Big book: Learning Media Early Limitation for Early Children

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Abstract: Attractive learning media is an attraction in early childhood learning. Media use can provide convenience for Early Childhood Education (PAUD) teachers in conveying the material to children. This study aims to conduct development research in making learning media. The media developed is Big-book. Media development uses the Research and Development (R&D) model. The stages of the R&D model include potential problems, information gathering, product design, design validation, design revision, products, small-scale, large-scale trials, and mass production. Not all stages were carried out in this study, considering the limited time and cost. Hence, the research only reached the feasibility validation stage and design revision to become the final product. Experts validate the eligibility of Big-book media. Based on data analysis, the results of this study indicate that this Big-book media is quite feasible to be used as a medium. In addition, a feasibility test is also carried out with an expert judgment test consisting of media, material, and learning experts. The material and media expert assessment results obtained an average validity score of 87.71% (category "very good"). Finally, test the effectiveness with a homogeneity test, normality, and t-test. In the homogeneity test, it is known that the significance value of student learning outcomes is $0.151 > value = 0.05$, then H0 is accepted. The normality test obtained a significance value for results more than 0.05, so it was typically distributed.

Keywords: Big book, learning media, early literacy

1. Introduction

Early childhood education is the foundation for further education. The development of children at this early age will influence the sustainability of children's growth in the future. The success of the nation's children will build. This country is influenced by how early childhood educators are (Nakajima et al., 2019). The stimulation provided by educators in developing all aspects of child development must be by the expectations of the standard level of achievement of child development (STPPA). The achievement of children's development at each age stage has different targets (Setiawan, 2017).

Aspects of child development consist of cognitive, language, religious and moral values, art, physical and motoric as well as social and emotional. The six parts of the product have achievement standards at each age stage. This achievement applies continuously. The development set at the lowest age will affect the achievement at the following age stage. Unsuccessful achievement of children's development in stages

A certain age will affect children's success in reaching the next stage. One of the problems that often becomes a problem in meeting the target of achieving child development is the achievement of the target for introducing early literacy in early childhood (Sainain et al., 2020). The government, as a policy maker, has issued several rules to regulate the level of achievement of early childhood development standards. The standard level of achievement of children's development as stated by the Minister of National Education 58 of 2009 in the scope of cognitive development for children aged 3-5 years, on the concept of numbers, symbols of numbers 1-10 and letters, namely mentioning numbers, recognizing number concepts, recognizing number symbols and recognizing letter symbols (Erlina, 2018).

Learning letters and numbers is again the focus of research conducted by Putra & Ishartiwi (2015). The research they do is in the form of development research intended to produce learning multimedia products. This study uses the Lee & Owens development model, which includes three stages, namely 1) planning, 2) design stage, and 3) development stage (Putra & Ishartiwi, 2015).

Letter recognition can be done with various media and forms such as singing, guessing letters, puzzles, and letter trees. The letter tree is a learning media made of plywood, flannel, and plastic balls, which attract children's attention and increase concentration in learning the introduction of vowels in particular. In addition, it can develop children's potential in the auditory, visual, and memory dimensions (Maulidya, Sa'dullah, & Lismanda, 2019).

Given the importance of early letter recognition as an essential component in reading skills, the learning media used by early childhood educators should be adapted to the stages of early childhood. For this reason, this research is directed at developing learning media to introduce early literacy in the form of big-book media. The product produced in this research is a letter board made of flannel and used cloth. In contrast to previous research that prioritizes using technology to create interactive learning media, this study emphasizes using used materials.

2.   Literature Review

According to Julianingsih et al. (2021) and Puspitarini & Hanif (2019), media is a sense that talks about or deliver learning messages. Besides that, Junaidi (2019) and Nurrita (2018) state that media is a tool to assist learning. It is used to clarify the message conveyed so that learning objectives can be achieved. So, the opinion is concluded that the media is a means used to support learning so that learning objectives can be achieved and conveyed using clear, and learning is more fun. Therefore, media selection criteria include 1) the media must be adapted to the learning objectives, 2) the media must be practical and flexible, 3) the media must be able to arouse student motivation, and 4) the media can be used continuously 5) have technical quality (Abidin, 2016).

