Playdough Guidebook to Improve the Grade III Student's Creativity

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Abstract— **The playdough guidebook has not been used yet in SDN Kalisegoro. This study aims to develop a playdough handbook aimed at knowing feasibility, as well as testing the effectiveness of media. Media is intended to improve learning outcomes. I conducted Research and Development (R&D), the development method created by Sugiyono. Respondents of the development of the guidebook consist of lesson materials specialists, media specialists, grade III teachers, and students of SDN Kalisegoro. The data were collected through interviews, questionnaire filling, and documentation. Based on the lesson materials validator, the playdough guidebook is affirmed as highly feasible at percentage point 95% and the one conducted by the media validator was affirmed as highly feasible at percentage point 97.72%. The small group testing through pretest got 55 as the mean score, while after doing post-test the students' mean score increased to 86. The small group normality test through pretest, L_o (0.237) < L_{table} (0.337), while the normality test of posttest shows L_o (0.222) < L_{table} (0.337) and small group t-test shows t_{count} = -6.20537 and t_{table} with α = 5% is 2.571 shows t≤- t_{table}, i.e.-6.20537 ≤ -2.571 which means that Ho is rejected and $μ_B$ < 0. The calculation of N-gain shows that the mean of the students' scores also improved to 0.69. The conclusion of the study is that the playdough guidebook is feasible and effective to be used in the Arts, Culture, and Craftsmanship learning, particularly the lesson of cutting techniques, folding techniques, and knitting techniques.**

Keywords— *arts, culture, and craftsmanship, playdough guidebook, research and development*

I. INTRODUCTION

According to Kristanto [1], Arts, culture, and Craftsmanship aim to develop thinking skills as well as attitudes and values as individuals as well as social and cultural beings [1]. Art education can cultivate students' emotional intelligence, because it processes all activities about physical activity and beauty, which is contained in the activities of exploring, creating, and expression through language, sound, and role [2]. Arts, culture, and Craftsmanship in its development are closely related to fostering students' creativity, developing skills, instilling an awareness of local culture, and love of the environmental environment.

Arts, Culture, and Craftsmanship is the subject that gives space to its learners to get involved in various experiences in the creation of a work in form of real product [2]. In Arts, Culture, and Craftsmanship learning, the students can interact with the handicrafts and the technology around them, thus they indirectly will get creative experience in their lives. The Arts education also functions to build the children's spirit

toward the development at their age. The arts education attracts the arts as the tool to develop psychological functions such as creation, feeling, and willing (Ki Hadjar Dewantara) [3].

The guidebook is often called the media of communication. Blake and Haroldsen said, "Communication Media like the availability of the guidebook is better called as media communication". Medio can be translated into "middle". It means that in a communication context, the word "middle" can be defined as something between personal and "mass" communications [4]. According to Effendy guidebook is, "The book containing the information, instructions, etc. that becomes a guide for the readers to have complete knowledge about something". Effendy added, "Media communication uses the media that does not have characteristics existing in mass media, the main character of simultaneousness" [5].

Based on the research conducted in SDN Kalisegoro through observation, documentation, interviews with the teacher, I founded the problem with the Arts, Culture, and Craftsmanship learning. In the learning process, the teacher does not use the teaching tool at best; the availability of the media at school is insufficient. During the learning of craftsmanship, the teacher just did what he could. If he is not good at making handicrafts, he just told the theory. The learning was also still teacher-centered, with the poor variation of learning models and methods. The teacher just practiced direct instruction to explain the theory of cutting, folding, and knitting techniques. He also practiced the discussion and tasking methods as well as the less innovative learning methods. If it continues happening, the student's creativity in the learning will be worsening as the teacher did not much involve the students so the students' enthusiasm during the learning worsened too. During the learning, the teacher has never used the Playdough guidebook, and previously, he had never used it either. He just used the books provided by the school, such as teacher's books, student's books, and workbooks.

Based on the explanation above, the researchers restricted the problem into the poor effort of the teacher to develop the teaching tools the teaching tool innovation that can give solution and improve the students' creativity is needed. I will develop the playdough guidebook. The researchers are going to develop the playdough guidebook for the Arts, Culture, and Craftsmanship learning mainly cutting, folding, and knitting techniques to boost the students' creativity. This book is used as an interesting learning medium and can improve students' learning outcomes, increase students'

attractiveness to SBdP materials and make it easier for students to understand learning materials.

