



Kukupu Dance Learning Innovation: Using Pop-Up Book Media to Improve Elementary School Students' Knowledge

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ABSTRACT

This study examines the effectiveness of using pop-up books in learning the *Kukupu* dance as an effort to improve dance knowledge in elementary school students. The *Kukupu* dance, which is part of cultural heritage, requires a deep understanding of movement techniques and the accompanying cultural context. The use of pop-up books as a learning medium was chosen because of its advantages in presenting information visually and interactively, making it easier for students to understand complex concepts. The research methodology involved designing pop-up books that integrate key elements of the *Kukupu* dance, such as movements, costumes, and cultural background, and implementing them in classroom learning activities. The research subjects consisted of fourth and fifth grade elementary school students, with the evaluation process carried out through observation, interviews, and knowledge tests before and after the media application. The analysis results showed that the use of pop-up books significantly improved students' dance knowledge, with a clear increase in understanding of movement techniques, costumes, and the cultural context of the *Kukupu* dance. These findings confirm the potential of pop-up books as an effective tool in dance learning, offering an innovative alternative to increase student engagement and understanding at the elementary school level.

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1. INTRODUCTION

Learning is a dynamic process that involves interaction between students and the educational environment with the aim of forming character and increasing students' knowledge (Fauziyah, Narawati, and Badaruddin 2025; Sandi, Masunah, and Badaruddin 2024; Badaruddin et al. 2025). In the context of education, learning does not only focus on the transfer of knowledge, but also on developing students' character, creativity, and spiritual values (Fitri Kuriniati 2023; Fauziyah, Narawati, and Badaruddin 2025; Badaruddin and Firdaus 2025). Therefore, it is important for the learning environment and strategies to be well-organized to ensure an effective and comprehensive process. According to (Weber and Reed 2022; Sari, Karyati, and Budiman 2021). There are four main components in teaching and learning activities that influence learning success: the learning atmosphere, teaching materials, learning resources, and learning media, as well as the role of the teacher as the subject of learning. These four components play a crucial role in achieving optimal learning objectives (Krissantono 2013). Learning media in particular plays an important role because it can make it easier for students to understand the material and make the learning process more interesting (Firdaus et al. 2025; Nurfadilah, Badaruddin, and Firdaus 2025). One important but often overlooked area of learning is dance. Learning dance, which encompasses both traditional and non-traditional arts, has significant benefits in developing students' logic, ethics, and aesthetics, as well as enhancing their creativity (Santoso, Budiman, and Badaruddin 2024; Amirulloh and Badaruddin 2024). However, in many schools, including SDN Margalaksana, dance arts learning often only focuses on the material provided by the school without paying attention to variation and innovation in teaching methods.

Weaknesses in arts and culture instruction at SDN Margalaksana, such as a lack of teacher competence and inadequate teaching materials, result in students being less active and unable to develop their potential optimally. Furthermore, selecting appropriate learning media is a challenge in itself, according to Sadiman in (Sunaryo, nd) explains that learning media is anything that can be used to convey messages from the sender to the recipient of the message. Good learning media can support the teaching and learning process by making the material easier to understand and more interesting for students. Learning media is one of the components of learning tools that is important to be well prepared by Falahudin in (Komalasari et al. 2021). Djamarah in (Tazkia and Sunaryo 2023) He stated that variations in teaching, whether in teaching style, the use of media and teaching materials, or the interaction between teachers and students, can make learning activities an engaging experience at various cognitive levels. Pop-up books, as a form of creative learning media, offer a potential solution to this problem (Ahda Aulia Fajriah, Halimatu Sadiyah, and Dede Indra Setiabudi 2022; Chusnah et al. 2023). This media not only presents material in text form, but also equipped with 3D images that can attract students' attention and increase their interest in learning dance, especially the *Kukupu* Dance. Thus, pop-up book media is expected to improve the quality of dance learning and help students be more active and understand the material better.

As a way to enhance students' dance knowledge, the use of pop-up books can be an attractive alternative for problem-solving. Learning using pop-up books not only increases motivation but also directs students to delve deeper into analyzing, evaluating, and creating solutions based on the problems they encounter (Relisa & Alwi, 2024). Learning dance using pop-up books can improve students' knowledge. This study aims to explore

the effectiveness of using pop-up books in dance learning at SDN Margalaksana. This research is expected to provide solutions to challenges faced in the dance learning process and increase students' interest and understanding of cultural arts.

