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BIG BOOK DEVELOPMENT IN MATHEMATICS LESSONS STUDENT LEARNING OUTCOMES IN CLASS 1 SD N 085138 LANGKAT

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Abstract

Learning mathematics is considered a difficult subject. For this reason, in learning mathematics it is necessary to apply learning media that connects learning concepts so that they are closer to students' lives. Researchers try to use the big book as a learning medium for the lower classes. This research aims to describe the media development process and produce a product and to determine the feasibility of product quality in the form of big book media in mathematics learning in elementary schools. This research is a type of Research and Development (R&D) research with the ADDIE model which consists of five stages. Data collection uses validation and questionnaires. Data analysis techniques were obtained from the validation results of media experts and material experts as well as the results of teacher and student response questionnaires. The research results show a development process consisting of analysis, design, development, implementation, evaluation. The results of this research show that the percentage of media expert validation was 85% and the percentage of material expert validation was 87.5% with very feasible criteria. The results of the teacher questionnaire obtained a percentage of 92.6% and the student questionnaire response was 90.8% with very appropriate criteria. Based on data analysis, it can be concluded that there is product quality in the form of suitability so that the big book media can be used as a mathematics learning media, especially in class 1 of the 085138 Langkat State Elementary School.

Keywords : Big Book Media, Mathematics, ADDIE Model

Introduction

Education is an activity carried out deliberately by teachers to guide and help students to develop themselves in facing problems and changes in the environment. Through education that is carried out deliberately, it is hoped that students will be able to develop their potential and learning outcomes in accordance with expectations, so that learning objectives can be achieved (Budiwibowo & Sudarmiani, 2018: 13). This is in line with the objectives of national education contained in the National Education System Law of the Republic of Indonesia Number 20 of 2003 which reads: National education aims to develop the potential of students to become human beings who believe and are devoted to God Almighty, have noble character, are healthy, knowledgeable. , capable, creative, independent, and become democratic and responsible citizens in order to make the nation's life more intelligent. Based on the description of the Law, national education goals can be achieved by providing education for the Indonesian people. Therefore, the government provides Indonesian citizens with the opportunity to get a decent education. Apart from economics, politics, security, and so on, one area that has an important role in the progress of a country is education. The development of a nation is influenced by the progress of education. Therefore, in the field of education it must be implemented optimally in order to obtain satisfactory results (Firmansyah et al, 2020: 100). At elementary school level, students are required to master several subjects, and one of the subjects that students must master is mathematics. The subject of mathematics itself is a basic subject at all levels of education, starting from elementary school to university. Mathematics content contains several abstract concepts and ideas,

because its abstractness makes most students think that mathematics learning content is difficult to learn, unpleasant and even a scary subject. In Piaget's opinion, the classification of elementary school students is at the concrete operational stage. Where at this stage students' logical thinking processes are still based on physical manipulation of objects, so students cannot think formally because their orientation is still related to concrete objects. However, this does not mean that mathematics content cannot be taught in elementary schools (Aryani & Mansur, 2017: 56). Objects in mathematics are not easy to understand and observe only with the five senses, so it is very natural that learning mathematics is difficult for students to understand, especially in elementary schools. Mathematics subjects are one of the subjects that are difficult to understand, this is because mathematics subjects are abstract in nature, with this problem teachers should instill concrete learning concepts, one of which is by using teaching aids that can be seen in shape and are easy to understand. with its development. The aim is that students can take part in mathematics learning that is more enjoyable and can optimize student learning outcomes.

According to Suryani, et al (2018: 17) teaching aids are tools used to make it easier to clarify lesson material that can be shown in real form. Teaching aids can help teachers, especially to convey lesson material and explanations to students, with the aim that students can master the material taught by the teacher through its embodiment in learning material, so that learning is more enjoyable and students' interest in learning is more optimal. Strong interest will encourage serious effort and never give up in learning (Kompri, 2016: 268). Low interest in learning will affect the achievement of educational goals and determine learning outcomes. An action that is not carried out in accordance with interest will result in unsatisfactory learning results. Without a strong interest, it is very difficult for students to achieve maximum learning outcomes. Props can be used to attract students' attention so it is hoped that students' interest will be more optimal after the props are available.This research is motivated by creating creative and non-boring learning. Because in its implementation, it sometimes still uses conventional learning patterns. That conventional learning focuses on lecture methods that refer to textbooks, so that conventional learning that is used to being applied in schools can be changed into contextual learning. According to Berns and Erickson, contextual learning is defined as a teaching and learning step that links topics to real world situations, which are applied in students' lives. So learning can be said to be a process related to innovative and creative teaching and learning activities in order to achieve the learning objectives that are implemented. Based on interviews from grade 1 teachers at elementary schools. Many students who are less active in learning also chat with their friends, causing students' focus to be disturbed. Often students feel bored and sleepy. According to the class 1 teacher, there is no media, due to limited time and costs in making media, they often still use conventional media, such as teachers only showing pictures in theme books. This condition is closely related to teacher competency mastery. Based on the problems that arise in schools, researchers try to develop effective learning support facilities. The aim of this research is to produce a learning media product in the form of a "big book" and determine the suitability of this media in the mathematics learning process, especially in lower grades in elementary schools. Various types of learning media, researchers will try to create learning media in the form of big books. According to Usaid this media is a type of reader that shows large format images, fonts or dimensions. This big book has special characteristics that appear both in the text and images. This allows for joint reading activities between teachers and students. The sizes vary, starting from A3, A4, A5 or can be adjusted to the required size. Another specialty is that it can attract attention because it contains colorful and large images so that it can improve the ability to read and understand text reading with the support of images.