According to Madyawati (2016), a big book is a picture book chosen to be raised to have unique characteristics, namely the enlargement of text and images. According to Prawiyogi et al. (2021), a big book is a book with unique features that are full of colors, exciting pictures, words that can be repeated, an easy-to-guess plot, and a rhythmic text pattern that can be sung. Media big book is a book with large size and colorful illustrations that the teacher uses to tell stories in a class (Setiyaningsih & Syamsudin, 2019). The big book creates a secure and relaxed atmosphere in the classroom and tracts students' attention in the teaching and learning process. So, the Big-book is a large colorful book with pictures and text.

Prawiyogi et al. (2021); Aisah & Rini (2022); and Madyawati (2016) explained the benefits of big book media, namely 1) children could learn in a fun way; and 2) encourage children to prefer stories with different themes and stories. So, it can be concluded that the benefits of big book media are to foster children's interest in reading, help with reading difficulties, and encourage students to like stories with the themes that have been presented.

Local wisdom is a view of life and knowledge, as well as various life strategies in the form of activities carried out by local communities in responding to multiple problems in meeting their needs. Local wisdom is conceptualized as a local policy of local wisdom, "local knowledge," or local genius (Nugrahartanti, Khanzunuddin, & Murtono, 2022). An example of local wisdom in Kudus City is that GUSJIGANG has the meaning 'GUS,' which means good, 'JI,' which means reading the Koran, and 'GANG,' which means trade. Through this philosophy, Sunan Kudus guides his followers and the Kudus community to become people with good personalities, diligent in the Koran, and willing to do business or trade. Gusjigang is a representation of the Kudus community who is good in appearance and good behavior, has an entrepreneurial spirit, and likes to learn and seek knowledge.

3.   Methodology

According to Borg and Gall, the development model used in this study refers to the development model. The Borg & Gall development model contains a systematic guide to the steps taken by the researcher so that the product he designs has a feasibility standard. Thus, what is needed in this development is a reference to the production procedure. The description of the Borg and Gall development model is explained as follows.
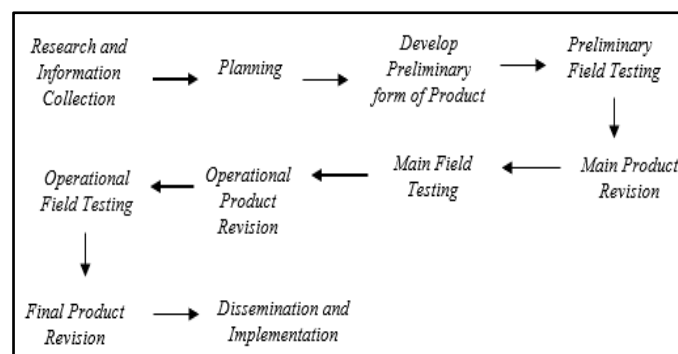

Figure 1. The Borg & Gall development model

The model's design has four stages: 1) Preliminary Study, 2) Model Development and Validation, 3) Field Test, and 4) Dissemination. The following is a picture of the model design according to the stages. This study's data collection instruments were interviews, observation sheets, questionnaires to analyze potential problems and the need for appropriate media, and questionnaires (validation forms) for material and media experts and users (PAUD educators). Questionnaires are used to collect quantitative data, which will then be converted into qualitative data.

The product developed is a big book. This product was developed using flannel and used fabrics. This media consists of letter boards and flannel letters. The letter board is a board containing the letters of the alphabet, both vowels and consonants. The letters are printed in flannel and affixed to a circle of flannel pieces pasted with a letter pattern from flannel. Instruments used in this study were a validation assessment questionnaire given to media experts and several teachers as media users.