The study conducted by Diajeng Nilam Resmatika titled "*Meningkatkan Kreativitas Melalui Permainan Plastisin Pada siswa Sekolah Dasar*" (Improving Creativity through Game Using Plasticine Clay on Primary Students) showed that the experimental group has different creativity improvement from the control one. The study showed that using plasticine clay can improve creativity in the experimental group. So after playing plasticine clay, their creativity improves and it is suitable for the primary students. The impacts of the study include: to the school, it is expected to provide a better facility to the students so they can play in the middle of the learning. Therefore, they can explore their ideas imaginatively. Thus, the school can be "their second home" [6].

Another study conducted by Annisa Nur Aziza titled "*Pengaruh Pemanfaatan Media Playdough Terhadap Keterampilan Menulis Permulaan Siswa Tunagrahita Kelas 1 SDLB Bhakti Luhur Malang*" (The Impact of Playdough Using on the Novice-Level Writing Skill of grade I Students with Mental Disability in SDLB Bhakti Luhur Malang) shows that in general there was score improvement during the intervention and the score decreased when the intervention was deceased. The score improved to 78.33 from 54.8. The use of playdough has an impact on the novice-level writing skill of the grade 1 students with mental disability in SDLB Bhakti Luhur Malang, so I suggested to the teacher and the school to use playdough as the teaching tool that is safely used in the learning of novice-level writing skill [7].

Research that has been presented that is relevant to this research, namely which has something in common about the use of playdough. However, the studies that have been presented have differences in the media content developed, place of research, subject of research. The research conducted above is used for researchers as material to carry out research. Research conducted by researchers aims to develop a handbook to improve learning outcomes grade III at SDN Kalisegoro.

II. METHODS

The researchers used to research and development in this study. As Sugiyono [8] stated, research and development is the method or process used to validate and develop a product. Research and development is the research method that creates a particular product and tests the effectiveness of the developed product. The steps of the research and development according to Sugiyono consist of 1) Potential and Problem, 2) Data Collection; 3) Product Design; 4) Design Validation; 5) Design Revision; 6) Product Testing; 7) Product Revision; 8) Design Validation; 9) Final Product Revision; 10) Mass Production. Mass production is modified with limited production[8]. This research was conducted until the 9th stage, not up to mass production. This is due to the limited time and cost of this research. Data and creativity measurement using data collection instruments. The value of creativity is derived from qualitative observations in small and large groups. Qualitative observation is intended to observe the ability of children to create playdough before and after playdough book development research.

The study was conducted to develop the guidebook as a product in Arts, Culture, and Craftsmanship learning for grade III students in SDN Kalisegoro. The media feasibility test was conducted by a validator team consisting of two, i.e. lesson materials specialist and media specialist. While the effectiveness of the media is shown in the result of the product testing and research design usage testing applied was the development model developed by Sugiyono [8]. That model was selected because it was relevant to the research and development I was going to do.

III. RESULTS AND DISCUSSION

Based on the research in SDN Kalisegoro, the researchers have developed a guidebook for Arts, Culture, and Craftsmanship learning particularly the lesson of cutting, folding, and knitting techniques for grade III students, including the playdough guidebook design development, the feasibility of the playdough guidebook, and the effectiveness of the guidebook.

A. Findings

- *Product of Playdough Guidebook Development*

The researchers developed a product in form of a *playdough guidebook* for Arts, Culture, and Craftsmanship learning, particularly cutting, folding, and knitting techniques for grade III students of SDN Kalisegoro. As stated by Greene and Petty (2008: 45) a high-quality textbook and guidebook should meet 10 criteria [9]. They are: (1) The book must attract the students' interest in using; (2) The book should motivate the students using it; (3) The book should have illustrations that attract the students using it; (4) The book should consider the linguistics aspects that are relevant with the competencies of the students using it; (5) The book must have close relation with another subject/the other subjects, and it will be better if it is supported with a plan so they become an intact and integrated unit; (6) The book should be able to stimulate and to encourage the personal activities of the students using it; (7) The book should sensibly and explicitly avoid the ambiguous and anomalous concepts in order not to confuse the students using it; (8) The book must have the clear and firm so it will influence its users' one; 9) The book must confirm and put emphasis on the children's and the adults' values; and (10) The book must tolerate the users' differences. The contents of the guidebook must be relevant to what we teach or deliver to the children so that the children can understand it well and properly. All those must be put into reality so that the children love reading books [8].

