



Need Assessment Implementation of Story Books in Basic School

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Abstract: This research is intended to foster positive appreciation toward the use of picture story book of elementary school students, as an effort to improve the quality of learning that gives a sense of calm, comfort and pleasant pleasure for students during the learning process. Specifically this study aims to: (1) to know the perceptions of teachers and principals on the use of picture books, (2) to grow the desire of teachers and principals in making picture books. The approach used in this research is Research and Development (R&D). Research subjects were teachers, principals, students, school committees, elements of the Education Office, selected by cluster sampling area. The first years research has produced a pictorial book product and then into the second years study of need assessment, teacher capacity building, school principals and school committees. The data collection techniques used were questionnaires, observations, interviews and Focus Group Discussion (FGD). The data were analyzed descriptively qualitative. The second year research results obtained data on the condition of the 60 Elementary School selected as a place of study, as follows. (1) The sixty elementary schools assessed, it shows that there are some who have the ability and desire to make their own picture book and some have not grown desire in making picture books. (2) FGD results indicate the desire and ability of teachers in designing picture story books has grown despite the various limitations. The teacher's interest in designing his own picture story book hits the limitations of publishing access and knowledge of the book publishing flow. (3) Learning picture book should be given in an integrated manner with the study of Natural Sciences (IPA).

Keywords: *Picture story books, science lesson*

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INTRODUCTION

The education in Indonesia is one of the role models in implementing education policy. Various efforts have been declared by the government of Indonesia. One or more concrete steps in improving the quality of teachers through various trainings, workshops, symposiums, seminars to provide scholarships for teachers to improve their education at higher levels, undergraduate and postgraduate. The team of Directorate of Education Personnel along with the Curriculum Center, PGRI and LPTK 2003 shows that The competency score of all elementary teachers for all subjects is below 50%, except Indonesian language is 54%, Social Sciences and Natural Sciences are 35% to 40%. Previous studies show that "There is a tendency of elementary school teachers not to be able to teach science well because they have difficulties in combining the concept of pure Natural Sciences and how to teach it in elementary school". The quality of elementary school teachers is less satisfactory because they are generally still difficult in choosing the right teaching strategy.

Teaching strategies include selection of methods, technical, texts, models to appropriate learning media. Teachers should be able to choose what kind of learning media and in accordance with the cognitive level of students. if seen in

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terms of cognitive elementary school students then refers in Piaget's theory (Dworetzky & Davis, 1989) states that children in elementary school age (7-10 years) are at a concrete operational stage, where students' thinking is still based on the help of objects (objects) or events directly seen and experienced. Unfortunately students tend to think concrete is required to be able to master the theories of science that tend to abstract. This is a gap between realistic theories and facts. In relation to that, picture story books can help students to concoct science lessons through stories (Hafid, 2009).

Some empirical research results show how pictorial picture books contribute in influencing the student process in understanding the content (Hladíková, 2014; Horst & Houston-Price, 2015; Shams, 2016; Unsworth, 2013). In line with the study, according to Rothlein (1991) that with a good picture book, children will be helped in the process of understanding and enriching the experience of the story. Besides illustrated story books in addition to having verbally interesting stories, the book should also contain images that affect the students' interest to read (Stewing, 1980). When students have been interested in reading, the next stage students will be more active to learn more. Especially in studying science, Natural Sciences theory that tend to be complex can be learned with fun and not tense is the dream of all teachers and students. Where teachers try to teach natural sciences on the level is not too difficult so that students are not frustrated and not too easy so that students do not easily bored. Picture story book is allegedly able to answer the problem and become a bridge over the science that tends to be abstract theory to be understood students who tend to think concretely.