4.   Results and Discussion

Information exploration and problem identification were carried out as an initial stage in this development research through observations at early childhood education institutions (PAUD). The Observations were made to find out how educators carried out the use of media to introduce early literacy. In addition, at this stage, a literature study on early literacy was carried out so that the media to be developed later was appropriate and to the needs (Choiriyah et al., 2021). However, the media found in the RA institution used as objects of observation did not yet have the value of utilizing the materials around them. Therefore, institutions tend to override the skills of educators in developing learning media. The following illustrates the availability of media used by several institutions, which were observed in the categorization of handmade media (teacher creations), finished product media (media purchased at the market), books and magazines, as well as IT-Based Media (technology, in the form of an Ipad for letter recognition and hijaiyah for children) (Dita et al., 2021).

The results of extracting information and potential problems show that: 1) There is still a lack of handmade media that raises the creativity of teachers for letter recognition in early childhood, 2) There is a weakness in the use of books and magazines in the introduction of early literacy, and 3) Some institutions cannot carry out letter recognition using media-based technology because of the limited economic capacity of the parents. Description This problem becomes the basis for designing or designing suitable media for the introduction of early literacy in early childhood.

The most common letter recognition game is using word and picture cards. However, the reality that researchers observe in the field is very different. Most teachers only introduce letter symbols one by one and immediately mention the sound of the letters. According to the synthesis method, an element (e.g., letter elements) will have meaning if they are related or related to other features to form a purpose (Ernawati, Joko Raharjo, & Sugiyo, 2021; Jazariyah, 2019). Using flannel and flannel letter boards is an effort to help children recognize letters while playing syllable patterns. So that children are not only able to recognize letters when standing alone but can recognize letters in syllable patterns, the word stacking game from flannel letters can also be done using this flannel board media. The child is getting to know the words he often hears and recognizes the writing for that word, for example, the word shop, book, etc. When the child sees a letter and a series of letters, it causes curiosity about pronouncing it (Developing & Zulkifli, 2016). Thus, the choice of words to be practiced in the word stacking game can be adapted to the terms commonly spoken daily.

Learning to recognize Script requires learning model guidelines through big book media that can introduce children's literacy in Kudus. Hence, researchers develop learning model guidelines to teach literacy through big book media.
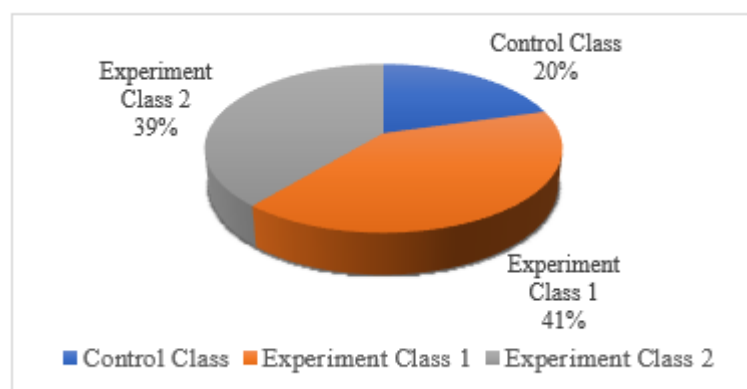

Figure 2. N-Gain analysis results

Based on N Gain analysis results, it can be seen that the average of the control class is 0.4, with a Gain Classification being moderate with an effective level of "fairly effective" ($0.30 \leq g \leq 0.7$). While the average experimental class is 0.73

with a high Gain Classification with an "effective" level of effectiveness (g≥0.70). This shows the experimental class that using big book media to introduce early literacy is feasible.

Developing learning media to recognize characters in Kudus is done by analyzing the content components/learning guide materials adapted to Core Competencies and Basic Competencies and introducing literacy to Kudus children. The language used in teaching materials is a language that is straightforward, communicative, interactive, and by the development of participants' education. After the development, the learning model guidelines were tested for feasibility through expert validation who scored in the very good category.