A big book is a picture book that is larger in size compared to books in general and has its own uniqueness, namely the presence of enlarged text and images that are full of color and attractive (Harjanty & Muzdalifah, 2021: 123). The "big book" learning media is designed with attractive images and fonts, tailored to the needs of lower grade students. Contains short and simple material in capital letters and is equipped with colored pictures to make it more communicative and easy for students to see and is packaged in story form. Based on the results of observations supported by interviews with grade 1 teachers at SDN 085138 Langkat, researchers found problems in mathematics learning for grade 1 students, including: 1) there were students who had difficulty answering mathematics questions. 2) during the learning activities the teacher still uses the lecture method as the superior method. 3) during the learning process teachers rarely use teaching aids. 5) low learning outcomes in mathematics subjects. Based on the results of the interview, it can be concluded that in learning activities at SDN SDN 085138 Langkat, there is a need for evaluation in learning to improve students' learning outcomes and interest which is still low in mathematics learning material. Efforts that must be made to bridge this gap are by using teaching aids, in order to clarify things that are still abstract in students' minds, especially regarding mathematical content. One of the teaching aids that can be applied in mathematics learning is the big book props. Mathematics is one of the contents in the curriculum structure of SD/MI, SDLB or other equivalent forms. According to Sumardyono (in Fathani 2009:59) one of the characteristics of mathematics is that it is abstract because mathematics has an abstract

object of study. Therefore, in the learning process, mathematics requires the help of facilities and infrastructure that can help facilitate the learning process, one of which is media. Learning media is anything that can convey or channel messages from a source in a planned manner, resulting in a conducive learning environment where the recipient can carry out the learning process efficiently and effectively (Ashyar 2012: 8). The existence of learning media is used to concretize mathematical objects so that students can better understand the lesson and can have a positive impact on learning outcomes. Manipulative objects can have a positive influence on student learning outcomes (Kania 2018:2). The reality that occurs in several schools is that this has not been implemented optimally. The learning process that is not optimal makes Indonesia at the bottom of the ranking (Agustya, et al 2017:115).

Apart from that, the fact that occurs in elementary schools is that students' learning outcomes are still low and they do not meet the minimum completeness criteria in mathematics subjects. The low learning outcomes in class I are caused by many factors, including the lack of enthusiasm and interest of students in participating in mathematics learning, which is characterized by the large number of students who do not pay attention during the mathematics learning process. Interest in learning is important to cultivate, because it can influence learning outcomes (Karina, et al 2017:74). The low mathematics learning outcomes experienced require teachers to be more creative in developing learning media. Learning media has many variations, one of which is the big book. A big book is a reading book that has large size, writing and pictures. Wardhani (2015:20) states that the big book is a learning medium that was first created by Holdaway. Usaid (2014:21) states that children like big books because of their large size and attractive pictures. According to Lynch (in Nidika 2016: 12) big books can create a safe and comfortable atmosphere in the classroom and are able to attract attention during the teaching and learning process. The use of big book media can be adjusted to the class level and material being taught, so it needs to be developed. Asyhar (2012:81) explains that media developed by teachers themselves can avoid inaccuracies (mismatches) because they are designed according to individual needs, resource potential and environmental conditions. Therefore, researchers offer alternative solutions to this problem through the development of big book media as a learning medium. So this development research aims to produce a big book that is valid and effective as a mathematics learning medium at SDN 085138 Langkat.

