

# DEVELOPMENT OF INTERACTIVE MULTIMEDIA FOR JUMPUT BATIK MATERIALS LEARNING CULTURAL ARTS AND CRAFTS

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## Abstract

The objective of this study was to develop a design and investigate the feasibility of interactive multimedia for batik jumput lesson. The method employed in this study was Research and Development (R&D). The research subject was the five graders of SDN Wonolopo 03. The techniques of data analysis employed preliminary data analysis, t-test, and gain test. The result of the study showed that (1) The design of developing interactive multimedia for batik jumput lesson was developed based on the teachers 'and students' needs which indicated that the teachers and students required an interactive multimedia for batik jumput lesson, (2) The result of materials validity obtained 62.85% in the feasible criteria, the result from media experts obtained 80% in the feasible criteria, the result of practitioner validity obtained 95. 5% in the very feasible criteria. (3) The learning outcomes increased by 0.407 for knowledge aspect, and 0.380 for skill aspect, each of which was in the medium criteria. In conclusion, the interactive multimedia with adobe flash for batik jumput materials is feasible and effective to be used in batik jumput lesson for grade 5 SDN Wonolopo 03.

Keywords: Media, Interactive Multimedia, Batik Jumput

## 1. INTRODUCTION

The results of observations, interviews, and documentation data in class V SDN Wonolopo 03 Semarang, found several problems, among others, the problems that were found in the teacher, namely, the teacher had difficulty in delivering the jumput batik material because the material has not been packaged attractively so that students are bored and batik pinch is only obtained from student books. The lack of instructional media used was evidenced from the results of interviews with class teachers who said that the media usedFor jumput batik material is still very simple, still in the form of pictures and the teacher has not used interactive media for students. The next problem is that it is not maximized

the use of technology science for classroom learning. Classroom problems are not only experienced by teachers, but students also experience several problems, namely, in the teaching and learning process students have more reading and writing activities and still less for practical activities, especially for grass batik material. Another problem in class V SDN Wonolopo 03 Semarang City is that the learning outcomes of most students have not yet achieve KKM average

(Minimal completeness criteria). Based on these problems, the teacher can create learning media that support the learning process of jumput batik material, namely using interactive multimedia with jumput batik material. This media is used as a support in conveying the material being studied so

that the process of understanding students can be more optimal in understanding the material presented by the teacher.

Supporting research is an international journal written by Farid Ahmadi Research conducted by Farid Ahmadi and Adi Wisnugroho (2016) entitled The Developing Media Learning Write Java Letters Using Macromedia Flash To Increase The Average Of Learning Result with research results that the development of learning media about writing Javanese characters using Macromedia Flash in fourth grade elementary school produces media development designs, and shows the feasibility of using and the ability to improve student learning outcomes. In the end, it can be concluded that ICT-based learning media has a very large contribution to the learning process in elementary schools. Teachers are now increasingly required to be creative, as well as students who are required to have high motivation to support learning activities with the media.

Another journal research was written by Muga Linggar Famukhit (2013) entitled Interactive Application Development Policy Object 3D Virtual Tour History Pacitan District based Multimedia with the results of research that the creation of digital media information in the form of Application Object Interactive 3D Virtual Tour Based on History Multimedia Pacitan understands a simple concept, easy to operate, attractive, clear and useful. This application can provide knowledge and can be used as a medium of information and promotion of the history of Pacitan to students and the public.

Furthermore, research written by Erwin Putera Permana and Desy Nourmavita (2017) entitled "Development of Interactive Multimedia in the Eyes IPA lessons describe the life cycle of animals in the surroundings of fourth grade elementary school students. Interactive multimedia was developed to make it easier for students to understand the material on the life cycle of animals. Seeing the results of the research obtained, namely the feasibility of interactive multimedia animal life cycles based on the overall expert judgment based on the percentage of the feasibility assessment is in the very feasible category to be used as a learning media for Natural Science for grade IV students SD.