4.1 Material Expert Validation

The model development support system before using the instrument is validated first. One of them is a learning model. This instrument contains statements that experts will assess. The validation sheet must be met in the activity and scoring, including aspects of conformity with Core Competencies and Basic Competencies, accuracy of material, language, and up-to-date. In addition, each element includes several assessment points regarding the development of learning media to recognize characters.

Table 1. Material expert assessment

No.	Aspect	Criteria	Scoring Scale			
			4	3	2	1
1	Core Competencies and Basic Competencies compatibility	The suitability of the material with core competencies		✓		
		The suitability of the material with basic competencies		✓		
		The material presented is accurate		✓		
2	Material Accuracy	Definition accuracy		✓		
		Information clarity		✓		
3	Language	The language in the book is adapted to the reader		✓		
		Efficient and effective use of language		✓		
		The material presented is according to the development of students		✓		
4	Update Theory	The linkage of the material with the activities given by students		✓		
		The activities presented attract children's interest		✓		
	Amount			30		
	Percentage	**(%)**	80	20		

Assessment criteria   Percentage Criteria
(4) Very Good   76-100
(3) Fine   56-76
(2) Enough   26-55
(1) Less   <25

The results of the assessment of the material expert obtained the average score of the material expert test, which was 80% in the "very good" category and was suitable for use. At this stage, the material expert responds to group A's activities in the following learning model to recognize letters.

4.2 Media Expert Validation

This instrument contains statements that will be assessed by learning model experts and their scores, including the contents of early childhood literacy.

Table 2. Assessment of material experts

No.	Aspect	Criteria	Scoring Scale			
			4	3	2	1
1	Core competencies compatibility	The suitability of the material with core competencies	✓			
	Basic competences compatibility	The suitability of the material with basic competences	✓			

2	Accuracy Theory	The material presented is accurate	✓	
		Definition accuracy	✓	
3	Language	Information clarity	✓	
		The language in the book is adapted to the reader	✓	
		Efficient and effective use of language	✓	
4	Update Theory	The material presented is according to the development of students	✓	
		The linkage of the material with the activities given by students		✓
		The activities presented attract children's interest	✓	
Amount			36	3
Percentage (%)			90%	10%

The results of the assessment of the linguist obtained the average score of the linguist test, which was 84% in the "Very Good" category and was suitable for use. At this stage, the material expert gave responses to the activities in group A contained in the learning model of Knowing characters which would then be tested empirically in group A.

Table 3. Feasibility of content

NO	Item Evaluation	Indicator Evaluation	Scoring scale			
			4	**3**	**2**	**1**
1	Presentation Technique	Systematic consistency of presentation in learning activities	✓			
		Concept collapse	✓			
2	Presentation Support	Activities according to the theme	✓			
	Theory	Introduction	✓			
3	Presentation Learning	Student Engagement		✓		
4	Coherence and coherence in the flow of thought	Links between learning activities and sub-learning activities	✓			
		The integrity of meaning in learning activities/sub-learning activities/paragraphs	✓			
Amount			24	3		
Percentage (%)			86%	14%		

Assessment criteria	Percentage Criteria
(4) Very Good	76-100
(3) Fine	56-75
(2) Enough	26-55
(1) Less	<25

4.3 Data Feasibility Test

The normality test is used to determine whether the data population is normally distributed; if the data is known to be normally distributed, parametric statistical tests are used, provided that the data for each variable is normal. Meanwhile, if the data is not normally distributed, a non-parametric statistical test is carried out (Sugiyono, 2017).

The following presents the results of the normality test obtained from experimental data in the field. The data includes experimental class data, namely 15 students from the RA Matholiul Hija school and RA Al-Khurriyah 01 Gebog Besito. The control class data are 15 students from the RA Al Falah school.

Based on the normality test, it was found that the significance value of Kolmogorov-Smirnov for the language skills of both the experimental class and the control class was more than 0.05, so it was normally distributed. In the experimental class questionnaire, a significance value of $0.095 > 0.05$ was obtained, which means it is normally distributed. In the results of the experimental class questionnaire, a significance value of $0.091 > 0.05$ was obtained, which means that it is normally distributed. While in the control class, the significance value of the questionnaire was

0.095 > 0.05, which was normally distributed, and the significance value of the questionnaire was 0.095 > 0.05, which was normally distributed. Thus, the test hypothesis is accepted, and the sample comes from a normally distributed population.

