

# **Development of android game-based learning media "Dhamma quest" on Buddhist symbols at the Dhamma suci Buddhist sunday school**

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**Abstract:** Rapid technological development has brought many significant changes to everyday life, changing people's mindsets and paradigms in seeking information. Nowadays, people no longer rely solely on newspapers and radio but also use other sources of information, one of which is the internet. In implementing learning, it is important to provide supporting teaching materials and resources so that educational goals can be achieved. If learning is only carried out conventionally, students tend to experience boredom and lack of active involvement. This study aims to develop an Android-based learning media in the form of the Dhamma Quest game as a tool to help Buddhist Sunday School students understand Buddhist symbols, as well as to analyze students' responses to its use in increasing their interest and understanding. In addition, this study also assesses the feasibility of the media through expert and specialist validation, as well as determining the influence of the Dhamma Quest learning media on students' interest or motivation to learn. This study also focuses on the development of learning media in the form of the "Dhamma Quest" game on Buddhist symbols at the Dhamma Suci Buddhist temple Sunday school. This study uses a level 3 research and development (R&D) method. The steps used include researching and developing the product. The research subject is the Dhamma Suci Buddhist temple Sunday school. Data collection techniques include observation, product validation observation sheets, and the one-group pretest-posttest method, while the analysis technique uses a paired samples test. The overall assessment results were given by subject matter and media experts, with an average score of 4.56 and a percentage score of 96% in the very feasible category. The limited test results showed that the posttest mean score (81.9) was higher than the pretest score (42.5). With this achievement, the Dhamma Quest media was considered effective in improving students' understanding and feasible for use as learning media for Buddhist symbols.

**Keywords:** Learning Media Development, Android Application, Game, Dhamma Quest, Buddhist Religious Symbols Material.

## **1. Introduction**

Buddhist religious education is a learning process that connects theory and practice in continuous learning, guiding individuals to develop spiritually and socially. In Buddhist teachings, education is often referred to as training (sikkhā), which includes training in

moral discipline (Sila), concentration (Samadhi), and wisdom (Panna). In addition, Buddhist education is also based on the four noble truths (cattāri ariya saccani) Suherman (2022). The fundamental values contained in Buddhist teachings are not enough to be understood conceptually, but need to be implemented in everyday life. This approach aims to shape students into individuals with strong ethical and moral integrity. Government Regulation of the Republic of Indonesia Number 55 of 2007 article 1 emphasizes that religious education is education that provides knowledge and shapes the attitudes, personalities, and skills of students in practicing their religious teachings. According to [1], Buddhist Sunday School is a special education program for children that aims to introduce the teachings of the Buddha and also introduce spiritual awareness from an early age.

Sunday school aims to instill moral values, develop wisdom, and guide children in understanding and applying moral behavior and ethics in their daily lives [2]. Buddhist Sunday school learning differs from formal education because it aims to facilitate and provide additional knowledge to students outside the school environment. The goal of non-formal Buddhist Sunday school education is to provide students with an understanding of Buddhist beliefs, morals, history, and teachings. Considering the character and needs of students, the learning process needs to be designed in an interesting way to increase its effectiveness and learning outcomes. The use of interactive learning media will attract more attention from students than conventional methods that do not utilize media as a tool in the learning process.

Rapid technological developments have brought many significant changes to daily life, changing people's mindsets and paradigms in seeking information. Nowadays, people no longer rely solely on newspapers and radio but also use other sources of information, one of which is the internet. Technological developments have had many positive impacts in various fields, one of which is education. Education is a communication process in which information is conveyed to students through various media as a means of presentation. In this process, there are educational elements that act as sources of information, which are then distributed through media to support students' understanding and learning [3]. The changes occurring in the world of education demand innovation and creativity in the learning process. This is because proposals or changes in education are still dominant without being balanced with concrete solutions to overcome challenges in the learning process in the current era. Therefore, a more systematic and solution-oriented approach is needed to improve the effectiveness of learning in line with the times [3]. In today's digital era, the use of technology in learning is certainly growing, making learning activities more interesting, interactive, and effective [2]. The development of learning media aims to improve the quality and quantity of students' understanding of the subject matter. In addition, the development of media also aims to meet the needs of students in understanding lessons that are difficult to understand if only one type of media is used [4].