LITERATURE REVIEW

Picture Story Books

This study leads to the idea that picture books have a role in building children's knowledge. Picture story books (picture story books) are story books that display images and texts and both are closely interconnected. Another opinion of Huck, Hepler, and Hickman (1987, p. 197) defined that picture book is a book that conveys messages in two ways, namely through illustration and writing. As for Santoso (2011) picture book books contain messages through illustrations and written text. Both of these elements are important elements of the story. These books contain themes that are often based on the experience of everyday life. The effort to bring students closer to nature in studying science is a real step towards improving Indonesia's education. In line with that opinion, (Gönen, Durmuşoğlu, & Severcan, 2009) defines the pictorial story as "The books content of which are enriched by pictures" and with picture story books (Gönen et al., 2009) emphasizes that "The books include pictures partially or wholly and adopted according to the needs and interests of young children". Picture story books are able to gather needs and foster interest in children (Sadik, 2016). Picture story books are also able to tell stories through writing and enriched by the image as a combination in the story to explain a concept of knowledge in order to obtain information that varies.

Judging from the position and format of the image, the location of the images on the pages in the book generally varies, for example there is on the sidelines of the text or flanked text, below the text, above, or on the page side of the text a full page. Image arrangement takes into account the beauty aspect of the display, attracts attention, is pleasing to the eye, and easily the child's eyes move from text to image and from image to text. In picture books for early childhood, the images presented are more striking, larger, more realistic, and occupy the lower half or next page, which is usually the right side of the text and the left side of the image, and with attractive colors.

The language used in picture books should help students develop an initial sensitivity to the imagination in language use (Huck et al., 1987). In line with that according to Novianto and Mustadi (2015) reinforce that the language used in picture books should be simple, but not over-simplification. Furthermore, the contents of picture books should be stubborn and raised issues related to the problems of human life. For example, family life, the relationship between children, mother, father, brother, sister, and others. Various child genres and subgenres such as fiction (fantasy and realism) and traditional stories (myths, legends, fables, etc.) are widely used in making picture books. If picture books can be used in everyday activities, especially teaching and learning activities, children will easily get a lot of messages about the real life concept of picture books.

From several explanations about the definition of pictorial story books, it can be concluded that the picture book is a book containing stories in it close to the daily life of students through the pictures are realistic and interesting with

the completion of explanatory sentences in the form of writings as an explanation of the picture which is intended to describe the real life in the environment around the students.

Picture story books can be used to help students familiarize themselves with the environment around them. With picture story books students can get to know the storyline, the setting and characteristics of the characters in the story. In addition, [Stewing \(1980\)](#) mentions there are three benefits of picture books, namely: (1) help the input language to students, (2) provide visual input for students, (3) stimulate visual and verbal students. Thus, the benefits of pictorial book books such as a bridge of students in helping students closer to the surrounding environment both in the home environment, school and social life. Picture story books in this study are designed in such a way as to foster positive student behavior and build good habits in their environment so that it becomes a strong character in real life. The importance of planting good grades and attitudes to students is in line with opinion ([Gonen & Guler, 2011](#)) "Value judgments and attitudes developed in childhood and youth are essential in developing a love for nature and empathy in relationships with nature at early ages".

Picture story books that have been designed are based on the 2013 curriculum (latest curriculum in Indonesia) on water, earth and the sun so that children are more familiar with the environment and easy to understand their environment through realistic images. Picture story books are considered capable of covering their visual abilities based on images. "Value judgments and attitudes developed in childhood and youth are essential in developing a love for nature and empathy in relationships with nature at early ages" and they involve pictures more than texts. In picture story books, a simple story or a fairy tale is told through consecutive pictures and both texts and pictures are used. Sometimes, there may even be no text ([Gonen & Guler, 2011](#)). The power of the picture plays a role in this pictorial book as a bridge of literacy between students' knowledge and real life in their environment. Picture story books help students' learning process as an effort to build their perceptions and interpretations in knowing the environment and fostering their sensitivity to their environment. Besides, it gives rise to confidence in teachers, school principals and school committees to participate in designing school picture books. Research on picture story books by Mubecel et al. ([Gonen & Guler, 2011](#)) in Turkey the result shows that the use of picture story books in educational learning in students resulted in a significant improvement as an effort to hone students' social skills, student communication with their environment.