Research Methodology

This research tries to develop big book media that contains thematic learning, especially for elementary school age children in grade 1 of elementary school. The big book that the researchers made was shown by showing pictures like the big book imagination, so that children would imagine by guessing what they saw in the big book imagination picture. This big book media is also accompanied by a mini game or challenge box which aims to evaluate learning using big book media as well as making students active in class. This research development model uses the R&D "Research and Development" method. According to Sugiyono, research and development methods are research methods used to create certain products and test the effectiveness of the product. 12 The research and development concept used as a guide for research and development of learning media is the ADDIE concept put forward by Robert Maribe Branch in the book Instructional Design: The ADDIE Approach consists of the analysis, design, development, implementation and evaluation stages.

Result & Discussion

The development of Big Book media products uses stages in the ADDIE model which consists of five stages, namely analysis, design, development, implementation and evaluation. Through the stages in this model, Big Book media can become interesting media.

Analysis Stage (Analyze)

Big Book media was developed in accordance with the 2013 curriculum which is applied to class III elementary schools. Analysis of student characteristics shows that each student has a high curiosity about things they have just seen, such as the big book learning media, because it is their first time carrying out learning activities using the big book media. Analysis of material in 1st grade elementary school learning regarding mathematics learning.

Design Stage (Design)

At the design stage, the first step in designing learning media is determining the material that will be used. Next, determine the materials used to make Big Book media so that they are easy to carry, suit the characteristics of grade 1 elementary school students and are safe to use in learning activities. The Big Book media display design was created using the Canva application. The Big Book media design is adapted to the characteristics of grade 1 elementary school students with an attractive combination of images, writing and colors.

Development Stage (Development)

The development stage is the product realization stage. At this stage, the development of big book media is carried out according to the design. The big book media design that the researchers have created consists of 10 sheets and then printed using A3 size paper. Before testing is carried out, it is necessary to have appropriate status for the media that has been created. Learning media is validated by media experts and material experts to determine the suitability of the media. The validity of the product in this research is seen from the score obtained from the validator (learning media expert). After validation by media experts, it is then validated again by material experts. After carrying out validation tests from media and material experts. Then proceed with design revisions according to criticism and suggestions from experts. After revision, it is then validated by media experts and material experts. Based on the final results, the percentage of media expert validators obtained was 85% and material experts were 87.5%, it can be stated that it is very suitable to be used as learning media.

Implementation Stage (Implementation)

In the implementation stage, it was carried out in a limited manner at the school designated as the research site, namely State Elementary School 085138 Langkat. Researchers conducted learning with the help of validated big book media. At this stage, researchers also gave response questionnaires to teachers and students containing statement items regarding the use of big book media in learning. This was done to obtain data related to the feasibility value of using big book media. The percentage results of the teacher questionnaire calculation were 92.6% and the student response questionnaire was 90.8%, which means that Big Book media was declared very feasible and helped teachers to explain material using Big Book media and made students feel happy when using Big Book media during tests. try.

Big Book Media Evaluation

The evaluation results were obtained based on suggestions obtained from media experts and material experts during the big book media development process. as well as from the class teacher concerned, especially class 1 elementary school during the thematic learning process using big book media.

a) Media validation evaluation takes the form of suggestions from media validators, that it is necessary to use materials that are not easily damaged so that the media can last a long time.
b) Evaluation of material validation takes the form of advice from the material validator that you must always pay attention to the rules of correct writing, because the media is aimed at lower grades so it can also teach correct writing.
c) Evaluation from the teacher response questionnaire, especially from grade 1 teachers, shows that the mathematics learning process using big book media is very exciting and enjoyable, thus helping students understand the material. All students are excited and enthusiastic about participating in learning using big book media, because big book media is something new according to the class 1 teacher. Also behind the big book media sheet there is a mini game or challenge box, so that it makes students enthusiastic about learning and at the same time completing the challenges in the box.

Conclusion

Based on the media development process and trials of big book learning media, it can be concluded that the revised and validated big book media shows better results and meets the feasibility criteria. In accordance with validation results from media experts and material experts as well as teacher and student response questionnaires. To determine the validity of the media, the results obtained from the media validator were 85% in the very suitable category and the material validator was 87.5% in the very suitable for use category. The practicality of the media using teacher response questionnaires obtained a percentage result of 92.6% and the student response questionnaire results obtained 90.8%, which is very feasible and helps teachers to explain material using big book media and makes students feel happy when using big book media during trials. Based on the results of the research and development that has been carried out, there are suggestions, namely: suggestions for further researchers should make the selection of materials for making media more practical and durable. Apart from that, to save time during

the learning process, you must really prepare before starting learning using this media. It is hoped that this research can be used as a reference or reference for further research by developing big book media to be more interesting and for making the material so that the story is first made as minimal as possible but still paying attention to correct writing rules and adjusting the font so that it is easily read by students in order to produce a media product the maximum.

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