The rapid development of technology in the world of education certainly poses a challenge for teachers to integrate technology into the learning system. Technology-based teaching media reflect progress in the world of education and provide benefits for both

teachers and students. In addition, the use of these teaching materials helps achieve educational goals in the teaching and learning process, where students become more interested in the material and do more exercises according to their individual abilities [5]. So, one of the teaching materials that can be used is by creating learning media. By using attractive interactive learning media, learning motivation can be aroused, making it easier for users to accept and understand the intended message. Therefore, the use of multimedia in Buddhist Education can meet the needs of the learning process [6]. Learning media are tools used to support the teaching and learning process, both conventionally and through digital technology. In the current educational context, learning media not only serves as a tool, but also as a connector that enhances student interaction and participation in the learning process. However, many experts have put forward definitions related to media. One of them is [7] who defines media as a tool used to transfer or convey messages. A medium is considered educational media when it conveys messages in the context of the learning process. The concept of Dharma in Buddhist teachings invites individuals to test it themselves (ehipassiko) (A.III.285) and emphasizes the importance of considering causality, where understanding cause and effect is considered as important as understanding Dharma (M.I.191). In addition, the aspect of adherence to morality in Buddhist teachings is linked to a culture of shame (hiri) and fear of the consequences of wrongdoing (ottappa). Meanwhile, according to [8] in the context of Buddhism, parables help explain spiritual concepts in a more concrete and relevant way to everyday life.

According to Sanjaya (2016), media is essentially an intermediary between the source of information and the recipient of information, such as videos, television, computers, and so on. Meanwhile, the purpose of using media is to meet the basic needs of students in developing their abilities in the digital era, it is necessary to add and integrate information technology content and basic competencies into the basic framework and structure of the 2013 curriculum at the primary education level and the secondary education level (Ministry of Education and Culture Regulation Number 37 of 2018). According to [9], learning media is specifically used with the following objectives: (1) to provide diverse and varied learning experiences that stimulate students' interest in learning, (2) to foster specific attitudes and skills in the field of technology, (3) to create learning situations that are not easily forgotten by students, (4) to create an effective learning situation, and (5) to motivate students to learn.

Media in Buddhist life is carried out using life stories and poems or parables [10]. This is done because the most important and primary thing is the meaning of the teachings conveyed by Buddha. Learning media can also encourage students to be more responsible and manage their own learning process, as well as help them adopt a long-term perspective on their education. Meanwhile, [7] state that learning media is a tool for conveying messages and information that contain learning objectives, because currently media is very important in helping students acquire new concepts and skills.

In this era of development, Android is widely used in various fields, both for business and education. Android applications are one of the advances in technology, which is why many people now find it easy to obtain information thanks to the development of Android applications [11]. Meanwhile, according to [12], Android is an operating system designed

for mobile devices based on the Linux kernel. Android includes operating system components, middleware, and various applications. Android applications are among the fastest growing due to the large number of Android operating system users and market demand. The development of mobile applications differs from the development of conventional applications because mobile applications are designed specifically for the mobile devices they are used on.

Every religion has different symbols or emblems. In Buddhism, there are symbols that have their own meanings and must be understood by its followers. According to [13], the symbols found in Buddhism are statues, pagodas/stupas, lotus flowers, Buddhist flags, chakras, swastikas, incense, water, flowers, and bells. Buddhist symbols are forms used to describe concepts, ideologies, and beliefs in Buddhism [14].

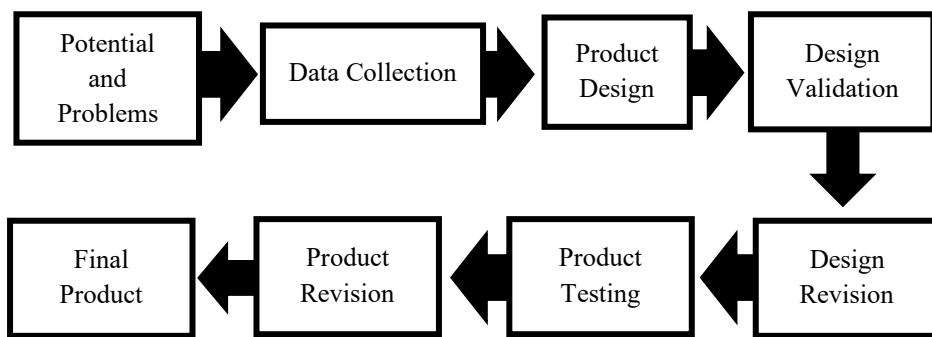
This study offers a solution by developing an Android game-based learning medium, "Dhamma Quest," which is specifically designed to introduce Buddhist symbols in Sunday School lessons at the Dhamma Suci Temple. The main advantage of this research lies in its educational and gamification approach, which not only increases the appeal of learning but also creates a more interactive and enjoyable learning experience. By applying the concept of game-based learning, this research is expected to increase student motivation, make learning more dynamic, and enrich technology-based teaching methods in the Buddhist Sunday School environment.

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## 2. Research Methodology

This study uses research and development (R&D). Research and development (R&D) is a method used to produce a product and also test the effectiveness of the product. Research and development has a goal, which is to produce new products through a development process [15]. The subjects in this research were students of the Dhamma Suci Buddhist temple Sunday school, and the one-group pretest-posttest method was used. The research and development method is a type of research model that is often adopted in the world of academic education to design and test the effectiveness of products [16].