2. METHODS

The method used in this research is an experimental method with a quantitative approach that is in accordance with the objectives of this research. The purpose of quantitative research is to develop and apply mathematical models, theories, or hypotheses related to a phenomenon (Sugiyono 2015; Creswell 2024). Participants in this study were fifth and sixth grade students at SDN Margalaksana, West Bandung. This study used a sample of 20 fifth and sixth grade students. The sample selection technique used non-probability sampling. Data collection techniques in this study used observation, interviews, tests, literature studies, and documentation.

The participants in this study were the homeroom teachers of grades V and VI and 20 students of grades V and VI of SDN Margalaksana, West Bandung. This study was conducted at SDN Margalaksana, located on Jalan Ciranji RT 03 RW 03, Kertamukti Village, Cipatat District, West Bandung Regency, West Java, postal code 40554. The reason for conducting the study at that location was because students' knowledge of dance was still very lacking and learning media was still limited. The sample in this study involved 20 students of grades V and VI, with each number of students being 8 male students and 12 female students. The sample collection technique in this study used non-probability sampling (Palinkas et al. 2015).

The data collection techniques used in this study were observation, interviews, tests, literature studies, and documentation. Observations were conducted 5 times to obtain the necessary data by conducting interviews with informants and conducting pretests and posttests with 20 questions given to fifth and sixth grade students. Data analysis in this study used normality tests and T-Tests using the SPSS statistical application ver.26 to process raw data into clear data results.

3. RESULTS AND DISCUSSION

3.1 Initial Condition of Dance Knowledge of Grade V and VI Students at SDN Margalaksana

Arts and culture instruction at SDN Margalaksana is quite good, but focuses more on fine arts and less on dance. Research on cognitive development focuses on thinking skills, including learning, problem-solving, rational thinking, and memory. Darouich in (Komalasari, Savitri, et al., 2021). The main problem is the lack of expert dance teachers, so dance instruction is limited to general knowledge and limited to books and the internet. Learning media is also limited, and there are no expert dance teachers at the school.

At SDN Margalaksana, students only receive dance knowledge from textbooks without the support of learning media such as projectors to display dance videos. Interactive books or pop-up books are considered more appropriate media to introduce dance to elementary school students. The data presentation in this study used a tabular pretest to measure students' knowledge of the *Kukupu* dance, with 20 multiple-choice questions. Each correct answer was given a score of 5, and an incorrect answer was given a score of 0, so the pretest score ranged from 0 to 100. The pretest results showed the initial

knowledge of fifth and sixth grade students about dance.

Table 1.Pretest result value data

No.	Student name	Mark
1	AB	80
2	AW	80
3	DS	70
4	EM	80
5	IAN	80
6	JA	60
7	MAMB	70
8	MR	70
9	NSM	75
10	YP	70
11	GNI	55
12	HFPH	70
13	O'CLOCK	55
14	NLS	60
15	RF	70
16	RRAF	75
17	SNA	75
18	SMN	75
19	TMR	70
20	UF	80
Average		66.25

Based on the results of the student data above, the data was then processed using descriptive statistics to see the average results of the pretest using IBM SPSS statistics software ver. 26 as follows.

Table 2.Results of descriptive statistical data from student pretest

Statistics				
pre_test				
N	Valid	20	Minimum	55
	Missing	0	Maximum	80
Mean		66.25	Sum	1325
Median		67.50	a. Multiple modes exist. The smallest value is shown	
Mode		55 ^a		
Std. Deviation		9.014		
Variance		81.250		
Range		25		

Based on table 4.2, the scores of fifth and sixth grade students varied from 55 (minimum score) to 80 (maximum score), with an average of 66.25. The most frequently occurring score was 55, and the median score was 67.50.

Table 3.Frequency Distribution Table of Pre-Test Result Data
Students' Knowledge of Dance

kelas interval	frekuensi	titik tengah	f1x1	Frekuensi Kumulatif	Frekuensi Relatif	Batas Nyata
55-59	5	57	285	20	25%	54,5
60-64	3	63	189	15	15%	59,5
65-69	2	67	134	12	10%	64,5
70-74	5	73	365	10	25%	69,5
75-79	2	77	154	5	10%	74,5
80-84	3	83	249	3	15%	79,5

From the table above, the frequency distribution of the pre-test data is known as:

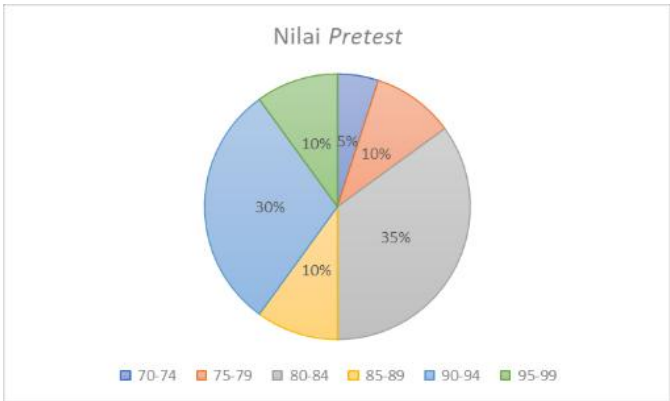


Figure 1.Pretest Results Diagram

Information:

- A: 88-100 = Very Good
- B: 76-88 = Good
- C: 65-76 = Sufficient
- D: <65 = Less

The results of the diagram analysis show that the average pretest score for students' dance knowledge is 66, which is classified as "sufficient." This indicates that students' knowledge before using pop-up book media at SDN Margalaksana is still lacking, mainly due to the lack of competent teachers in the field of dance.

3.2 Pop-up Book Media Learning Design to Improve Student Knowledge at SDN Margalaksana

Researchers were directly involved in the learning process using pop-up books to teach *Kukupu* dance to fifth and sixth grade students at Margalaksana Elementary School. The pop-up book, originally titled "Pop-Up Butterflies," was modified to include *Kukupu* dance material, tailored to the students' characteristics and the school's beautiful environment. Researchers used a 3D book about *Kukupu* metamorphosis and added *Kukupu* dance material with the help of the Canva application. The book's title was changed to "Pop-Up

Kukupu Dance," with a cover that still clearly explains the book's contents.

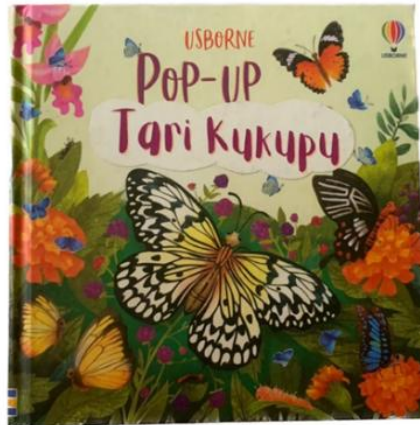


Figure 2.Pop-up book cover after

On the first page, the researcher replaced the original English material with an explanation of the specifications and types of butterflies by adding numbers to the images. Students were asked to recognize and match the names to the numbered *Kukupu* images, according to Bloom's taxonomy at level C1 (Remembering), to help them see, recognize, and remember the types of butterflies.

On the second page, the researchers replaced the English text with Indonesian and used the Canva app to adjust the colors and text. This page illustrates the metamorphosis of a *Kukupu* from egg to adult. Students were asked to understand (C2) this process and apply (C3) *Kukupu* movement in real life everyday, and creates (C6) movements that resemble the movements of a *Kukupu*, such as when flying.



Figure 3.Third page of modified pop-up book

On the third page, the researcher introduces the *Kukupu* dance, including its creator and history, and adds a picture of a *Kukupu* dancer to provide a clear picture. Students are asked to analyze (C4) the picture and relate it to the history of the *Kukupu* dance.



Figure 4.Fourth page of modified pop-up book

On the fourth page, the researcher added material about the meaning of the *Kukupu* dance movements, complete with images of dancers demonstrating swinging movements and 3D butterflies that move like butterflies perching. Students were asked to analyze (C5) the meaning of the dance movements and relate them to the *Kukupu* movements from the second page, as well as evaluate (C6) the *Kukupu* dance movements by displaying and assessing group movements.



Figure 5. Fourth page of modified pop-up book

On the final page, the researcher added material about the *Kukupu* dance costume, with pictures of dancers and accessories such as necklaces and bracelets. Students were asked to analyze (C5) the dance costume and match the picture with the number provided in the pop-up book.



Figure 6. Fifth page of modified pop-up book

The *Kukupu* dance material in the pop-up book is taken from the book "Sundanese Dance 1880-1990" and YouTube, then developed according to the level of students' cognitive abilities based on Bloom's taxonomy, namely Remembering (C1), Understanding (C2), Applying (C3), Analyzing (C4), Evaluating (C5), and Creating (C6).

3.3 Learning Process Using Pop-up Book Media

1) Meeting 1: Stimulating Students with Butterflies as Material

In the first meeting, the researcher introduced herself and explained the arts and culture lesson plan for the next few days. After a prayer and singing the national anthem, the researcher asked students to introduce themselves and share their experiences with dance. Before beginning the lesson, the researcher inquired about their prior knowledge of dance and provided an icebreaker to increase students' focus.



