October 17, 2025. The following are the scoring categories for the small group trial:

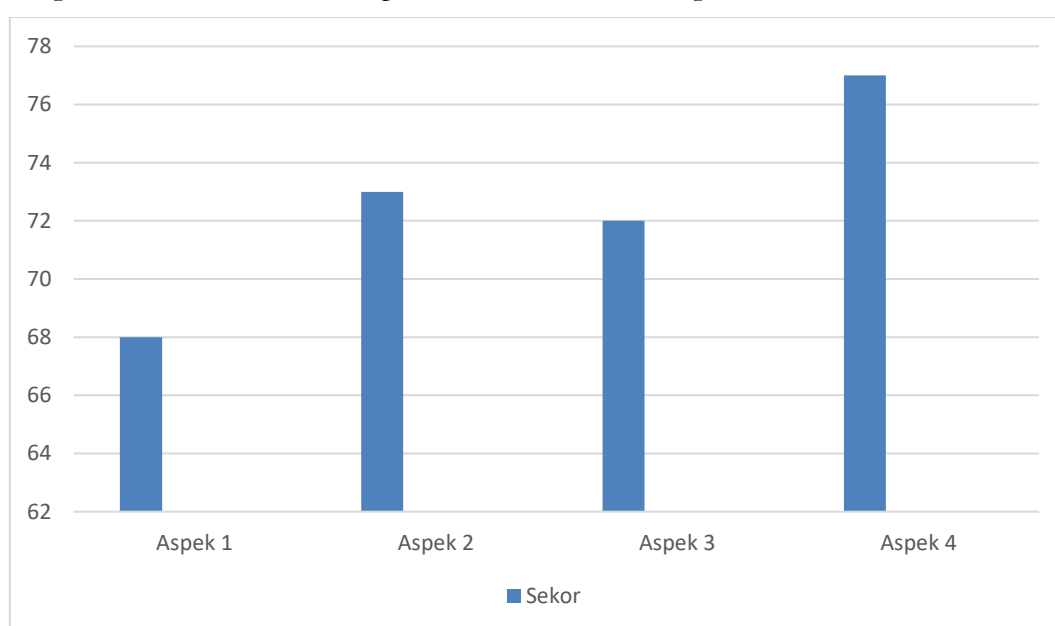
| Score | Category    |
|-------|-------------|
| 47–62 | Good        |
| 31–46 | Fairly Good |
| 16–30 | Poor        |
| 1–15  | Very Poor   |

The scoring categories are based on Suharsimi Arikunto (2010: 192), who divides the maximum score by the number of predetermined categories. In the small group trial involving fifteen students, the maximum score obtained was 220, and since there are four

categories, the scoring is divided into four intervals. The results of the small group trial can be presented in the following table:

| No          | Assessed Aspects                    | Total Score | Category |
|-------------|-------------------------------------|-------------|----------|
| 1           | Helps in understanding the material | 58          | Good     |
| 2           | Clarity of media usage instructions | 53          | Good     |
| 3           | Ease of media access                | 52          | Good     |
| 4           | Media attractiveness                | 57          | Good     |
| Total Score |                                     | 220         | Good     |
| Average     |                                     | 55          |          |

The results of the small group trial above indicate that the Interactive Learning Media based on Project-Based Learning (PjBL) assisted by Scratch falls into the "Good" category with an average score of 55, and can be presented in the following chart:



## 6. Operational Product Trial Data

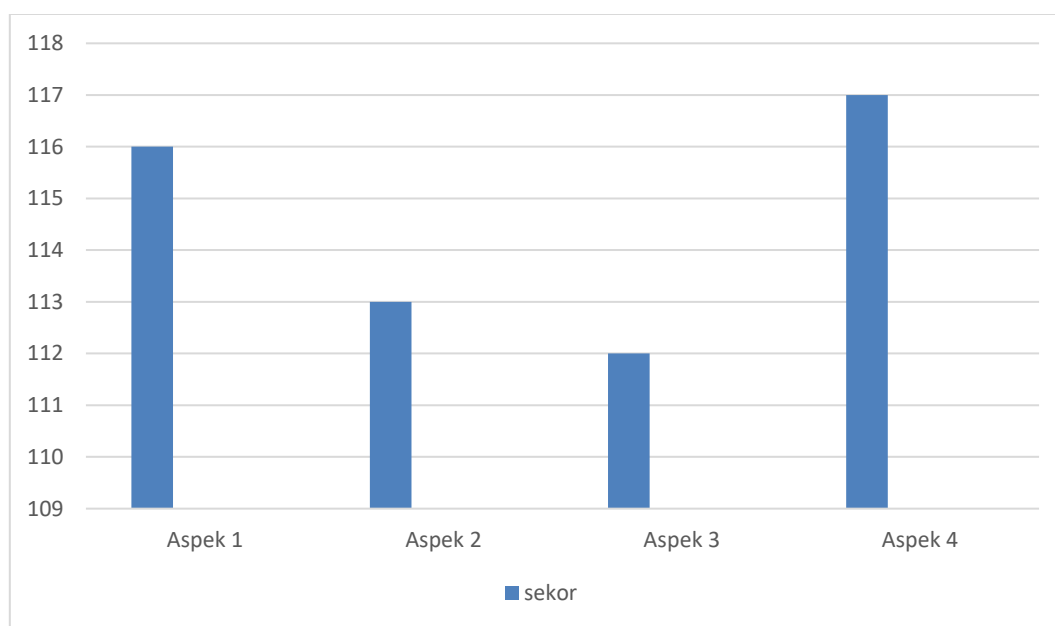
The operational trial of the Interactive Learning Media based on Project-Based Learning (PjBL) assisted by Scratch was conducted after the small group trial stage was completed. The operational trial involved 29 students of SDIT Izzatul Islam Getasan on October 3, 2025. The following are the scoring categories for the operational trial:

| Score  | Category    |
|--------|-------------|
| 89–117 | Good        |
| 59–87  | Fairly Good |
| 30–58  | Poor        |
| 1–29   | Very Poor   |

The scoring categories are based on Suharsimi Arikunto (2010: 192), who divides the maximum score by the number of predetermined categories. In the operational trial involving twenty-nine students, the maximum score obtained was 458, and since there are four categories, the scoring is divided into four intervals. The results of the operational trial can be presented in the following table:

| No | Assessed Aspects                    | Total Score | Category |
|----|-------------------------------------|-------------|----------|
| 1  | Helps in understanding the material | 116         | Good     |
| 2  | Clarity of media usage instructions | 112         | Good     |
| 3  | Ease of media access                | 113         | Good     |
| 4  | Media attractiveness                | 117         | Good     |
|    | Total Score                         | 458         | Good     |
|    | Average                             | 114.5       |          |

The results of the operational trial above indicate that the Interactive Learning Media based on Project-Based Learning (PjBL) assisted by Scratch falls into the "Good" category with an average score of 114.5. The chart of the operational trial results is presented as follows:



The results of the individual trials, small group trials, and operational trials indicate that the Interactive Learning Media based on Project-Based Learning (PjBL) assisted by Scratch is feasible to be used as a supporting tool in learning activities for the subtopic of recognizing the Pillars of Faith.

### Product Revision

Revisions were made based on suggestions and feedback provided by the material experts and media experts. The aspects revised in the module are as follows:

1. **Material**  
From the material perspective, the revisions focused on the learning indicators, which were considered insufficiently specific. The details are as follows the revision suggested by the material expert was based on notes indicating that the core competency "having faith and devotion to God Almighty" and the indicator "recognizing the Pillars of Faith" were too general. Therefore, the indicator was refined to be more specific, namely focusing on "mentioning the Pillars of Faith."
2. **Media**  
Revisions suggested by the media expert included adding audio to the questions so that students who are not yet able to read can understand the meaning of the questions. In addition, it was necessary to adjust the background sound to match the learning material.

These revisions were implemented by adding audio when questions appear and aligning the background sound with the content.

## Final Product Review

The final product is the result of improvements based on revision notes obtained through the expert validation process and trial results. The scores obtained from validation and product trials, as previously described, indicate that the Interactive Learning Media based on Project-Based Learning (PjBL) assisted by Scratch is feasible to be used as a learning medium. The scores fall into the “Good” category. The average scores obtained are as follows: the material expert score is 4, the media expert scores are 3.25 and 3.75, and the practitioner score is 4. The average scores from the individual trial, small group trial, and operational trial are 35, 55, and 114.5, respectively. During both the validation and trial stages, several revision notes were identified. The following are the improvements suggested by the expert team:

1. In the individual trial, the issue was related to the accessibility of the application that had been downloaded and sent to mobile phones, which was still slow when opened.
2. In the small group trial, similar issues were found regarding application accessibility, as certain mobile devices were not yet capable of accessing it properly.
3. In the operational trial, the instructions for completing the tasks were not sufficiently clear, causing students to answer based on their own understanding.