Referring to the concept stated [15], this study adopts a development design, including level 3. Sugiyono states that level 3 R&D research only focuses on the research and development of existing products. In product development based on research results, testing and evaluation are carried out. The research procedure is presented in Figure 1 as follows:



**Figure 1.** Developing procedure

Research instruments for data collection were obtained from research instruments in the form of observation and interviews. Observation is a process that involves observing biological and psychological aspects related to human behavior, work methods, and natural phenomena, especially when the number of respondents observed is not too large [15]. Meanwhile, interviews are a data collection technique in which researchers gather information by asking questions to the interviewees [15]. The technique used in data analysis from the results of validator analysis and trials in the development of the Android game "Dhamma Quest" uses descriptive percentage analysis with a Likert scale.

### 3. Results and Discussion

In this study, data collection techniques included observation, interviews, and literature studies from various sources. The results found based on observations and interviews at the Dhamma Suci Buddhist Sunday school were: a). Learning at Buddhist Sunday schools is still monotonous and conventional, with limited use of learning media; b). Learning activities are still textual in nature; c). There is a shortage of educators in Sunday schools.

The data obtained by the researcher will be linked to the general and specific research objectives. Specific research objectives were developed to describe the results to be achieved in accordance with the planned research stages. Judging from the final results, this study aims to provide benefits for students and teachers, particularly in the development of learning media. An overview of the implementation of Buddhist Sunday School learning at the Dhamma Suci Temple on the subject of Buddhist religious symbols. Buddhist Sunday School learning is still dominated by conventional methods where learning is still focused on teachers or educators, making students less active in learning. Teachers who teach in Buddhist Sunday School activities do not have the qualifications of an educator and are not skilled in creating and utilizing media as a learning resource. In the learning process, the role of learning media is very important because it has an impact on the achievement of learning objectives.

#### 3.1. Implementation and Product Validation Testing

The validation process includes media validation and material validation (content validation), which are described as follows:

### 3.1.1. Media Expert Validation

In the media expert validation process, the researcher asked for help from an expert in information technology who has qualifications in this field, namely Dedi Kundana, S.Pd., M.T.I. Based on the results of media validation, the researcher obtained data on the assessment from media experts calculated based on the questions in the observation questionnaire in product validation. The results of the analysis are as follows:

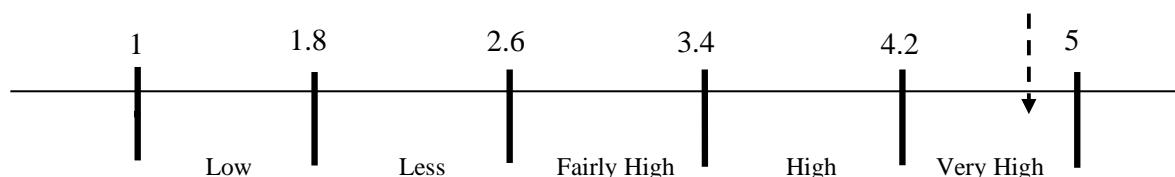
#### a. Feasibility Assessment of the Navigation Aspect

The results of the validation of the feasibility indicators of the navigation aspect of this learning media by media experts provided data on the feasibility of the navigation aspect of the media. Based on the analysis of the learning media indicators, the results are as follows:

**Table 1.** Feasibility of Navigation Aspects

No.	Category	Weight (x)	F	Percentage	F.X	X
1	Highly Recommended	5	4	80	20	
2	Worthy	4	1	20%	4	
3	Fairly Adequate	3	0	0%	0	
4	Unsuitable	2	0	0%	0	
5	Not suitable	1	0	0%	0	
Total			5	100%	24	4.8

Source: Obtained from the April 2025 Validator results



**Figure 2.** Lines of the Continuum of Feasibility of Navigation Aspect Indicators

Source: Researcher Data, 2025

Table 1 above explains the results of the recapitulation of the description of the suitability of the Navigation indicator calculation, which consists of 5 questions with 5 categories, namely very feasible, feasible, quite feasible, less feasible, and not feasible. Based on this information, it can be seen that the very feasible assessment received a percentage of 80.00% and the feasible assessment received 20.00%.

In addition, based on the rating scale from the descriptive analysis of the Navigation Aspect in this learning media research and development, it received an average score of 4.8 ( $4.8:5 \times 100\% = 96\%$ ), which falls within the "very feasible" category. This means that based on the media expert validator, this learning media is declared to have very high feasibility in the Navigation indicator. Feasibility in the navigation aspect includes the

ease of operating the media, the smoothness of the media when used, the application of the application using effective and efficient time in playing games, the features and functions of the application used to achieve development objectives appropriately, and the application has navigation that is easy to operate by users.