"The findings that are acquired from the research results, pictured story books that can be attained by the early childhood educators are concentrated on specific skills in terms of social skills. It is suggested that teachers and parents should use pictured story books published by different publishing firms which are focus on some social skills not only expressing their emotions and providing help to the friends but also defending the right of the friends, having the feeling of humor and saying good things for one self".

The study shows that picture story books have a positive impact on students' communication skills as an effort to build students' social skills both in communication and empathy with their environment. Here are some advantages picture books according to [Sadiman et al. \(2009\)](#), namely:

1. Concrete, trying to present realistic images in real life and not just a collection of verbal sentences.
2. The contained image can overcome space and time. Nature, objects and phenomena of the IPA phenomena are not entirely present in the class for that required image to visualize the original object accordingly.
3. Can overcome the limitations of our observations. The picture in the storybook can lead us to much more in-depth study of natural phenomena.
4. Can clarify a problem, both symptoms and natural phenomena that occur in the environment around us.
5. Media images are cheap and easy to obtain and use, without the need for special equipment in using them.
6. This media describes a lot of motion, mimic and series of stories, is expected to attract motivation to train students' reading skills until students are able to think more about natural phenomena.

In addition to these advantages, according to [Sadiman et al. \(2009\)](#) images contained in picture books have drawbacks, some of the disadvantages are:

1. The picture only emphasizes the perception of the eye senses. Limited to the visual sense is merely a two-dimensional work.
2. Images of objects that are too complex are less effective for learning activities. So the writing in the form of explanatory sentences is very limited.
3. The size is very limited large groups. If this picture book is disseminated it requires considerable cost and manpower.

From the exposure can be concluded that picture books have advantages that are more concrete, realistic, in accordance with real life, tools and materials easily available around us and easy to carry anywhere without limiting space and time. While the drawback is a picture book is limited to the visual sense only.

Science learning in elementary school

Science learning should be able to be learned by prioritizing direct observation on the object to be learned that learners get the facts in the form of objective data to be analyzed in accordance with the level of development of learners (Novianto & Mustadi, 2015). Therefore, in the process of education, especially primary school education which is the beginning of the formation of individual knowledge. Meaningfulness of the learning process to be noteworthy, learning is not merely collect or memorize the facts presented in the form of information / course materials but learning must have meaning for the students. Similarly, learning science, must be provided through fun activities and supported by a peaceful environment, compassion, and provide flexibility to learners to fully explore. Some people assume that there are still many teachers in implementing science lesson less understanding of the actual science lesson and tend to not want to know. Natural sciences is concerned with how to systematically find out about nature, so science is not just the mastery of a collection of knowledge in the form of facts, concepts, or principles alone, but also a process of discovery (Depdiknas, 2004). Here are some criteria of effective natural sciences learning according to Wieman (2007) that must be owned in the process of science learning in elementary school:

Transporting student thinking from novice to expert: Carl Wieman's research entitled Why not try a scientific approach to science education shows that effective science learning can be created by how to direct students to think. They can understand and apply science theory like a scientist does. The scientific approach is one of them to deliver the students to the thinking process from simple things in their environment to high-level thinking process.

Student reaction to my brilliantly clear explanations: The findings of Wieman (2007) and colleagues show that theoretical explanations in the classroom are a waste of time. Students will not quickly grasp the concept of theory if it is limited to theoretical explanations only. In fact, students who make the concept discovery process themselves are more successful than students who only study the theory. They experience their own knowledge through the process of thinking, applying to master the concept of science in a short time when compared with students who receive theoretical explanations only.

Brain-development possibility: 17 years as intellectual caterpillar before transformation into physicist butterfly? Several research results yield three findings. First how teachers transfer knowledge, secondly how to understand concepts and third how a scientist solves problems. From these three findings, the findings are the basis for the implementation of science learning. First, how to teachers transfer the knowledge. Now that it has begun to shift, the teacher has always been the main speaker but now after the discovery of research that shows that students only receive information no more than 7 different items and 4 new ideas received. This is because every human has short-term memory. Students cannot be blamed if they accept only a small portion of what the teacher says.