Figure 7. Exploration of Flying *Kukupu* Movement

The researcher explained the day's activities and asked students about insect types, focusing on butterflies. Together, the researcher discussed *Kukupu* movements and then asked students to draw and color butterflies to foster creativity. Next, the researcher asked one or two students to demonstrate *Kukupu* movements, such as flying and collecting nectar from flowers. After presenting the material on butterflies, the researchers administered a 20-question multiple-choice test. This served as a pretest to assess students' dance knowledge before using the pop-up book.

After the lesson was completed, the researcher and students summarized the material and concluded the first meeting. They then prayed together according to their respective religions and beliefs.

2) Meeting 2: History of the *Kukupu* Dance

In the second meeting, students began the lesson with a prayer and were then divided into two groups. Each group received a pop-up book discussing *Kukupu* species and the metamorphosis process. The researcher introduced the *Kukupu* dance material, including its history, creator, and the meaning of the movements. Students discussed the third and fourth pages of the pop-up book, discussing the meaning of the *Kukupu* dance movements, demonstrating *Kukupu* movements, and discussing the swinging movements and their meaning in a classical setting.



Figure 8. Students Open Pop-up Books

After the material on the meaning and movements of the *Kukupu* dance was presented, the researcher and students concluded the lesson together. Then, the students recited prayers according to their respective religions and beliefs.

3) Meeting 3: The Meaning of the *Kukupu* Dance Movements

In the third meeting, the activity began with a prayer, singing the song "Indonesia Raya," and an icebreaker to increase student focus. The researcher conducted an apperception with questions and answers about the previous activity and informed the purpose of the meeting. Students then sat in groups and analyzed pictures of *Kukupu* dancers from a pop-up book. The researcher held a class discussion on the makeup and costumes of the *Kukupu* dance, provided reinforcement of the material, and distributed student worksheets to match the names of the costumes to the pictures provided.

After students completed the worksheet, the researcher and students collectively summarized the material on makeup and costumes for the Kupu-kupu dance. The lesson concluded with students reciting prayers according to their respective religions and beliefs.

4) Meeting 4: Makeup and Dance Costumes

In the fourth meeting, the final one for this research, students were familiarized with the lesson with a prayer, the song "Indonesia Raya," and an icebreaker. The researcher reviewed all the previous material, and then students completed a 20-question multiple-choice test to assess their increased knowledge of dance. Afterward, the researcher

expressed their gratitude and posed for a group photo as a souvenir.

3.4 Results of the Implementation of Pop-up Book Media to Improve Dance Knowledge of Grade V and VI Students of SDN Margalaksana

This study presents pretest results in tabular form to assess students' dance knowledge through 20 multiple-choice questions. Each correct answer is given a score of 5, while an incorrect answer is given a score of 0, so the maximum pretest score is 100. The pretest results were used to evaluate fifth and sixth grade students' prior knowledge of the *Kukupu* dance.

Table 4. Student posttest results

soal 1	soal 2	soal 3	soal 4	soal 5	soal 6	soal 7	soal 8	soal 9	soal 10	soal 11	soal 12	soal 13	soal 14	soal 15	soal 16	soal 17	soal 18	soal 19	soal 20	total
5	5	5	5	5	5	5	5	5	5	5	5	5	5	0	5	5	5	0	5	90
5	5	5	5	5	5	5	5	5	0	5	5	5	5	5	0	5	0	5	0	80
5	5	5	5	5	5	5	0	5	5	0	5	5	5	5	0	5	5	0	5	80
5	5	5	5	5	5	5	5	0	5	5	0	5	5	0	5	5	0	5	5	80
5	5	5	5	5	5	0	5	5	5	5	5	5	5	5	5	5	5	5	0	90
5	5	5	5	5	5	5	0	5	5	5	5	0	5	5	5	0	5	0	5	80
5	0	5	0	5	5	5	5	5	5	5	5	5	5	5	5	5	0	5	0	80
5	5	5	5	5	5	5	5	5	5	5	5	0	5	5	5	0	5	0	5	85
5	5	5	5	5	5	5	5	5	0	5	5	0	0	5	5	5	0	5	5	80
5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	0	95
5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	0	5	5	5	0	90
5	5	5	5	5	5	5	5	5	5	5	5	0	5	0	5	5	0	5	5	85
5	5	5	5	5	5	5	5	5	5	0	0	5	5	0	5	5	0	0	5	75
5	5	5	5	5	5	5	0	5	5	5	0	5	5	5	5	0	5	5	0	80
5	5	5	5	5	0	5	0	5	5	5	5	5	5	5	5	5	5	5	5	90
5	5	5	0	0	5	5	0	5	5	5	0	5	5	5	5	5	5	0	5	75
5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	0	0	90
5	5	5	5	5	5	5	5	5	5	5	5	0	5	0	5	0	0	0	0	70
5	5	5	0	5	5	5	5	5	5	5	5	5	0	5	0	5	0	0	5	80
5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	0	5	5	5	95

Based on the results of the student data above, the data was then processed using descriptive statistics to see the average results of the pretest using IBM SPSS statistics software ver. 26 as follows.