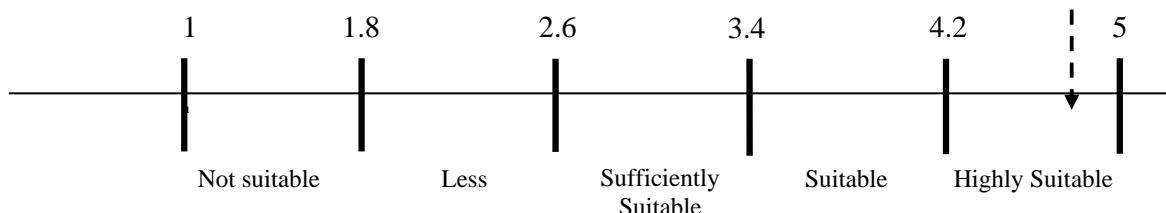
### 1) Feasibility Assessment of the Interactivity Aspect

The results of validation in the feasibility indicators of interactivity aspects in this learning media by media experts show that the data obtained provides an overview of the feasibility of the interactivity aspects of the media. Based on the analysis of each indicator of learning media, the results are as shown in the following table:

**Table 2.** Feasibility of the Interactivity Aspect

No.	Category	Weight (x)	F	Percentage	F.X	X
1	Highly Recommended	5	3	75%	15	
2	Worthy	4	1	25%	4	
3	Fairly Adequate	3	0	0%	0	
4	Unsuitable	2	0	0%	0	
5	Not suitable	1	0	0%	0	
Total		4	100%	19	4.8	

(Source: Obtained from the April 2025 Validator results)



**Figure 3.** Continuum of Suitability for Interactivity Aspect Indicators (Source: Researcher Data, 2025)

Table 2 above explains the results of the recapitulation of the description of the suitability of the interactivity indicator calculation, which consists of 4 questions with 5 categories, namely very suitable, suitable, fairly suitable, less suitable, and unsuitable. Based on this information, it can be seen that the very suitable rating received a percentage of 75% and the suitable rating received 25%.

In addition, based on the rating scale from the description analysis of the interactivity aspect in this learning media research and development, it received an average score of 4.8 ( $4.8:5 \times 100\% = 96\%$ ), which is in the "very feasible" category. This means that based on the media expert validator, this learning media is declared to have very high feasibility in the navigation indicator. Feasibility in the interactivity aspect includes the aspects of the application supporting children's memory in remembering the names and meanings of Buddhist symbols, the application encouraging users to actively participate in operating the application, users feeling satisfied with the performance and results

obtained from using the application, and the application helping users optimize the time available for learning.

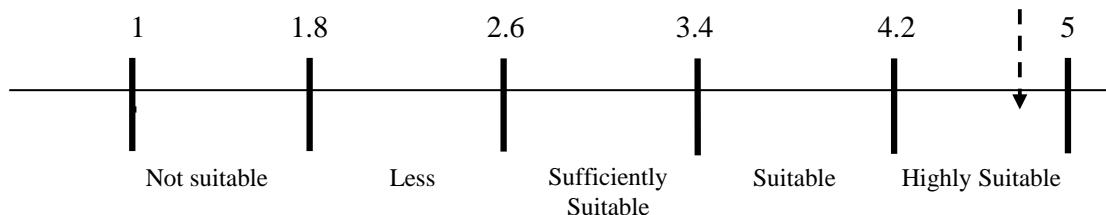
### 3.1.2. Feasibility Assessment in the Usability Aspect

The results of the validity assessment of the Usability aspect indicators in this learning media by media experts provide an overview of the Usability aspect of the media. Based on the analysis of each indicator of the learning media, the results are as follows:

**Table 3.** Usability Aspect Feasibility

No.	Category	Weight (x)	F	Percentage	F.X	X
1	Highly Recommended	5	4	80	20	
2	Worthy	4	1	20%	4	
3	Fairly Adequate	3	0	0%	0	
4	Unsuitable	2	0	0%	0	
5	Not suitable	1	0	0%	0	
Total			5	100%	24	4.8

(Source: Obtained from the April 2025 Validator results)



**Figure 4.** Usability Indicator Continuum Line (Source: Researcher Data, 2025)

Table 3 above explains the results of the recapitulation of the description of the Usability indicator calculation, which consists of 5 questions with 5 categories, namely very suitable, suitable, fairly suitable, less suitable, and unsuitable. Based on this information, it can be seen that the very suitable rating received a percentage of 80% and the suitable rating received 20%. In addition, based on the rating scale from the description analysis of the usability aspect in this learning media research and development, it obtained an average score of 4.8 ( $4.8:5 \times 100\% = 96\%$ ), which is in the "very feasible" category. This means that based on the media expert validator, this learning media is declared to have very high feasibility in terms of usability indicators. Feasibility in the Usability aspect includes the media used in the application being able to convey information about understanding Buddhist symbols, the application providing all the functions necessary to achieve the intended use, the application operating efficiently so as to minimize resource usage without sacrificing performance, the use of the application producing optimal results in accordance with the desired objectives, and the application offering effective solutions at low cost to users.