Based on observations and interviews, the formulation of the problem is as follows (1) How is the development of interactive multimedia on grass batik material; (2) What is the feasibility of interactive multimedia with jumpat batik material; and (3) How are the student learning outcomes using interactive multimedia with jumpat batik material. The objectives of this study were (1) to develop an interactive multimedia development design of jumpat batik material; (2) Testing the feasibility of developing interactive multimedia on jumpat batik material. (3) Knowing the learning outcomes of jumpat batik material using interactive multimedia on jumpat batik material.

## 2. METHOD OF INVESTIGATION

The research subjects in this study were fifth grade students of SDN Wonolopo 03 Semarang City, fifth grade teachers of SDN Wonolopo 03 Semarang City, material experts, media experts, and practitioner experts. The research conducted is a type of development research. This study uses an adaptation development model from Sugiyono (2015: 408).

The steps in this research are:

(1) potential and problems; (2) data collection; (3) designing product design; (4) design validation; (5) design revision; (6) product testing; (7) testing of usage products; (9) manufacture of the final product.

The data collection techniques used were test and non-test techniques. Meanwhile, the data analysis techniques used were preliminary data analysis based on the results of the normality test of student learning outcomes, product analysis based on the assessment of material experts and media experts, and final data analysis based on the results of the n-gain and t-test calculations.

## 3. FINDINGS AND DISCUSSION

### Potentials and Problems

The initial activities carried out were observation of class V SDN Wonolopo 03

Semarang City and interviews with homeroom teachers of class V SDN Wonolopo 03 Semarang City. Class observations and interviews were carried out to gather information about the implementation of learning the jumpat batik material in class V SDN Wonolopo 03 Semarang City and the needs of teachers and students' needs for learning media as the basis for the analysis of research needs.

In accordance with the guidelines for the classroom observation instruments and interviews with class V teachers as an initial stage of potential and problems, the results are used to identify problems in this development research. The results of classroom observations and interviews were (1) the material of jumpat batik has not been packaged attractively so that students tend to be bored while learning; (2) Lack of interactive learning media

for students on grass batik material; (3) Lack of IT-based learning media for jumpat batik material; (4) Students' knowledge about batik jumpat is still lacking; (5) The learning outcomes of most students still do not meet the KKM.

### Data collection

At the data collection stage related to the making of interactive multimedia material, the researchers prepared some data, including: (1) Initial data on the needs questionnaire.

and 95.5% of the aspects tested, it can be concluded that the interactive multimedia of the jumpat batik material being developed is feasible to be used in learning batik material in elementary schools with revisions, so it must be revised according to the suggestions and comments of each validator first before moving on. the next stage.

Table 1 Recapitulation of Feasibility Validation of Interactive Multimedia Product Design with Batik Jumpat Material

No	Expert	total	Maxim um Score	Percentag e (%)	Criteria
1	Media	80	100	80%	Well worth it
2	Material	66	105	62.85%	Well worth it
3	Practition ers	191	200	95.5%	Very Worth it

teacher; (2) Initial needs questionnaire datastudents.

### Interactive Multimedia Development Design of Batik Jumpat Material

This stage includes the product design being developed. The interactive multimedia product development design of jumput batik material is obtained from filling out a questionnaire on the needs of teachers and students. Product design in the form of media containing cognitive material and skills material about batik material

The product design combines several aspects, namely sound, images, animation, text, and video, so as to create an attractive media for students.

#### Feasibility of Interactive Multimedia Products with Grass Batik Material

After the initial product is made, it is validated by media experts, material experts, and expert practitioners. Media validation was carried out by a lecturer in Media Education Technology, namely Ghanis Putra Widhanarto, M.Pd. The material validation was carried out by a PGSD lecturer in the arts, namely Atip Nurharini, M.Pd. Practitioner validation was carried out by a class teacher at SDN Wonolopo 03 Semarang City, namely Siti Rondyah, S.Pd. This validation is intended to determine the feasibility of the interactive multimedia material of batik jumput that has been made. The results of validation activities with media, material, and practitioners experts are as follows:

Based on the recapitulation table of the validation of the feasibility of interactive multimedia product design, jumput batik material shows that each validator gives a value of 80%, 62.85%,

#### Learning Outcomes Using Interactive Multimedia of Batik Jumput Material

To find out student learning outcomes using interactive multimedia, jumput batik material is seen from: (1) cognitive learning outcomes, and (2) skills learning outcomes. Cognitive learning outcomes were obtained by students doing test questions. Skills learning outcomes were obtained by students making jumput batik work exemplified in the video. This is done by researchers to determine whether student learning outcomes have increased or not by using interactive multimedia with jumput batik material. The results of the increase in the mean pre-test and post-test cognitive and skills were carried out to determine whether or not student learning outcomes improved by using interactive multimedia with jumput batik material. Student learning outcomes can be seen from the difference and average increase between the scores before learning (pre-test) and after learning (post-test). The average pre-test score of students' cognitive in learning batik material was 59.5 and the average post-test score was 76 with the result of the N-gain calculation.

obtained by 0.40 and included in the moderate criteria. Meanwhile, the average pre-test score of students' skills in making batik jumput was 68 and the average post-test score was 78 with the N-gain calculation results obtained at 0.30 and included in the moderate criteria.

Table 2 Result of N-gain Test Analysis

Lots value student	Tinda's right	Average	difference Nratagain values average	Criteria
Cognitive Pretest	40	59.5	16.5	Moderate
Posttest	40	76	0.40	
Craft Pretest	40 lan	68	100.30	Moderate
Posttest	40	78		

In this study, student learning outcomes using interactive multimedia, jumput batik material were calculated based on the ngain test and t-test pretest and posttest values, pretest and posttest activities carried out on large-scale product use trials. The research subjects were 40 grade students of SDN Wonolopo 03 Semarang City. The results of the t test analysis are as follows:

Table 3 T-test results pretest and posttest values

Score	Number of Actions Students	t <sub>count</sub>	t <sub>table</sub>	Criteria
Cognitive Pretest	40	10,422	2,030	Ha received
Posttest	40			
Craft Pretest	406.40	2,030		Ha lan Posttest 40 is accepted
Posttest				

Based on these records obtained on the cognitive value shows tcount 10.422 is greater than t table which is 2.030 then Ha is accepted and the skill value shows tcount 6.40 is greater than t table which is 2.030 then Had received. This result is strengthened with Sadam Husain's research t test results showed that there was a significant difference between the increase in the experimental class and the control class

with the value of tcount = 3.32 > t table = 1.671 then Ho is rejected. Research Zaraturrahmi,

et al (2016) results of  $t\text{-count} > t\text{-table}$  ( $4.91 > 2.046$ ) means that there is a significant difference in learning outcomes between the experimental and control classes, the n-gain of the experimental class is 50.92 (moderate) n-gain class control of 32.5 (moderate). Research on the application of the practicum method by Panjaitan (2015) shows that the practical method is effective in improving student learning outcomes.

Based on research conducted using interactive multimedia, jumpcut batik material provides information and knowledge in an interesting way. The results obtained indicate that the interactive multimedia material of jumpcut batik is well received as a learning medium. So based on the results of the ngain test and the t test it can be concluded that interactive multimedia of jumpcut batik material is suitable for use in learning jumpcut batik material to improve learning outcomes of fifth grade students of SDN Wonolopo 03 Semarang City.

#### 4. CONCLUSION

Based on the results of data analysis and discussion, it can be concluded that the interactive multimedia of the jumpcut batik material that was developed meets the appropriate criteria of media experts, material experts, and practitioner experts. The interactive multimedia of grass material is able to improve student learning outcomes, the results of the increase in the average pretest cognitive score of 59.5 and the average post-test score of 76 with the result of the N-gain calculation obtained of 0.40. On the average, the pretest score of skills is 68 and the post-test score is 78 with the result of the N-gain calculation is 0.30, and the t-test result is 10.422 for the cognitive score of 6.40 for the skill score.

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