

Development of Sundanese *Pupujian* Interactive Multimedia-Based Learning Materials

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Abstract—This study aims to develop Sundanese *Pupujian* Learning Materials based on interactive multimedia. Interactive multimedia in this research refer to learning media by using Adobe Flash which contains texts, graphics, sounds, and videos. Meanwhile, Sundanese *pupujian* in this research refers to oral-literary work that contains the teachings of the Islamic religion. The method used in this research was the research and development method. The development steps included: 1) problem analysis, 2) data collection, 3) product design, 4) design validation, 5) design revision, 6) trial products, 7) product revisions, 8) trial run, 9) product revisions, 10) mass production. The results of this study indicated that the learning materials developed were valid and effective. Media validity was indicated by obtaining a score of 37 from a maximum score of 40 in the aspect of material validity and obtaining a score of 21 from a maximum score of 24 in the aspect of media validity. Both aspects of validity were in the very good category. As for the effective criteria, the effectiveness of the media was assessed by using quasi-experiments in one sample. The result was a pretest and posttest score of studentss understanding of Sundanese *pupujian* concepts. Based on the results of normality testing, it is known that both the pretest and posttest data were normally distributed so that the testing of the difference in pretest and posttest was done through paired sample t test. From the test results, it is known that the Sig. (2-tailed) = 0.001. This means Sig (2-tailed) <0.05. Thus, there are differences in the mean scores of students before and after learning by using Sundanese *Pupujian* learning media with the posttest mean greater than the pretest mean. Therefore, it can be concluded that Sundanese *pupujian* materials in question are valid and effective so that they can be used in learning Sundanese *pupujian* in Sundanese subjects.

Keywords: *interactive multimedia, learning materials, Sundanese pupujian*

I. INTRODUCTION

Sundanese language subjects are subjects that exist in the 2013 curriculum in Indonesia. Sundanese subjects are local content subjects. The existence of Sundanese language subjects in schools in accordance with the Regional Regulation of West Java No. 5/2003 about Preservation of Language, Literature, and Regional Script which was later changed to Regional Regulation of West Java No. 14/2014. Sundanese is a local language in West Java. In Sundanese language there are noble values of a Sundanese culture. One of the materials in Sundanese subjects is *pupujian*. This is in accordance with the

basic competencies of class VII namely “3.7 identifying the form, structure and content of the text in accordance with the social function, text structure, and linguistic elements” (Dinas Pendidikan Provinsi Jawa Barat, 2017). Similarly, basic competence 4.7 “chanting praise according to the characteristics of each region according to social function, text structure, and linguistic elements” (Dinas Pendidikan Provinsi Jawa Barat, 2017, p. 24).

Pupujian Sunda is a Sundanese oral literature. *Pupujian* is a traditional poem whose contents praise the majesty of God, pray to the prophet, warnings, or commands to perform worship (prayer, fasting, etc.) (Isnendes, 2010). The form of *pupujian* is generally a poem in which each verse consists of four lines and each end has a *purwakanti* (Rosidi, 2011). In the contents of the Sundanese *pupujian* there is character education that can be used as a reference in everyday behavior. The contents of Sundanese *pupujian* include: 1) praise Allah, 2) blessings to the Rasulullah, 3) prayers and repentance to Allah, 4) ask for *safaat* from Rasulullah, 5) advising people to practice piety and good deeds and stay away from disobedience, and 6) lessons about religion about faith, the pillars of Islam, fiqh, morals, dates, interpretations of the Qur'an, *sorof*, and others (Rosidi, 2000).

Sundanese *pupujian* results from local wisdom of the Sundanese people. It is contained in Sundanese subjects. Today, Sundanese *pupujian* is rarely known by children and young people because it is more interested in modern prayers that are often exposed on television. In addition, Sundanese *pupujian* is rarely sung in mosques in urban areas. Therefore, as one of the efforts to introduce Sundanese *pupujian* and preserve it, namely by making Sundanese *pupujian* as teaching material.