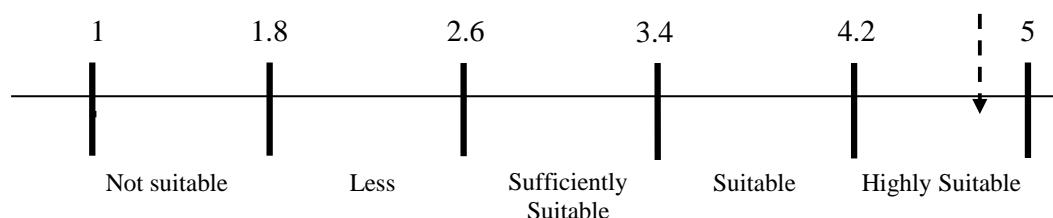
### 3.1.3. Feasibility Assessment of the Design and Display Aspects

The results of the validation of the feasibility indicators for the design and appearance aspects of this learning media by media experts provide data on the feasibility of the design and appearance aspects of the media. Based on the analysis of each indicator of the learning media, the results are as shown in the following table:

**Table 4.** Feasibility of Design and Display Aspects

No.	Category	Weight (x)	F	Percentage	F.X	X
1	Highly Recommended	5	5	83	25	
2	Worthy	4	1	17	4	
3	Fairly Adequate	3	0	0%	0	
4	Unsuitable	2	0	0%	0	
5	Not suitable	1	0	0%	0	
Total			6	100%	29	4.8

(Source: obtained from the April 2025 validator results)



**Figure 5.** Continuum Line of Design and Appearance Indicator Suitability (Source: Researcher Data, 2025)

Table 4 above explains the results of the recapitulation of the description of the calculation of design and appearance indicators, which consists of 6 questions with 5 categories, namely very suitable, suitable, fairly suitable, less suitable, and unsuitable. Based on this information, it can be seen that the rating of very suitable received a percentage of 83% and the rating of suitable received 17%.

In addition, based on the rating scale from the descriptive analysis of the design and appearance aspects in this learning media research and development, it received an average score of 4.8 ( $4.8:5 \times 100\% = 96\%$ ), which falls within the "very feasible" category. This means that based on the media expert validators, this learning media is declared to have very high feasibility in terms of design and appearance indicators.

Feasibility in terms of usability includes consistent application design and navigation throughout the application, an application with an attractive visual design that entices users to continue using it, an application with a clear and logical structure that makes it easy for users to understand the flow of use, text used in the application that is easy to understand, content in the application that is organized in a way that makes it easy for users to find the information they need, and an application that is designed and used in accordance with its development objectives.

### 3.2. Recap of Media and Material Validation Tests

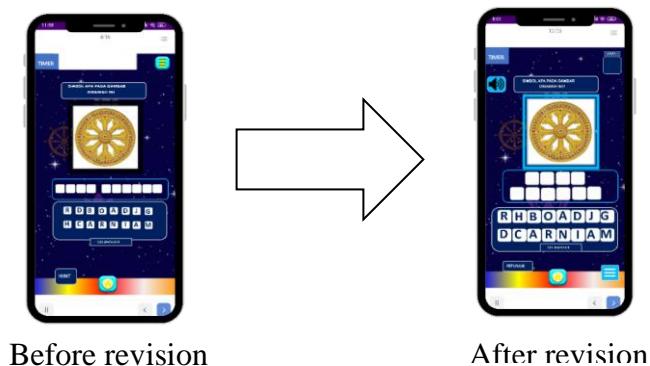
Based on the results of the media and material expert validation tests, the researchers obtained data on the assessment of the learning media product design that had been developed. The assessment results from the media and material experts were calculated based on the questions in the observation questionnaire for product validation.

**Table 5.** Summary of Media Expert Validation Results

No.	Indicator	X
1	Navigation	4.8
2	Characteristics	4.8
3	Usability	4.8
4	Design and Appearance	4.8
	Quantity	19.2
	Average	4.80

Source: Research data analysis results 2025

Based on Table 5 it can be seen that the average value of the indicator recapitulation in media validation is 4.8 (4.8:5x100% = 96%), which is in the "very feasible" category. Thus, it can be concluded that the feasibility obtained based on media expert validation, namely the Android game-based learning media "Dhamma Quest" on Buddhist symbols, has very high feasibility. Based on the assessment results from the observations submitted by media experts, there are suggestions or input to change the appearance of the keyboard letters in the game to make them look bigger so that it is easier to operate or click on the text contained in the media. The following are improvements to the keyboard display in the application-based learning media:



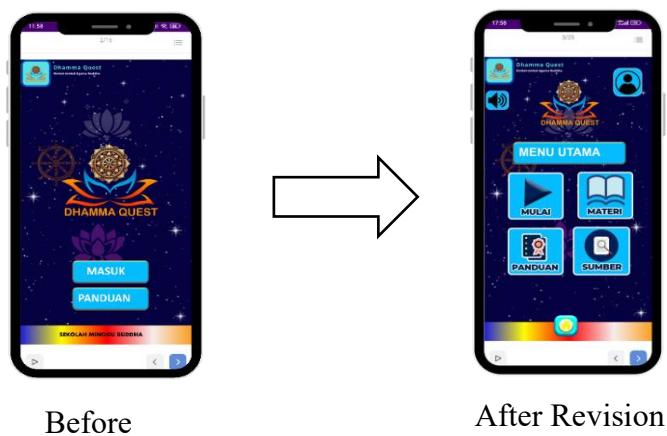
**Figure 6.** Improvements

**Table 6.** Summary of Material Expert Validation Results

No.	Indicator	X
1	Clarity	4.3
2	Content Relevance	4.70
3	Language	4
4	Characteristics	4.30
	Total	17.3
	Average	4.33

Source: Research Data Processing Results 2025

Based on Table 6, it can be seen that the average value of the indicator recapitulation in media validation is 4.3 (4.3:5x100%=87%), which is in the "very feasible" category. Thus, it can be concluded that the feasibility obtained based on the validation of subject matter experts, namely the Android game-based learning media "Dhamma Quest" on Buddhist religious symbols, has very high feasibility. Based on the assessment results from the observations submitted by subject matter experts, there are suggestions or input to add a material button to the application, add a source button, and improve the questions. The following are improvements to the keyboard display on application-based learning media:



**Figure 7.** Improvements

#### 4. Product Testing Results

The testing plan will be carried out at the Dhamma Suci Buddhist Sunday School. Data from the trial results will be used as a basis for revising the "Dhamma Quest" game learning media on Buddhist symbols and will be the final result in the development of learning media on Buddhist symbols. The product trial results are described as follows:

**Table 8.** Scores Before and After Using the Media

No.	Pre-test	Post-test
1	40	85
2	40	70
3	30	80
4	50	90
5	30	80
6	40	90
7	60	90
8	50	70
9	40	85
Total	340	655
Average	42.5	81.9
Min	30	70
Max	60	90

Source: 2025 data processing results

Table 8 shows the results of the first product test of 8 children, which obtained a score of 340 before using the media, with an average score of 42.5 and the smallest score of 30 obtained by the student with serial number 4 and the largest score of 60. Next, the researcher applied the Dhamma Quest game media in Sunday school learning with the hope of increasing the scores obtained by the students. The Dhamma Quest game was applied to 8 students. The scores obtained after using the media were 655 with an average of 81.9, the lowest score obtained by a student was 70, and the highest score was 90. The difference in the scores obtained was 315 from  $655-340=315$ . Based on the above results, there were differences and comparisons between before and after using the Android-based learning media "Dhamma Quest" at the Dhamma Suci Buddhist Temple Sunday School. To determine the significant difference between the scores obtained before and after using the media, the researcher used the Paired Sample T Test.

#### Determining the Hypothesis

$H_0$  = There is no difference between the average score before using the media and the average score after using the media

$H_a$  = There is a difference between the average score before using the media and the average score after using the media

The test used a two-tailed test with a significance level of  $\alpha = 5\%$ . The significance level in this case means that the researcher takes the risk of making a mistake in deciding to reject the correct hypothesis by a maximum of 5% (significance of 5% or 0.05 is a standard measure often used in research). The results are shown in the table below:

**Table 9.** Paired Sample Statistics

Paired Samples Statistics					
		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Pretest	42.50	8	10.351	3.660
	Posttest	84.00	8	7.031	2.486

Source: Data processing results in SPSS

Table 9 shows the results of data processing in the paired samples statistics table, which shows the standard deviation before and after use of 10.351 and 7.031 with a sample size of 8 and an average of 42.50 and 84.00. The correlation table is described below:

**Table 10.** Paired Samples Correlations

Paired Samples Correlations				
		N	Correlation	Sig.
Pair 1	Pre-test & Post-test	8	.569	.141

Source: Data processed using SPSS

Table 10 shows the results of data management of scores before and after the use of media, with a correlation of 0.569 and a significance of 0.141. Therefore, it can be said that between the two variables: the result of 0.569 means that it is not significant with a significance level of 0.05 greater than 0.141 in Table 6 below:

**Table 11.** Paired Sample Test

Paired Samples Test								
Paired Differences								
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference		t	df	Sig. (2-tailed)
				Lower	Upper			
Pair 1	Pre-test - Post-test	- 41,500	8,586	3,036	-48,678	-34,322	-13,672	7 ,000

