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THE USE OF POP-UP BOOK MEDIA TO IMPROVE GEOMETRY LEARNING OUTCOMES OF GRADE V STUDENTS OF SD QUR'ANI AL-IKHLASH RAPPANG

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Abstract

The problem in this study is the low learning outcomes of fifth grade students of Qur'ani Al-Ikhlash Rappang Elementary School. The purpose of this study was to determine the improvement of the process and student learning outcomes on geometry material in class V of Qur'ani Al-Ikhlash Rappang Elementary School through the use of pop-up book media. The approach used is a qualitative approach and the type of research is classroom action research (PTK). The implementation of this research action was carried out in 3 cycles starting with pre-action activities, then each cycle consisted of 4 stages which included planning, implementation, observation, and reflection. Data were obtained through observation techniques, learning outcomes tests and documentation. The instruments in this study were observation sheets, learning outcomes tests and documentation. The results showed that in cycle I the results of observations of teacher and student activities in the category of sufficient (C). In cycle II shows the results of teacher activity observations in the good category (B) and student activity observations in the moderate category (C). In cycle III, it showed an increase in the observation results of teacher activities in the good category (B) and the observation results of student activities in the good category (B). The research results related to learning outcomes in cycle I completed students 34.6%. In cycle II, students who completed 57.7%. And in cycle III it increased to 88.4%. It can be concluded that the use of pop-up book media can improve the process and learning outcomes of students.

Keywords: Pop-up Book Media, Learning Process, Learning Outcomes and Geometry

Abstrak

Masalah dalam penelitian ini adalah rendahnya hasil belajar siswa kelas V SD Qur'ani Al-Ikhlash Rappang. Tujuan dalam penelitian ini adalah untuk mengetahui peningkatan proses dan hasil belajar siswa pada materi geometri di kelas V SD Qur'ani Al-Ikhlash Rappang melalui penggunaan media *pop-up book*. Pendekatan yang digunakan adalah pendekatan kualitatif dan jenis penelitian adalah penelitian tindakan kelas (PTK). Pelaksanaan tindakan penelitian ini dilakukan dalam 3 siklus diawali dengan kegiatan pra tindakan, kemudian pada setiap siklus terdiri dari 4 tahapan yang meliputi perencanaan, pelaksanaan, observasi, dan refleksi. Data diperoleh melalui teknik observasi, tes hasil belajar dan dokumentasi. Instrumen pada penelitian ini adalah lembar observasi, tes hasil belajar dan dokumentasi. Hasil penelitian menunjukkan bahwa pada siklus I hasil observasi aktivitas guru dan siswa dengan kategori cukup (C). Pada siklus II menunjukkan hasil observasi aktivitas guru dengan kategori baik (B) dan observasi aktivitas siswa dengan kategori cukup (C). Pada siklus III menunjukkan peningkatan hasil observasi aktivitas guru dengan kategori baik (B) dan hasil observasi aktivitas siswa dengan kategori baik (B). Hasil penelitian terkait dengan hasil belajar pada siklus I siswa yang tuntas 34,6%. Pada siklus II,



siswa yang tuntas 57,7%. Dan pada siklus III mengalami peningkatan menjadi 88,4%. Dapat disimpulkan bahwa penggunaan media *pop-up book* dapat meningkatkan proses dan hasil belajar siswa di kelas V SD Qur'ani Al-Ikhlash Rappang.