Contents Material or learning material is basically curriculum content in the form of subjects or fields of study with topics/subtopics and details (Ruhimat, 2013). Learning material is a summary of taught material given to students in printed material or in other forms stored in electronic files both verbal and written (Gintings, 2014, p. 152). In addition, teaching materials can be any kind of material used to assist teachers/instructors in carrying out teaching and learning activities (Majid, 2011).

Material or teaching materials will be understood by students if delivered in a way that is interesting and easily understood by students. One thing that is very important in the learning process so that the material can be understood is the

existence of learning media. Media is everything that can be used in order to achieve learning objectives (Sutiko, 2014). The criteria that must be considered in choosing the media are: 1) in accordance with the objectives to be achieved; 2) appropriate to support the content of lessons that are facts, concepts, principles, or generalizations; 3) practical, flexible, and enduring; 4) skilled teachers use it; 5) grouping of targets; 6) technical quality (Arsyad, 2014). Based on these criteria, learning media must be valid and effective. Learning media has a goal that learning material can be understood by students. In addition, learning media becomes a facility between the teacher and students so that the material delivered by the teacher can be understood properly.

Types of instructional media are visual, audio, audio visual and multimedia (Gintings, 2014, p. 141). One of the types of learning media is interactive multimedia. "Multimedia displays learning material with techniques that combine all the advantages of audio and visual media equipment with a variety of presentation techniques that utilize computer technology and LCD Projector as its main equipment" (Gintings, 2014, p. 146). Munir (Novaliaendry, 2013, p. 110) states that "the term multimedia is used to describe a system that uses a computer where all media such as text, graphics, sound, interactive multimedia, and video are in one computer software". Interactive multimedia-based learning media for Sundanese *pupujian* material which developed contains Sundanese *pupujian* material for Junior High School students.

II. METHOD

The method used in this research is the research and development method. Research and development methods, namely research methods used to produce certain products and test the effectiveness of these products (Sugiyono, 2013). The development method is used to develop Sundanese *Pupujian* Learning Materials Based on Interactive Multimedia. The research phase consisted of a preliminary study, a development phase, and a validation stage. The preliminary study stage is carried out using a qualitative approach. The development phase uses a descriptive approach and limited trials. Media validation stage is carried out by the experimental method. The design of the development is presented in Figure 1.

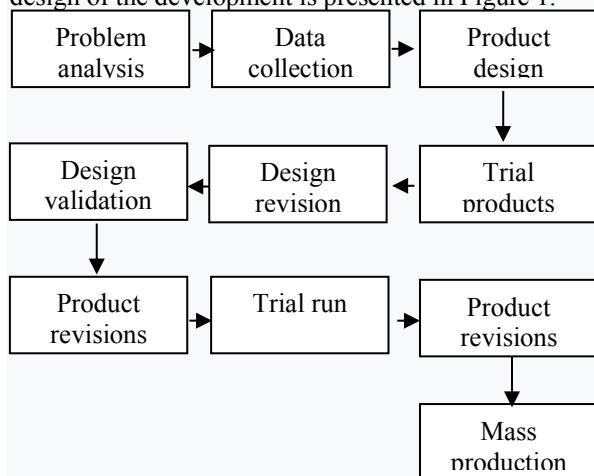


Fig. 1. Design development of sundanese *pupujian* learning materials based on interactive multimedia

Media quality is proven by valid and effective criteria. The validity of the media is proven through assessment by material experts and media experts. As for the effective criteria, the effectiveness of the media is reviewed by using quasi-experiments in one sample. The result is a pretest and posttest skor of students understanding Sundanese *pupujian* concepts.

0₁ X 0₂

Information:

X: Treatment

0₁: Pretest value (before treatment)

0₂: Posttest value (after treatment).

III. FINDINGS AND DISCUSSION

1. Analysis of problems & Information Collection

In the analysis phase of problems in the field related to Sundanese *pupujian* material and learning media, researchers used literature studies and field studies. Literature study is conducted by analyzing the material, Core Competencies (KI), and Basic Competencies (KD) in the syllabus and RPP in the revised edition of the 2013 curriculum. The basic competencies are: "3.7 identifying the form, structure and content of the text in accordance with social functions, text structure, and linguistic elements." Meanwhile, other Basic Competencies are "4.7 Chanting praise in accordance with the characteristics of each region according to social function, text structure, and linguistic elements" (Dinas Pendidikan Provinsi Jawa Barat, 2017: 24). The field study was conducted by analyzing the need for teaching materials, instructional media, and filling out questionnaires for Sundanese language teachers.