Source: results from data processing using SPSS

Table 11 presents the results of the t-test. From the table above, the calculated t-value is -13.672. The t-distribution table is searched at  $\alpha = 5\%$  (two-tailed test) with degrees of freedom (df)  $n-1$  or  $8-1 = 7$ . With a two-tailed test (significance = 0.05), the result obtained for  $t_{(table)}$  is 2.365

Test criteria:

$H_0$  is accepted if  $-t_{(table)} \leq t_{(calculated)} \leq t_{(table)}$

$H_0$  is rejected if  $-t_{(calculated)} < -t_{(table)}$  or  $t_{(calculated)} > t_{(table)}$  Based on probability:

$H_0$  is accepted if  $P$  value  $> 0.05$   $H_0$  is rejected if  $P$  value  $< 0.05$

Next, to compare  $t_{(calculated)}$  with  $t_{(table)}$  and the probability according to the testing criteria with the value  $-t_{(calculated)} < -t_{(table)}$  ( $-13.672 < -2.365$ ) and  $P_{value}$  ( $0.00 < 0.05$ ),  $H_0$  is rejected and  $H_a$  is accepted. Therefore, from the test results based on the criteria that have been made with a comparison value of  $-t_{(calculated)} < -t_{(table)}$  ( $-13.672 < -2.365$ ) and  $P_{value}$  ( $0.00 < 0.05$ ), it can be concluded that there is a difference between the average score before using the media and the average score after using the media.

The results of product validation testing by media experts and Buddhist education subject matter experts were conducted. The results of the recapitulation of the validation results by media experts and subject matter experts were based on four indicators. Validation was carried out to anticipate errors by users.

**Table 12.** Summary of product validation results

Product Validation Summary			
No	Expert	Mean	Category
1	Media	4.80	Highly Recommended
2	Content	4.33	Very Good
	Total	9.13	
	Average	4.57	Highly Recommended

(source: 2025 research data results)

Table 12 shows the results of product validation tests conducted by subject matter experts, which obtained an average score of 4.33 with a total score of 97 and a percentage of 87%. Meanwhile, media experts gave an average score of 4.80 with a total score of 96 and a percentage of 96%. The two validation tests were then totaled to obtain an overall picture of the two internal tests that had been conducted. The results of the two tests obtained a total score of 193 with an average answer score of 4.56 and a percentage of 91%. Therefore, the media as a whole passed the validation test with an average assessment that the media was "very feasible". The test used a two-tailed test with a significance level of  $\alpha = 5\%$ . The significance level in this case means that the researcher takes the risk of making a mistake in deciding to reject the correct hypothesis by as much as 5% (5% significance or 0.05 is a standard measure often used in research). Thus, the test results were obtained based on the criteria that had been made with a comparison value of  $-t \text{ count} < -t \text{ table}$  ( $-13.672 < -2.365$ ) and  $P \text{ value}$  ( $0.00 < 0.05$ ), it can be concluded that there is a difference between the average score before using the Android game-based learning media "Dhamma Quest" and the average score after using the media.

## 5. Conclusion

The conclusion of this study shows that the procedure for developing the Dhamma Quest learning media on Buddhist symbols for the Dhamma Suci Buddhist temple Sunday school follows the Research and Development (R&D) method. The following are the stages used 1) Needs Analysis: determining potential and problems, including material analysis and student analysis; 2) Product Design: compiling product content based on the objectives to be developed. At this stage, a storyboard is created with several parts, such as the initial display, menu display, and media content; 3) Product development: Dhamma Quest media is developed using Microsoft PowerPoint and Inspiring Suite software as well as Web Builder 2 Apk to convert it into an application; 4) Product validation: involves subject matter and media experts to ensure that the developed product is suitable for use. 5). Product testing: conducted at the Dhamma Suci Temple Buddhist Sunday School using a one group pretest-posttest model. Students used the Dhamma Quest application to learn, and the results were compared before and after using the media to measure the increase in understanding and learning effectiveness. 6). Revision and refinement: Based on feedback from testing and validation, revisions were made to improve the quality and ease of use of the Dhamma Quest application before it was widely implemented in classrooms. These steps ensured that the Dhamma Quest application was

developed with consideration for effective and interactive learning needs, in accordance with Buddhist symbolism material.

At the stage of using the "Dhamma Quest" learning media, Sunday school students were very positive. They showed high enthusiasm, felt more interested and involved in learning, and found it easier to understand the meaning of Buddhist symbols through an interactive and fun approach. The Dhamma Quest media on the subject of "Buddhist Symbols" for Sunday school at the Dhamma Suci Buddhist temple was considered very feasible to develop and use. Based on the validation results involving subject matter experts and media experts, Dhamma Quest received a score of 4.56, which is equivalent to a percentage of 91% in the very feasible category. In addition, the results of trials using the pretest-posttest method showed a significant increase in understanding, where the average posttest score (81.9) was higher than the pretest score (42.5). With this achievement, Dhamma Quest media is considered effective in improving student understanding and is suitable for use as learning media for material on Buddhist symbols. For Buddhist Sunday Schools and educators, this learning medium can be a solution to overcome the limitations of learning resources and media, where learning is still conventional. Teachers can be more effective in delivering more complex material in an interactive and interesting way, while students can learn more independently and be directly involved in understanding the material. Sunday schools are expected to continue to encourage the use of technology in learning to improve the quality of education.