Kata Kunci: Media Pop-up Book, Proses Belajar, Hasil Belajar dan Geometri

INTRODUCTION

The results of mathematics learning outcomes of fifth grade students of Al- Ikhlash Rappang Elementary School are still low and have not reached the Minimum Learning Completeness Standards. This is evidenced by the scores of fifth grade students of Qur'ani Al-Ikhlash Rappang Elementary School, out of 26 students only 8 completed and 18 did not complete with an average score of 64, which is below the provisions of the Minimum Learning Completeness Standards (SKBM). Through observations made by researchers, it was revealed that learning in class V of Al-Ikhlash Rappang Elementary School was not optimal. Throughout the implementation of the learning process, it was seen that there was no supporting media to facilitate the delivery of material, and teachers rarely included learning media in their teaching and learning methods. The teachers mostly relied on lecture and question and answer techniques. As a result, the student learning process is limited to recording information from the teacher. Students only listen, pay attention and take notes without any other form of involvement that can foster creativity in their learning activities. This situation results in a learning process that revolves around the teacher, with learning resources centered on textbooks. As a result, most students are not enthusiastic in learning and lack understanding of the lesson.

The lack of student involvement in the learning process is a result of these problems. The majority of students only learn what their teachers teach them. However, to learn, students are expected to actively voice their thoughts and be able to communicate what is in their minds. It is known that low student learning outcomes are caused by two factors, namely teacher factors and student factors. Factors from the teacher are; (a) the teacher does not use interactive media in the learning process; (b) the teacher does not optimally direct students to work together in groups and; (c) the teacher does not activate students in learning. From the student factor, namely; (a) students pay less attention to the teacher's explanation; (b) students are less able to work together in groups and; (c) students lack the courage to express their opinions. As a result of these problems, the learning outcomes of fifth grade students at Qur'ani Al-ikhlah Rappang Elementary School have not reached the school's minimum learning completeness standard (SKBM) of 75. Arifin and Ekayati (2021) argue that learning outcomes which include cognitive, emotional, and psychomotor changes in students are changes in behavior caused by the self-learning process and external influences.



Student learning outcomes certainly do not just grow and develop, but student learning outcomes grow and develop after going through a process of influencing factors. According to Sugiarto (2020), there are two other factors that can affect the learning outcomes achieved by students: 1) Internal factors (Physiological aspects), maintaining physical fitness and health of the five senses through a diet rich in nutrients, adequate sleep, and regular exercise is very important to achieve optimal learning outcomes. The psychological component also includes learning style, intelligence, motivation, interest, talent, attitude, and personality. Learning outcomes are significantly influenced by psychological variables. 2) External factors, this element comes from sources other than students: Family, school, community, living environment, school facilities, curriculum alignment.

One way to overcome this is if the teacher as a learning facilitator can use existing media with a variety of methods that are fun and provoke student activeness. The use of media combined with appropriate methods will provide an interesting learning experience for students if students start to be interested, then the material presented can be absorbed easily and more memorable. The media has the ability to express what the teacher is unable to explain through certain words or numbers. The abstractness of the material is also concretized by the media. This is in accordance with the theory put forward by Hamalik in Pagarra (2018) that learning media are tools, approaches, and strategies used to improve the relationship and communication between teachers and students during the learning process in the classroom. One of the media that can be applied is pop-up book media. (Julianti et al., 2022)

Pop-up book is a book that contains notes or 3-dimensional decorated pages with interactive features that when opened will give the impression as if an object appears from within. Umam et al., (2019) defines a pop-up book as an innovative book that uses a combination of folds, rolls, and turns to highlight the three-dimensional pattern inside, thus displaying the content and potential of the book. According to Sinta and Syofyan (2021) pop-up learning materials have 3D components with distinctive shapes, eye-catching colors, and vivid images that attract students' attention and make them amazed every time they see the information on the book's pages. This ensures a more engaged and productive learning environment (Maulana et al., 2022).

The advantages of pop-up book media stated by Dzuanda (in Fitri et al., 2022) include: Providing a more interesting visualization of the story starting from the appearance of images that look more dimensional to images that can move when the page is opened or the part is shifted, providing surprises on each page that can invite amazement when the page is opened so that readers are waiting for what surprises will be given on the next page, strengthening the impression that wants to be conveyed in a story and, a more dimensional visual display makes the story feel more real coupled with



the surprises given on each page.