2. Data Collection

Data collection is done by collecting Sundanese teaching material and selecting Sundanese *pupujian* that is in accordance with the competence of junior high school children. Sundanese *pupujian* used are Sundanese poems entitled "Suanten Adan" and "Kanjeng Nabi". Sundanese poetry entitled "Suanten Adan" and "Kanjeng Nabi" were obtained from Sundanese *pupujian* documentation made by Local Language and Literature Education (PBS) students and STKIP Muhammadiyah Primary School Teacher Education students Muhammadiyah Kuningan.

3. Product Design

The product design stage is to design Sundanese *pupujian* in order to become interactive multimedia-based teaching material. At the design stage, researchers gather information related to learning sources / references in the form of books and videos. Novaliendry (2013: 110) states that "the term multimedia is now used to describe a system that uses a computer where all media such as text, graphics, sound, interactive multimedia and video are in one computer software". So, interactive multimedia is learning media that uses various types of media such as images, text, interactive multimedia, graphics, and video. The Sundanese teaching material is then designed to be an interactive multimedia-based

learning media by using Adobe Flash application. In the interactive multimedia-based Sundanese learning media design there are material, examples of *pupujian*, videos of *pupujian*, and quizzes. The existence of quizzes is expected that students can be more active in learning in class and more active.

4. Design Validation

At this stage, the teaching material that has been compiled is then validated by experts related to Sundanese *pupujian* material. Each expert is asked to assess the design, so that the weaknesses and strengths can be identified (Sugiyono, 2013: 302). Validation is carried out by three validators, namely two material expert validators and 1 media expert validator. Material validation is done by looking at the material content aspects which consist of: 1) material compatibility with Core Competency and Basic Competence; 2) Material depth; 3) the ruffle of the material presentation; 4) the truth of the concept; 5) clarity of material content; 6) giving examples in the presentation; 7) language suitability with the target user; 8) appropriateness of exercises with competencies; 9) ease in understanding the material; 10) quality feedback. Validation for interactive multimedia criteria includes: 1) ease of navigation; 2) cognitive content; 3) information presentation; 4) media integration; 5) artistic and aesthetic; 6) functioning as a whole. The Table I results of the validation by the experts are:

TABLE I. RESULTS OF *PUPUJIAN* TEACHING MATERIAL VALIDATION USING INTERACTIVE MULTIMEDIA-BASED LEARNING MEDIA

Validator	Score	Percentage	Criteria
Material Validator	37	92,5 %	Very Good
Media Validator	21	87,5%	Very Good

Material validators consist of two validators namely validator 1 score is 36 score and validator 2 score is 38 from score 40. Therefore, the results of material validator ie 37 from the maximum score of 40 are in the very good category, meanwhile the media validity score is 21 from the score a maximum of 24 is in the very good category.

5. Design Revision

At this stage, revising the design of Sundanese *Pupujian* Learning Materials Based on Interactive Multimedia. Design revisions were made based on the advice of the validator. The suggestions are as follows:

- Revision of validator 1: the content of Sundanese *pupujian* is adjusted to the theories of experts.
- Revision of validator 2: the language used in the media must use Sundanese.
- Revision of validator 3: placement of pictures, videos and quizzes is stored on the back.

6. Trial Product

Limited product testing is conducted for junior high school students. Trials were conducted 3 times to measure students' ability of understand Sundanese *pupujian* using interactive multimedia. The first trials was the presentation

of Sundanese *pupujian* material in interactive multimedia-based learning media. The second trial explained the example of Sundanese *pupujian* in interactive multimedia. The third trial practiced quizzes contained in interactive multimedia-based learning media with Sundanese *pupujian* material.