Second, how to understand the concept. Students are expected to master the basic concept only. Not that the whole concept and the abstract things of the whole theory should be mastered by them. Effective science learning is taught to students to understand the basic concepts, after which they can develop their own knowledge by referring to the basic concepts they have learned.

Third, how a scientist solves a problem. Students are likened to like young scientists, where they are directed to think critically like a scientist. Start to think what the root of the problem and how to solve it with a variety of alternative solutions to the existing problems.

Result of loading student up with low, medium and high cognitive loads: Wieman (2007) results show the latest innovations in learning. Where a scientific approach is learned by fun and does not impose cognitive students. When the teacher gives all explanations about the concept of science to students with the aim that the students can succeed in learning. But this is wrong, where when all the explanations received by this student is not increase his knowledge but will only burden cognitive students only. This will be a waste of learning and students will not learn anything. This effective application of science lessons can reduce students' cognitive load. This learning delivers students in the discovery of clear, logical concepts and students can relate the basic concepts of science they examine to things that students already know.

Circuit construction kit interactive simulation: Utilization of technology in education is an effective thing in teaching natural science. The simulations that students can do come from their real life. Simple simulations or practices can

provide understanding to students through how their learning process and learning objectives are achieved. This simple simulation is effectively applied as an effort to bring students closer to their surroundings and to help students explore their knowledge. So that can facilitate students in learning a basic concept of science. Thus, effective science lesson in elementary school is a meaningful learning experience for students to optimize various aspects of students' cognitive development, appropriate teaching strategies and determine the relevant learning media to be taught to elementary students. So that students not only know and memorize the concept of science, but also students are able to understand, comprehend, and apply it in everyday life. If so, then the teacher should accommodate students in order to understand the science material by using effective learning media one of them picture story books. Based on previous studies of effective picture story books in bridging students understand the science theory to apply science theory in the daily life of students.

RESEARCH METHODOLOGY

To carry out this research, a general approach, Research and Development (R&D), was completed in three stages of the study. The first stage is produces the products in the form of picture story book, while the second phase is concentrated on the need assessment conducted by the survey and cultivate the desire of the teacher as well as the principal in making the picture book of their own works. This paper only presents the results of the second stage.

The subjects of this study were taken on the basis of the UPT of schools, namely the state primary schools of four districts in DIY, a total of 60 schools, with details of each district three schools. Respondents from each school involved principals, second grade teachers, III, IV, V and school committees. Cluster sampling technique sampling technique. Schools are chosen based on their homogeneity. Elementary school who has "A" accreditation and has run the 2013 curriculum in a period of more than three months. Data collection techniques that used were questionnaires, observations, interviews and supported by FGD. Data were analyzed descriptively qualitative.

DATA ANALYSIS

Research Setting

This study involved several State Elementary School (SDN) in the province of Yogyakarta Special Region (DIY), which are as many as 60 schools. The schools are spread over 4 districts. At the beginning of the study, an assessment was conducted to determine the condition of the school and its elements in terms of aspects of the development of teaching strategies. The initial condition of the school in this case includes the learning strategies that exist in the school either from the aspects of students, teachers and the school environment, the potential condition and desires of teachers, principals, and school committees on education or the implementation of picture books in learning. Of the 60 schools shows varying conditions. In general, urban schools have the desire and ability to design their own picture storybooks rather than schools in rural areas.

Care of Master's Understanding on Implementation of Picture Story Book after FGD

Understanding of picture book making: Most teachers can be said to have understood about picture books. When the teacher's understanding test was held some times after the FGD process to improve their ability about making picture book, obtained the answer as follows.

1. Learning by using picture book is learning to increase student's learning interest.
2. An innovative learning in combining the compulsory guidebook of the 2013 curriculum with picture book as a supplement book.
3. Learning that instills a sense of calm and pleasure in learning a thing.
4. Education with student-oriented.
5. Learning to improve creativity both for teachers, students, principals and school committees in learning innovation.
6. Learning that is implemented by combining the approach and method of active learning and fun.