According to Resta & Kodri, (2023) some of the benefits of pop-up books as learning media, among others; fostering a sense of responsibility for the books given. Learners will be encouraged to care for and appreciate existing books; stimulate the imaginative power of students; build and develop students' creativity; interactively provide knowledge about shape recognition; develop early interest in reading to students. Other benefits of using pop-up book media are: to encourage interest in reading in students by introducing books in a fun way; can be used to optimize critical thinking; make it easier for children to interpret something abstract through interesting images.(Saipani et al., 2024)

The steps of using pop-up book media are: 1) Preparation Stage: a) the teacher forms students into 5 groups consisting of 5-6 people, b) the teacher distributes pop-up book media to each group, c) the teacher explains the important points of the material to be studied. 2) Media Use Stage: a) the teacher explains the learning material contained in the pop-up book media, b) the teacher distributes LKK to each group, c) the teacher guides and directs students in doing the tasks given in LKK 3) Completion Stage a) the teacher invites group representatives to present the results of the discussion b) the teacher invites other groups to ask questions to the presenting group about the material presented c) the teacher gives conclusions and appreciation to the presenting group and those who successfully answer questions.

Some experts have evaluated pop-up books, including Alman and Nugrahaeni (2022) who conducted research on "Pop Up Book Learning Media on Mathematics Learning Outcomes of Grade II Elementary School Students". Based on the research, pop-up books have a great influence on the mathematics learning outcomes of second grade students of SD Inpres 15 Sorong Regency. Similar research has been conducted by Asrul Sultan et al., (2023) with the title "Application of Pop-Up Book Learning Media to Improve Student Learning Outcomes on Economic Activity Material in Class V UPT SDN 14 Parepare Model". The research shows that the use of Pop-Up Book media can improve the learning process and student learning outcomes in the classroom. Further research has also been conducted by Arip and Aswat (2021) on "Pop Up Book Media to Improve Student Learning Outcomes in Science Subjects in Elementary Schools". This study concluded that Pop Up Book media can contribute to improving academic achievement among students.

The novelty of the research can be shown by comparing this research with previous studies that discuss issues with the same or similar themes. These differences include, among others, the name of the researcher, the year of the study, the title of the study, the purpose of the study, the research method and the results of the study. Based on the explanation of the problem above, the purpose of this study is to improve the process and learning outcomes of students on geometry material in class V of Qur'ani Al-Ikhlash Rappang Elementary School through the use of pop-up book media.



RESEARCH METHOD

This research is a classroom action research that uses a qualitative approach. Suprayitno (2020) defines classroom action research as a research effort that analyzes the learning process through the implementation of actions intended to overcome identified problems and improve teaching standards in the classroom. This research was conducted in class V of Qur'ani Al-Ikhlash Rappang Elementary School, which is located in Sidenreng Rappang Regency, South Sulawesi Province, North of Pasar Baru Rappang, Lalebata, Panca Rijang District. The research subjects were 1 V grade teacher and 26 female students. This research consists of 4 stages, namely planning, implementation, observation and reflection. The implementation of this class action research was carried out using three cycles, each cycle is a series of interrelated activities, meaning that if the implementation of cycle I has not been successful, it will be continued in the next cycle.

The data collection techniques used in this study were observation, tests and documentation. The observation sheet used is an observation sheet that has been checked and approved by expert validator Mrs. Nurul Mukhlisa, S.Pd., M.Pd. The tests used in this study were 10 items of multiple choice questions that had been validated by expert validator Mr. Drs. Yonathan Pasinggi, M.Pd. Data analysis techniques used in this research are data condensation, data presentation, and conclusion drawing. The instruments of this research are observation sheet, learning outcome test, and documentation.