7. Product Revision

At this stage, the researcher revised the interactive multimedia-based Sundanese teaching material after seeing the shortcomings of the trial results. The revision was made after seeing the use of interactive multimedia in the classroom. The revision is the delivery of material so quickly that students are less active in the learning process. In addition, there are a number of texts in the *pupujian* text that are so small that must be revised so that can be seen by all students.

8. Trial run

The usage test was conducted on students of SMPN 2 Kramatmulya class VIIA. This step aimed to prove the effectiveness of the developed media. This trial was conducted through a quasi-experimental research design with a pretest-posttest one sample group. Students were given a test of Sundaness *pupujian* concept understanding before and after treatment. The Table II results of the pretest and posttest are displayed as follows.

TABLE II. PRETEST AND POSTTEST RESULTS

	Pretest	Posttest
N	32	32
Valid	0	0
Missing		
Mean	54.34	62.94
Median	53.00	63.50
Mode	60	53 ^a
Std. Deviation	13.736	14.529
Minimum	20	40
Maximum	80	87
Sum	1739	2014

With regard to the research objectives, to find out that the application of interactive multimedia Sundanese *Pupujian* learning media can have an impact on the ability of students understanding Sundanese concept, it is necessary to test statistics on the mean results of pretest and posttest. Testing is done using t-test for paired samples if the data is normal assumptions and using the Wilcoxon test if the data is not normal.

Before testing the mean, it must first be shown that the data is normal. Data normality testing is performed using the Shapiro-Wilk test. Data is normally distributed if the $\text{Sig.} > 0.05$. The normality test results are shown in the following Table III.

TABLE III. NORMALITY TEST RESULTS

Kelompok	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Data	.153	32	.056	.963	32	.341
Pretest	.128	32	.198	.944	32	.097

a. Lilliefors Significance Correction

Based on the test results obtained by Sig. the pretest was 0.341 while the posttest was 0.097. In the pretest and posttest the Sig value is more than 0.05 so it can be concluded that the pretest and posttest data are normally distributed.

After proven the normal assumptions, the mean test can proceed using the t-test for paired samples. This test is done by comparing the mean pretest results and the mean posttest results. Criteria for acceptance of the hypothesis in this test is H_0 accepted if $\text{Sig. (2-tailed)} < 0.05$. The hypotheses in this study are:

H_0 : There is no difference in the mean scores of students before and after learning by using Sundanese *Pupujian* learning media based on interactive multimedia.

H_1 : There are differences in the mean scores of students before and after learning by using Sundanese *Pupujian* learning media based on interactive multimedia.

The mean test results of students' scores before being treated (pretest) and the mean scores of students after treatment (posttest) using the t-test for paired samples are taken in the following Table IV.

TABLE IV. TEST RESULTS FOR PRETEST AND POSTTEST

	Paired Differences					t	df	Sig. (2-tailed)			
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference							
				Lower	Upper						
Pair 1	PRETEST - POSTTEST	-8.594	12.914	2.283	-13.250	-3.938	-3.764	31	.001		

From the test results it is known that the Sig. (2-tailed) value of 0.001. This means $\text{Sig. (2-tailed)} < 0.05$. Based on the hypothesis acceptance criteria, H_0 is rejected. Therefore it can be concluded that there are differences in the average scores of students before and after learning by using interactive multimedia Sundanese *Pupujian* learning media. The results of this study indicate that Sundanese learning media based on interactive multimedia is effectively used for Sundanese subjects.

9. Product Revision

Product revision is done by perfecting Sundanese *Pupujian* Learning Materials Based on Interactive Multimedia. At this stage re-checking of media was done so that the results are optimal.

10. Mass Production

At this stage producing Sundanese *Pupujian* Learning Materials Based on Interactive Multimedia for use in Sundanese subjects. Sundanese teaching materials using interactive multimedia-based learning media are distributed to teachers at SMPN 2 Kramatmulya so that they can be used for the learning process at a later stage. The teaching material uses interactive multimedia based learning media, namely:

a. The main page of learning media

The main page of learning media is an opening page to display the name of interactive multimedia learning media in Sundanese *pupujian*. As presented in Figure 2.