Activities that use playdough media can give fun to children, especially when the child forms a new combination with his game tools. Playing activities using playdough media requires flexibility and fine motor connection of children in their implementation [10]. Further, Through playing playdough children can use their ability to hold, press, grasp, and narrow playdough and children can form a variety of shapes according to their creations whether using printing tools or not [11].

The design of the playdough guidebook was printed on A4-sized ivory paper. The contents of the book are: 1) Title of the book; 2) Name of Author; 3) Preface; 4) standard of competencies 5) Fundamental competencies and their

Indicators; 6) Table of Contents; 7) How to use; 8) Pictures of means of transportation; 9) About the Author. The followings are the components of the product the researchers have designed:
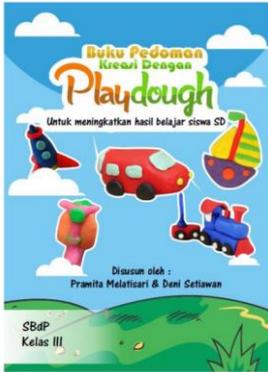
a) Playdough Guidebook Design

Fig. 1. Cover of playdough guidebook

On the cover of the guidebook titled "*Buku Pedoman Kreasi Dengan Playdough Untuk Meningkatkan Kreativitas Siswa SD*" (Guidebook for Creation using Playdough to Improve Primary Students' Creativity), the background is dark blue and light blue in line with the needs questionnaire and there are pictures of the stuff made of playdough, such as rocket, cars, ship, motorcycle, and train. Also, there is a note "Arts, Culture, and Craftsmanship subject for grade III students", the name of the author "Pramita Melatisari dan Deni Setiawan".

b) Preface

Fig. 2. The look of the design of the Preface page

On the preface page, the background is combined with the front cover in dark blue and light blue. The contents of the preface are concerning the importance of playdough for the primary students. The page number is written on the right bottom of the page.

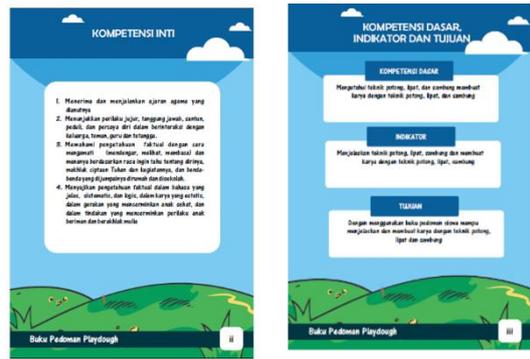### c) Core Competencies, Basic Competencies, and Learning Objectives

Fig. 3. The look of the design of the page containing Core Competencies, Basic Competencies, and Learning Objectives

The core competencies, basic competencies, and learning objectives that are included in the playdough guidebook are: Basic Competencies are (3.4) to know about cutting, folding, and knitting techniques and (4.4) to create a work by practicing the cutting, folding, and knitting techniques. Subsequently, there are three indicators for the objectives reaching, are 3.4.1 to identify the cutting, folding, and knitting techniques; 3.4.2 to be able to explain the cutting, folding, and knitting techniques, 4.4.1 to create a work using playdough by practicing the cutting, folding, and knitting techniques. The learning objectives are that by using the guidebook, the students will be able to explain and to create a work by practicing the cutting, folding, and knitting techniques. Then, the page number is at the bottom right of the page.
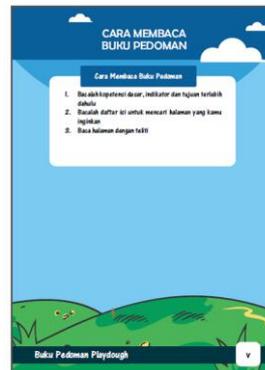
d) How to read the guidebook

Fig. 4. The design look of the page containing How to use the guidebook
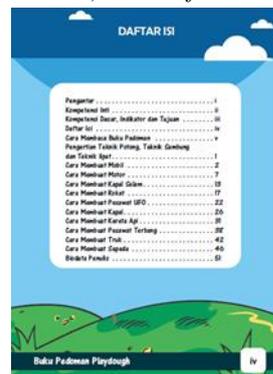
e) Table of Contents