From what the teachers have said substantively, they have sufficiently understood the implementation of pictorial story books in their learning. Implementation of pictorial book is a learning strategy that can be applied to integrated science learning by using approach of scientific approach and method of Project Based Learning (PjBL) with simple lab close to the daily life of the students so that the learning process becomes more effective, easy and fun. Implementation of picture book as well as to cultivate students' scientific attitude in order to be able to have high curiosity, objective

attitude, open hearted, meticulous, able to cooperate in team, critical and creative, firm and not easily give up and sensitive (aware) environment. Implementation of pictorial story books can be a role model in creating fun learning, based on scientific and practical approaches conducted through schools and other institutions.

In addition, from the interviews, the teachers revealed that they have actually done quite a lot of learning innovations in line with the media of picture book stories such as using LCDs and projectors to display images, pick up and collect various images from the available books and then put together in the form of clipping and try to work create a simple book by collecting images from online media only they have not understood how the plot in printing books his work. Thus, actually the things that are expected in the implementation of pictorial story books, some have been owned by teachers. This makes it easier for them to implement the picture book.

DISCUSSION

To implement picture story book in elementary school, in this research developed learning media. The result of FGD was agreed that the implementation of pictorial story books did not stand alone but as a companion book with books that teachers and students use in learning as well as integrated with art and culture, mathematics, Indonesian and KDP lessons. The learning media use picture book as a supplement book to be combined with the science material. Therefore, the process of conveying the concept and meaning of science learning combined with other subjects.

To distinguish the learning media of picture book books with other learning media, then given the following characteristics:

- a. Integrated science learning with four other subjects.
- b. The science lesson uses picture books as a supplement of integrated science learning materials.
- c. In integrated science lesson than using picture book, this study also uses scientific approach in accordance with regulation of education and culture minister of Indonesia Number 65 about Process Standard that to strengthen scientific approach, thematic integrated (thematic inter subjects), and thematic (in an eye lessons) need to be applied to the learning that encourages students' ability to produce contextual work, either individually or in groups, it is strongly recommended to use a learning approach that produces project based learning and project based learning.
- d. In line with this, the learning of integrated science using PjBL method. It is reinforced by [Sani \(2014\)](#) statement that the scientific approach is suitable to be applied with some relevant learning methods, namely inquiry, discovery, PBL, and PjBL methods. In this study, the learning method used is the method of PjBL. In this research we chose PjBL as a method to implement picture story book with consideration of requirement, maturity of student age and others.

e. Supporting facilities are required.

Integrated Natural Sciences learning with picture story book using PjBL method is applied in the following way:

- a. Integrated with other lessons instruments; art, culture, mathematics, Indonesian language and PPKn (Pancasila and civic education).
- b. Through hands-on experience, for example a simple lab, creating a simple product, counting in a simple way and so on.
- c. Through dialogue among students.
- d. Through simple practicum learning about the environment.
- e. Using stories and drawings that are close to the student's daily life.
- f. The PjBL method by generating student-made products, media and languages adapted to the level / class.
- g. Scientific approach is used as a relevant learning approach in teaching science.
- h. Teachers play a role in the implementation of picture story books; do not need special teachers, especially in implementing picture book with PjBL method.

CONCLUSION AND IMPLICATIONS

Based on the results of data analysis and discussion, the following conclusions can be drawn.

- a. Of the sixty elementary schools assessed, it shows that there are some schools that have the ability and desire to make themselves and others that have not. Elementary schools in urban areas demonstrate the potential and desire to design their own storybooks higher than those in rural areas.
- b. Most teachers do not know about book publishing and the flow of books.
- c. After the FGD conducted, it showed that teachers' ability in making picture books increases. This can be seen from the results of the observations made to teachers during and after the FGD.

d. Science learning in primary schools can be provided in an integrated manner with other subjects; art of culture, mathematics, Indonesian language and PPKn (Pancasila and civic education) by using picture book.

e. After teachers gain knowledge of how to publish a book to implement the book, the next stage teachers can create a book that suits the needs of teachers and students in their guidance.

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