## Conclusion

The Interactive Learning Media based on Project-Based Learning (PjBL) assisted by Scratch is considered feasible and appropriate for use when, during its development process, it achieves validation results from expert teams and all three stages of product trials fall into the “Good” category, and revisions have been made based on feedback obtained from validation and trial stages to improve the product. The material expert validation results obtained an average score of 4, categorized as “Good.” The media expert validation results obtained average scores of 3.25 and 3.75, both categorized as “Good.” The practitioner validation results obtained an average score of 4, also categorized as “Good.” Based on these validations, the material, media, and practitioner experts stated that the Interactive Learning Media based on Project-Based Learning (PjBL) assisted by Scratch is feasible to be tested in the field without revision. The product trials consisted of three stages. The individual trial obtained an average score of 35, the small group trial obtained a score of 55, and the operational trial obtained an average score of 114.5. The results of all three trials indicate that:

The development of Interactive Learning Media based on Project-Based Learning (PjBL) assisted by Scratch in Islamic Religious Education falls into the “Good” category and is feasible to be used as a supporting learning medium in Islamic Religious Education, particularly for the core competency of having faith and devotion to God Almighty and the indicator of recognizing the Pillars of Faith for first-grade students at SDIT Izzatul Islam Getasan.

The development of Interactive Learning Media based on Project-Based Learning (PjBL) assisted by Scratch in Islamic Religious Education is highly effective as a supporting learning medium, especially for the core competency of having faith and devotion to God Almighty and the indicator of recognizing the Pillars of Faith for first-grade students at SDIT Izzatul Islam Getasan.

## Bibliography

- Amatullah, D. C., Sutrisno, J., & others. (2022). Pengembangan media pembelajaran interaktif pada materi bangun ruang. *Jurnal Ilmiah Kependidikan*, 15(1).
- Arif, S., & Hidayati, D. (2024). Analisis kebijakan pendidikan dalam perspektif madrasah. *Syntax Idea*, 6(3), 1138–1148. <https://doi.org/10.46799/syntax-idea.v6i3.3057>
- Arikunto, S. (2010). *Prosedur penelitian: Suatu pendekatan praktik*. Jakarta: Rineka Cipta.
- Ayu Peritami, S., Siska Afifah, A., Khoerul Rijal, A., Suhartono, I., & Rosyid Ridlo, M. (2021). Membangun logika coding melalui Scratch dengan pembuatan game. *Jurnal Kreativitas Mahasiswa Informatika*, 2.
- Maimunah, M., & Rosadi, K. I. (2021). Faktor yang mempengaruhi sistem manajemen pendidikan Islam. *Jurnal Ilmu Manajemen Terapan*, 2(1), 249–265.
- Mulanisya, P., Wardani, A., Putera Permana, E., Dwi, D., & Wenda, N. (2022). Pengembangan media game Scratch pada pembelajaran IPA kelas V materi alat pernapasan pada hewan. *Sains dan Teknologi*, 9(1), 40–49. <https://doi.org/10.47668/edusaintek.v8i1.375>
- Nuryani. (2013). *Pengembangan media pembelajaran dalam penelitian dan pengembangan (R&D)*.
- Pitri, A., Ali, H., & Anwar Us, K. (2022). Faktor-faktor yang mempengaruhi pendidikan Islam: Paradigma, berpikir kesisteman dan kebijakan pemerintah. *Jurnal Ilmu Hukum, Humaniora dan Politik*, 2(1), 23–40. <https://doi.org/10.38035/jihhp.v2i1.854>
- Rusyd, A., Ishom, M., Ayatillah, F., Hunaida, W. L., & Muqit, A. (2024). Pengembangan pembelajaran berbasis teknologi dalam pendidikan Islam. <https://doi.org/10.61094/arrusyd.2830-2281.333>
- Setyawan, D. A. (2021). *Penelitian*. Tahta Media Group.
- Yumarni, A. (2019). Inovasi pembelajaran pendidikan agama Islam (PAI) berbasis teknologi informasi. *Journal of Education and Instruction (JOEAI)*, 2(2), 112–126. <https://doi.org/10.31539/joeai.v2i2.894>