## References

- [1] S. E. Hartono, "Pembinaan Sekolah Minggu Buddha di Vihara Buddha Dharma Dan 8 Pho Sat," vol. 3, no. 1, 2023, doi: <https://doi.org/10.53067/ijecsed.v3i1>.
- [2] Walyono, "Meningkatkan Pemahaman Agama Dan Budi Pekerti Menggunakan Media Pembelajaran Studi Kasus Pada Siswa Sekolah Minggu Buddha," *Jurnal Kajian, Penelitian dan Pengembangan Kependidikan*, vol. 15, no. 1, pp. 96–101, 2024.
- [3] N. Fauziyah, "Pengaruh Penggunaan Media Pembelajaran Berbasis Aplikasi Android Offline Terhadap Hasil Belajar Sejarah Siswa Kelas X di SMAN 5 Banjarmasin," 2020.
- [4] A. Juanda, "Pengembangan Media Pembelajaran Berbasis Video Tutorial Pada Mata Kuliah Pemrograman Visual dengan Metode ADDIE," *JAVIT: Jurnal Vokasi Informatika*, pp. 121–130, 2022, doi: 10.24036/javit.v2i1.81.
- [5] D. Maskar, "Praktikalitas dan Efektivitas Bahan Ajar Kalkulus," vol. 4, no. 2, pp. 888–899, 2020.
- [6] P. Pebrianto, H. Herpratiwi, and H. Fitriawan, "Pengembangan Multimedia Pembelajaran Hari Raya Agama Buddha di Sekolah Minggu Buddhis Bodhisattva," *Edukatif: Jurnal Ilmu Pendidikan*, vol. 3, no. 4, pp. 1261–1270, 2021, doi: 10.31004/edukatif.v3i4.556.
- [7] M. Hasan, Milawati, Darodjat, H. Khairani, and T. Tahrim, *Media Pembelajaran*. Tahta Media Group, 2021.
- [8] J. A. Pradana, J. Surya, S. Sakawana, B. Wiradharma, and M. Triana, "Peran Media Pembelajaran Dalam Pendidikan Berdasarkan Kajian Sutta Pitaka," *Dharma Acariya Nusantara: Jurnal Pendidikan, Bahasa dan Budaya*, vol. 2, no. 1, pp. 82–90, 2024, doi: 10.47861/jdan.v2i1.749.

- [9] M. Khairani and D, "Studi Meta-Analisis Pengaruh Video Pembelajaran Terhadap Hasil Belajar Peserta Didik," *Jurnal Biolokus*, vol. 2, pp. 158–166, 2019.
- [10] W. Mukti, *Wacana Buddha Dharma*. Yayasan Dharma Pembangunan, 2006.
- [11] T. Wahyudi, "Pengembangan Aplikasi Berbasis Web dan Android Sebagai Penunjang Kerja di Indonesia: Systematic Literature Review," *Indonesian Journal Computer Science*, vol. 1, no. 2, pp. 96–102, 2022, doi: 10.31294/ijcs.v1i2.1428.
- [12] F. Fitriana, "Pengembangan Media Pembelajaran Berbasis Android Untuk Meningkatkan Hasil Belajar Siswa Pada Mata Pelajaran IPS di SMP Negeri 1 Lawang Malang," vol. 1, no. 2, pp. 99–108, 2023.
- [13] S. Darma and N. S, *Pendidikan Agama Buddha dan Budi Pekerti Kelas I*. Jakarta: Pusat Kurikulum Dan Perbukuan, 2016.
- [14] T. Yatno, "Nilai Simbol Candi Borobudur Dalam Wisata Kapitalis Global," *Sabbhata Yatra: Jurnal Pariwisata dan Budaya*, vol. 1, no. 2, pp. 114–125, 2020, doi: 10.53565/sabbhatayatra.v1i2.255.
- [15] Sugiyono, *Metode Penelitian Pendidikan (Kuantitatif, Kualitatif, Kombinasi, R&D dan Penelitian Pendidikan)*. 2021.
- [16] M. Waruwu, "Metode Penelitian dan Pengembangan (R&D): Konsep, Jenis, Tahapan dan Kelebihan," *Jurnal Ilmiah Profesi Pendidikan*, vol. 9, no. 2, pp. 1220–1230, 2024, doi: 10.29303/jipp.v9i2.2141.