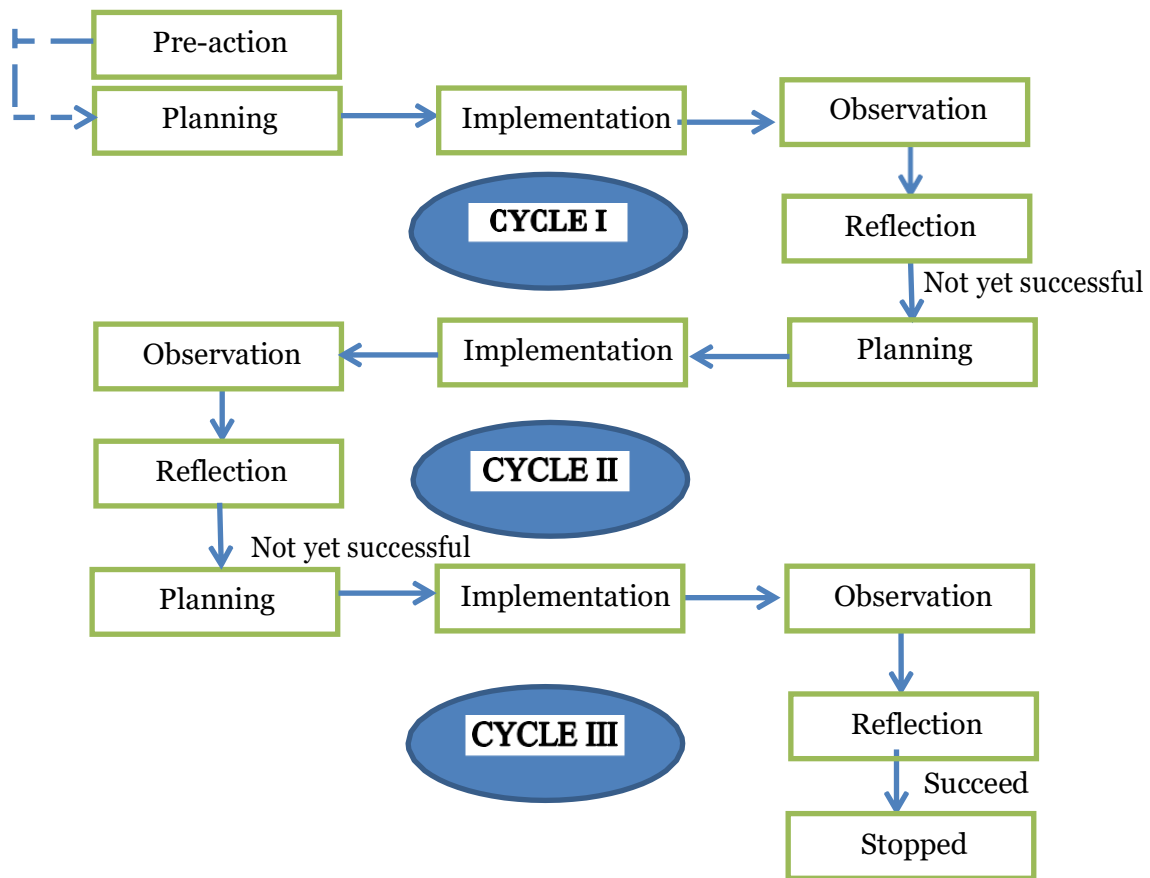


Figure 1 Modification of Kemmis and Taggart's Research Cycle Design (Arikunto, Suhardjono and Supardi, 2015)



RESULTS AND DISCUSSION

Research Results

This research was conducted in three cycles, where each cycle was conducted in one meeting.

A. Cycle I

The implementation of action in cycle I was carried out on Monday, May 06, 2024 starting at 07.30 - 08.40 WITA, 2 lesson hours (2 x 35 minutes). The details of learning time began at 07.30-08.25, then an evaluation test was carried out for 15 minutes until 08.40. The preliminary activity begins with the teacher entering the class, starting the learning by saying greetings, praying led by the class leader, asking for news and checking the presence of students then making apperception by asking about the material to be learned, namely rectangular flat shapes then conveying learning objectives. The core activity, the teacher applies 3 steps of pop-up book learning media. The final activity, the teacher distributes a learning outcome test or evaluation in the form of 10 multiple choice questions that will be done by students. After all students have finished working, the learning ends with a prayer together led by the class leader and the teacher says greetings to end the lesson.