Table 4. Data normality test

Class	Kolmogorov - Smirnov			Shapiro-Wilk		
	Statistics	df	Sig.	Statistics	df	Sig.
Control	.155	15	.200	.948	15	.496
Experiment 1	.181	15	.200	.947	15	.478
Experiment 2	.206	15	.087	.923	15	.211

4.4 Homogeneity Test

Homogeneity testing aims to determine whether the object under study has the same variance (Siregar, 2013: 167). The homogeneity test used in this study used SPSS version 26 software with Leven's.

Table 5. Homogeneity test results

Levene Statistic		df1	df2	Sig.
Ability based on mean	4.035	1	41	.151
Recognizing characters based on median	2.881	1	41	.197
Based on median and with adjusted df	2.881	1	27.221	.101
Based on trimmed mean	3.843	1	41	.157

In the output table of homogeneity above, it is known that the significance value of the ability to recognize characters based on the mean is $0.151 >$ the value of $= 0.05$, then H0 is accepted so that the variance of the data on learning outcomes in the experimental class and control class is homogeneous.

4.5 T-test

After the n-gain test, the questionnaire value data were analyzed by t-test. Before the t-test was carried out, the normality test analysis phase was carried out to determine whether the results of the questionnaire experienced a significant increase. The effectiveness of product development is done by comparing the average scores in the experimental class and the control class using the independent sample t-test.

Table 6. T-test results

		Independent sample t-test								
		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	T	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Posttest scores for the ability to recognize characters	Equal variances assumed	.089	.767	5.206	28	.000	-6.86667	1.32188	-9.56855	-4.16488
	Equal variances not assumed			5.206	27.482	.000	-6.86667	1.31897	-9.57075	-4.16258

Based on the data processing table above, it shows the ability to recognize the letters of Raudhatul Athfal (RA) Group A students in Kudus using the paired-samples t test above, obtained a significance value (2 tailed) of 0.000 < 0.005, then H0 is rejected. Thus, there is a difference in the average value in the experimental class and the control class.

The total number of respondents was 45 students, consisting of 15 experimental class students and 15 control class students. The results of average value of the experimental class students were 95.50, and the control class obtained an average score of 81.48. It can be concluded that the average value of the experimental class is better than the average value of the control class, so using big book learning media to introduce letters to early childhood is very effective to be applied to students.

5.   Conclusion and Recommendation

The results of this study are described in needs analysis, model design, feasibility test, and effectiveness test. The needs analysis shows the need for the right media to introduce early literacy to early childhood, so the big book media is used. Media design uses ten research steps with its products, namely guidebook media and big book media. Feasibility test with N Gain test, which shows an average experimental class of 0.8 with a high Gain Classification with an "effective" level of effectiveness (g>0.70). In addition, a feasibility test is also carried out with an Expert Judgment Test consisting of media, material, and learning experts. The results of the material and media expert assessment obtained an average validity score of 87.71% ("very good" category). Test the effectiveness with a homogeneity test, normality, and t-test. In the homogeneity test, it is known that the significance value of student learning outcomes is 0.151 > value = 0.05, then H0 is accepted. The normality test obtained a significance value for results more than 0.05, so it was normally distributed. T-test, children's learning outcomes using paired sample t-test, obtained a significance value (2 tails) of 0.000 <0.005. Thus, there is a difference in the average value in the experimental class and the control class.

From the research that has been done, the suggestions that can be conveyed are: As educators, we must always innovate learning to improve the quality of education. The learning model should always be maintained in this era of globalization. Future researchers are expected to be able to develop further research on the development of big-book media as a means of introducing literacy to early childhood.

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Conflict of Interest

The authors declare no conflicts of interest.

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