Fig. 2. Main page learning media

b. The main menu of media

The main menu of interactive multimedia learning media consists of material and quiz menus. The appearance is as follows in Figure 3:



Fig. 3. Main menu of learning media

c. The media learning material Menu

Material menu of media interactive multimedia learning consists of understanding (*wangenan*) *pupujian*; and the form (*wangun*) *pupujian*; function, content (*eusi*) and *pupujian* example; and video *pupujian*. The menu is as follows in Figure 4:



Fig. 4. Material menu of media learning

1) Material content of wangenan pupujian

Content material sense *pupujian* is a group of *pupujian* understanding of some experts. As presented in Figure 5.

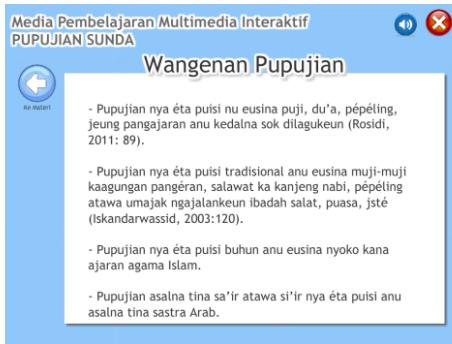


Fig. 5. Fill material restriction *pupujian*

2) Material content of ciri & wangun pupujian

Pupujian features a description of the *pupujian* as presented in Figure 6, namely:

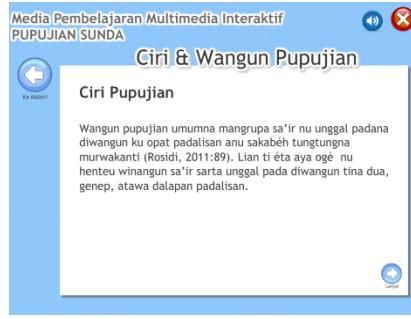


Fig. 6. Content material of *ciri & wangunpupujian*

The form of *pupujian* consists of: 1) *pada*, 2) *padalisan*, 3) *purwakanti*, and 4) *randegan*. As presented in Figure 7.



Fig. 7. Content material of *wangun pupujian*

3) Content material in the functions, contents, and examples of *pupujian*

The function of *pupujian* is the expression and social function. The contents of *pupujian* are praising Allah, blessings to the Prophet, prayer and repentance to God, advice, and teachings of the Islamic religion. As presented in Figure 8.



Fig. 8. Content material of function and content of *pupujian*

Examples of *pupujian* featuring one of the *pupujian* title "Kanjeng Nabi". As presented in Figure 9.



Fig. 9. Fill of material example *pupujian*

4) *Pupujian Video* (As presented in Figure 10)



Fig. 10. Video of Sundanese *pupujian*

d. *Quiz Menu*

The quiz menu consists of several questions that must be answered by selecting points A, B, C, and D which are equipped with true or false answers. The menu is presented in Figure 11 as follows:



Fig. 11. Quiz menu

IV. CONCLUSION

Based on research result, the development steps include: 1) problem analysis, 2) data collection, 3) product design, 4) design validation, 5) design revision, 6) trial products, 7) product revisions, 8) trial run, 9) product revisions, 10) mass production. The results of this study indicate that the Sundanese *Pupujian* Learning Materials Based on Interactive Multimedia developed are valid and effective. Media validity is indicated by obtaining a score of 37 from a maximum score of 40 in the aspect of material validity and obtaining a score of 21 from a maximum score of 24 in the aspect of media validity. Both aspects of validity are in the very good category. As for the

effective criteria, the effectiveness of the media is reviewed by using quasi-experiments in one sample. From the test results it is known that the $\text{Sig. (2-tailed)} = 0.001$. This means $\text{Sig (2-tailed)} < 0.05$. Thus, this means that there are differences in the mean scores of students before and after learning by using Sundanese *Pupujian* learning media based on interactive multimedia with the posttest mean greater than the pretest mean. Therefore, it can be concluded that Sundanese *pupujian* teaching materials based on interactive multimedia that are developed are valid and effective so that they can be used in learning Sundanese *pupujian* in Sundanese subjects.

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