B. Cycle II

The implementation of action in cycle II was carried out on Monday, May 13, 2024 starting at 07.30-08.40 WITA, 2 lesson hours (2 x 35 minutes). The details of learning time began at 07.30-08.15, then an evaluation test of learning outcomes was carried out for 25 minutes until 08.40. The initial activity, the researcher as a teacher entered the class, started the learning by saying greetings, praying led by the class leader, asking for news and checking the presence of students then making apperception by asking about the material to be learned, namely determining the area and perimeter of rectangular flat shapes using paper with a map then conveying learning objectives. The core activity, the teacher applies 3 steps of pop-up book learning media. The final activity, the teacher distributes a learning outcome test or evaluation in the form of 10 multiple choice questions that will be done by students. After all students have finished working, the learning ends with a prayer together led by the class leader and the teacher says greetings to end the lesson.

C. Cycle III

The implementation of action in cycle III was carried out on Friday, May 17, 2024 starting at 09.45-10.55 WITA, 2 lesson hours (2 x 35 minutes). Details of learning time starting at 09.45-10.30, then an evaluation test of learning outcomes for 25 minutes until 10.55. The initial activity, the researcher as a teacher entered the class, started the learning by saying greetings, praying led by the class leader, asking for news and checking the presence of students then making apperception by asking about the material to be learned, namely determining the area and perimeter of rectangular flat shapes using

formulas then conveying learning objectives. The core activity, the teacher applies 3 steps of pop-up book learning media. The final activity, the teacher distributes a learning outcome test or evaluation in the form of 10 multiple choice questions that will be done by students. After all students have finished working, the learning ends with a prayer together led by the class leader and the teacher says greetings to end the lesson.

Table 1. Comparison of Student Learning Outcomes

Grade Recapitulation	Cycle I	Cycle II	Cycle III
Amount	1.850	1.880	2.300
Average	71,1	72,3	88,4
Completeness	34,6%	57,7%	88,4%
Incompleteness	65,4%	42,3%	11,6%
Category	Less	Less	Good

Based on table 1 above, it can be seen that student learning outcomes have increased from cycle I to cycle III. It is known that in cycle I, students who completed 34.6%. In cycle II, students who completed 57.7%. And in cycle III has increased to 88.4%. Thus, the geometry learning outcomes of fifth grade students of Qur'ani Al-Ikhlash Rappang Elementary School by using pop-up book media have reached the level of success and are in the good category (B) and the research is considered successful and the research is stopped.

Table 2. Teacher Activity Presentation

Activities	Cycle I	Cycle II	Cycle III
	Category	Category	Category
1) Preparation stage: a) The teacher forms students into 5 groups of 5-6 people b) The teacher distributes pop-up book media to each group. c) The teacher explains the important points of the material to be learned.	C	B	B
2) Media use stage: a) The teacher explains the learning material contained in the pop-up book media b) The teacher distributes LKK to each group c) The teacher guides and directs students in doing the tasks given in LKK.	B	B	B
3) Completion stage: a) The teacher invites group representatives to present the results of the discussion b) The teacher invites other groups to ask questions to the presenting group c) The teacher gives conclusions and appreciation to the presenting group and those who	K	K	C

successfully answer questions.

Percentage of Achievement	66,6%	77,7%	88,8%
Category	Enough	Good	Good

Based on table 2 above, it shows that teacher activity has increased from cycle I to cycle III. The results of observations of teacher activity in cycle I were 66.6%, cycle II 77.7%, and cycle III as much as 88.8%, this shows that in the learning process in terms of aspects of teacher activity increased by 22.2%.