Fig. 5.   The look of the Table of Contents page

In the table contents page of the guidebook, there are preface, core competencies, basic competencies, indicators of competencies mastery and learning objectives, the definition of cutting, folding, and knitting techniques; and the pictures of means of transportation, and the back cover. Then you can see the page number at the bottom right of the page.

f) Definition of Cutting, Folding, and Knitting Techniques

Fig. 6.   The Look of the Definition Page

The definition page includes the definition of cutting technique, the definition of knitting technique, and the definition of folding technique so that the students know what those are. Its background is light and dark blue as well as I put a picture of a cloud at the top left of the page. Then, you can find the page number at the bottom right of the page.

Fig. 7.   The Look of Content Page

On the page containing the contents of the book, you can see 10 pictures of means of transportation and the steps to make those that will be chosen by the students to make the mockup of those using playdough clay. The 10 means of

transportation are cars, motorcycles, submarines, rocket, space ship, ship, train, airplane, truck, and bicycle. The background is light and dark blue. And the page number is at the bottom right of the page.
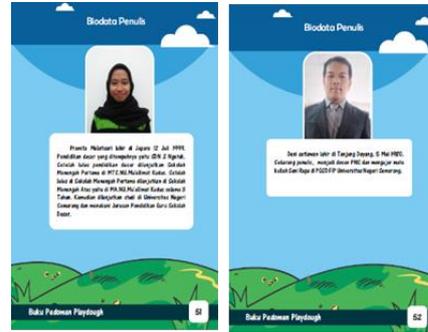
g) About Authors

Fig. 8.   The Look of Author Page

Playdough guidebook includes the information about its authors presented in the picture with a caption containing information about the author. The pictures' and captions' backgrounds are white. Then the page number is at the bottom right of the page.

h) Back Cover

Fig. 9.   Back Cover

B. Discussion

- *Media Feasibility*

Feasibility assessment of playdough guidebook is conducted by lesson materials and teaching tool assessors by using research instruments. The first assessment is conducted by the lesson materials assessor, the lecturer in Department of Fine Arts, Faculty of Arts and Language, UNNES, and the second assessment is conducted by the lesson materials specialist, the lecturer in Department of Education Technology, Faculty of Education, UNNES. The result of the assessment is presented in Table I.

TABLE I.   THE ASSESSMENT OF VALIDATION CONDUCTED BY MEDIA SPECIALIST AND LESSON MATERIALS SPECIALIST

No	Validator	Validation Perangkat	Percentage	Remarks
1	Lesson materials specialist	Lesson Materials Validation	95%	Excellent
2	Media specialist	Media Validation	97.72%	Excellent

Table I showed that the developed playdough guidebook got percentage point 95 % and is included in the excellently feasible category by the lesson materials specialist and got percentage point 97.72 % included in excellently feasible by the media specialist [8]. The validators also advised that the researchers needed before doing small group product testing.

The questionnaire filled the teacher and the students in the small group, it shows the positive response to the product of playdough guidebook containing lesson of cutting, folding, and knitting techniques at percentage point 100% and is included in the excellently feasible category. A comprehensive analysis of the response questionnaire shows that the playdough guidebook for the lesson of cutting, folding, and knitting techniques is excellently feasible for the learning in SDN Kalisegoro. The results showed that the need for learning media is attractive to students and can improve learning outcomes for students during SBdP lesson content practice. So the researchers developed a playdough media playdough content of decorative work material because it is considered fun and proven that the media that has been developed attracts students' attention and is fun for students [10].

- *The Effectiveness of Media*

The effectiveness of the playdough guidebook for the lesson of cutting, folding, and knitting techniques can be viewed from the students' learning outcome. According to H.M Surya [12] the learning outcome is marked by the cognitive, connotative, affective, or motor behavior [12]. The learning outcome consists of pretest and posttest scores tested using normality test, t-test, and N-gain test.

TABLE II.   SMALL GROUP NORMALITY TEST

Data	Mean	Deviation Standard	L0	Ltable	Remarks
Pretest	55.2	9.121403	0.23714	0.337	Distributed Normally
Posttest	85.6	6.0663	0.222031	0.337	Distributed Normally

From Table II we can see that the calculation on the small group L_0 *Pretest* = 0.23714 and L_0 *posttest* = 0.222031. Based on the data, I can conclude that small group tests of pretest and posttest scores are distributed normally because $L_0 < L$ table.