. Table 3. Percentage of Student Activity

Activities	Cycle I	Cycle II	Cycle III
	Category	Category	Category
1) Preparation stage: a) Students are divided into 5 groups of 5-6 people b) Students receive pop-up book media for each group c) Students listen to the important points explained by the teacher.	C	B	B
2) Media use stage: a) Students listen to the teacher's material explanation in the pop-up book media b) Students receive LKK for each group c) Students work on LKK according to the instructions.	B	B	B
3) Completion stage: a) Students present the results of their discussion b) Students ask questions to students who make presentations c) Students listen to conclusions and get appreciation from the teacher.	K	K	C
Percentage of Achievement	61,5%	73,0%	90,1%
Category	Enough	Enough	Good

Based on table 3 above, it shows that teacher activity has increased from cycle I to cycle III. The results of observation of student activity are known that cycle I is 61.5%, cycle II is 73.0%, and cycle III is 90.1%, this shows that there is an increase in student aspects by 28.6%.

Discussion

This study was conducted to determine the success in the process of using and improving learning outcomes pop-up book learning media implemented in the learning process with an effort to improve student learning outcomes on geometry material. The research subjects were students in class V of Qur'ani Al-Ikhlash Rappang Elementary School consisting of 26 female students.

Based on the results described in cycle I, the learning process of the teacher aspect reached the sufficient category (C) with a percentage achievement of 66.6% and the results of the observation of the



learning process of the student aspect showed a sufficient category (C) with a percentage of 61.5%. The results of the observation of the learning process of the teacher aspect carried out in cycle II showed that it had reached the good category (B) with a percentage achievement of 77.7% and cycle II the results of the observation of the learning process of the student aspect still showed a sufficient category (C) with a percentage of 73.0%. The results of the observation of the learning process of the teacher aspect carried out in cycle III showed that it had reached the good category (B) with a percentage achievement of 88.8% and the results of the observation of the learning process of the student aspect had increased by reaching the good category (B) with a percentage of 90.1%.

Based on the results of cycle I, cycle II, and cycle III obtained, this is in accordance with the objectives outlined by the researcher has proven that from the whole process carried out starting from the process of planning, implementation, observation, and reflection shows that using pop-up book learning media can improve the process and learning outcomes of students on geometry material in class V SD Qur'ani Al-Ikhlash Rappang. Changes that occur in the learning process that has been implemented, become a trigger in improving the value of student learning outcomes in the classroom. This is in line with the advantages of pop-up book media proposed by Halisah (2018), namely 1) Can overcome the limitations of space, time, and observation because not all objects, objects or events can be brought into the classroom 2) It is concrete, which means it is more realistic than verbal media 3) It can be a learning resource for all ages because each page of the book can be filled with images and information that match the concept 4) Pop-up book media has dimensional spaces where this book is usually a three-dimensional structure so that this book is more interesting to read In addition, the use of higher quality book materials also makes this book more expensive.

CONCLUSIONS

Based on the results described in cycle I, the learning process of the teacher aspect reached the sufficient category (C) with a percentage achievement of 66.6% and the results of the observation of the learning process of the student aspect showed a sufficient category (C) with a percentage of 61.5%. The results of the observation of the learning process of the teacher aspect carried out in cycle II showed that it had reached the good category (B) with a percentage achievement of 77.7% and cycle II the results of the observation of the learning process of the student aspect still showed a sufficient category (C) with a percentage of 73.0%. The results of the observation of the learning process of the teacher aspect carried out in cycle III showed that it had reached the good category (B) with a percentage achievement of 88.8% and the results of the observation of the learning process of the student aspect had increased by reaching the good category (B) with a percentage of 90.1%. Based on the formulation of the problem and



through the implementation of the research, it can be concluded that: The use of pop-up book media can improve the learning process and results of fifth grade students of SD Qur'ani Al-Ikhlash Rappang.

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