TABLE III.   SMALL GROUP T-TEST

Classroom	N	Mean	Variants	T_{count}	T_{table}	Remarks
Pretest	5	55	83,2	- 6,20537	2,571	H_0 is rejected
Posttest	5	86	36,8			

From table III, based on t-test calculation using paired sample t-test of paired observation, t_{count} = -6.20537 and t_{table} and α = 5% is 2.571, got $t \leq t$ table or -6.20537 $\leq$ -2.571 so H_0 is rejected and $\mu_B < 0$. Thus it shows that after the small group product testing we can see that the pretest score is different from posttest one in Arts, Culture, and Craftsmanship learning, particularly the lesson of cutting, folding, and knitting techniques using a playdough guidebook.

TABLE IV.   N-GAIN TEST ON THE SMALL GROUP

Classroom	Mean of Score		N-gain	Category
	Pretest	Posttest		
Small group	55	86	0.69	Fair

From Table IV we can see that the calculation of N-gain on the small group is 0.69 which is included in the fair category. The posttest score is much higher than the pretest one, i.e. 86 from 55 [8]. Thus playdough guidebook is effective to be used in the Arts, Culture, and Craftsmanship, particularly the lesson of cutting, folding, and knitting techniques. This is relevant to the study conducted by Dyah Kartikaningtyas (2014:662) said that the results of this learning media study had a positive effect on cognitive learning outcomes as evidenced by the difference in average student understanding through t-test and an average increase (gain) of 0.5 (moderate). Learning media is also able to increase the activities and character of honest and friendly/communicative students [13].

Based on qualitative observations, children's creativity is seen to have progressed after using playdough manuals resulting from this research and development. Referencing the forms taught makes it easy for children to produce playdough products to their liking. Children are also faster and not confused in producing playdough works. Another creativity is starting to boldly blend the playdough colors into more varied and more interesting. According to Lilik Suwarti, the results of research that has been done by researchers showed that playdough media can improve cognitive ability in knowing the shape and size in children group B this is based on the results of the cycle I with a percentage of completeness of 53.84% in the second cycle percentage of completeness of 69.23% and the result of the third cycle percentage of 84.61% [14].

This study also has a connection with the theories that have been used by researchers to develop playdough media. The development of playdough manual media can improve students' learning outcomes on decorative materials of SBdP learning content. At the time of learning SBdP decorative work material, there are differences in pretest and posttest results before and after using learning media. The increase is due to playdough manual media can make students interested in the learning process. Research that has been done by other researchers also revealed that playdough media can make it easier for students to do learning.

The practical implication of this research is that it can help teachers and students in conducting related learning activities by using new and innovative learning media so that students can learn with developed media. and for teachers when learning using playdough handbook media can be an alternative in efforts to improve student learning outcomes, teachers will be motivated to create innovative media in the learning process. For schools can improve the quality of schools with the use of media learning by other teachers.

IV. CONCLUSION

The development of playdough guidebook for Arts, Culture, and Craftsmanship subject particularly the lesson of cutting, folding, and knitting techniques for grade III

particularly the lesson of cutting, folding, and knitting techniques. It is referred to the questionnaire on needs filled out by teacher and students, Standard of Competency, Basic Competencies, and Learning Indicators. The feasibility of the playdough guidebook for Arts, Culture, and Craftsmanship subject, particularly cutting, folding, and knitting techniques for grade III students in SDN Kalisegoro has been validated by lesson materials and media specialists. The feasibility of lesson materials that have been validated by the lesson materials specialist got the percentage point 95%, included in the excellently feasible category. Then, the media feasibility validated by media specialists got a percentage point of 97.72%, included in the excellently feasible category.

The effectiveness of playdough guidebook is regarded as being able to improve the student's creativity in the learning of Arts, Culture, and Craftsmanship, mainly cutting, folding, and knitting techniques, shown by the students' creativity improvement (students' learning outcome both cognitive and psychomotor area) at grade III of SDN Kalisegoro. The conclusion is that the playdough guidebook for Arts, Culture, and Craftsmanship particularly cutting, folding, and knitting techniques for grade III students in SDN Kalisegoro is effective and can improve their creativity. Children are more creative in producing playdough work using playdough guidebooks that have been developed in this study.

V. ACKNOWLEDGMENT

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