Table 5. Results of descriptive statistical data from students' posttest

Statistics		
posttest		
N	Valid	20
	Missing	0
Mean		84.00
Median		82.50
Mode		80
Standard Deviation		6,996
Variance		48,947
Range		25
Minimum		70
Maximum		95
Sum		1680

Based on table 6, of the 20 fifth and sixth grade students, the lowest score was 50 and the highest score was 100, with an overall average score of 82.75. The most frequently occurring score was 90, while the median score was 85. From this data, the class interval, class length, and frequency of each class interval can be calculated and presented in graphical form.

Table 6.Frequency of posttest results

posttest		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	70	1	5.0	5.0	5.0
	75	2	10.0	10.0	15.0
	80	7	35.0	35.0	50.0
	85	2	10.0	10.0	60.0
	90	6	30.0	30.0	90.0
	95	2	10.0	10.0	100.0
	Total	20	100.0	100.0	

kelas interval	frekuensi	titik tengah	f1x1	Frekuensi Kumulatif	Frekuensi Relatif	Batas Nyata
70-74	1	73	70	20	5%	69,5
75-79	2	77	154	19	10%	74,5
80-84	7	83	581	17	35%	79,5
85-89	2	87	174	10	10%	84,5
90-94	6	93	558	8	30%	89,5
95-99	2	97	194	2	10%	94,5

Information:

- A: 88-100 = Very Good
- B: 76-88 = Good
- C: 65-76 = Sufficient
- D: <65 = Less

From the table above, the frequency distribution of the pre-test data is known as:

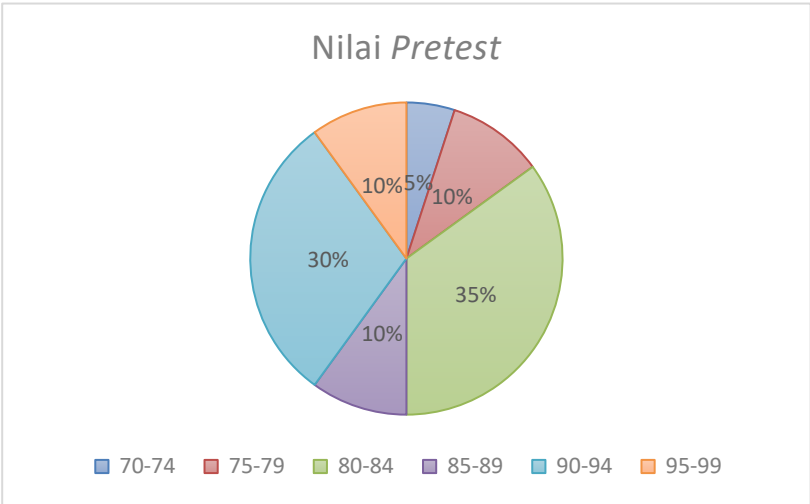


Figure 9.Pretest Diagram

Based on the diagram, the average posttest score of students regarding dance was 84, which is categorized as "good." This shows an increase from the "sufficient" category in the pretest, where the highest score was 80 and the lowest score was 55. In the posttest, the highest score reached 95 and the lowest score was 70. Thus, the use of pop-up book media in learning Kukupu dance has shown significant progress.

Table 7. Comparison of Pretest and Posttest Scores on Student Knowledge Improvement

No	Nama	Pretest	Posttest	Selisih (d= Posttest-Pretest)	d ²
1	AB	80	90	10	100
2	AW	60	90	30	900
3	DS	70	80	10	100
4	EM	65	80	15	225
5	IAN	80	90	10	100
6	JA	60	80	20	400
7	MAMB	55	80	25	625
8	MR	55	85	30	900
9	NSM	75	80	5	25
10	YP	70	95	25	625
11	GNI	55	90	35	1225
12	HFPH	70	85	15	225
13	JAM	55	75	20	400
14	NLS	60	80	20	400
15	RF	70	90	20	400
16	RRAF	55	75	20	400
17	SNA	75	90	15	225
18	SMN	65	70	5	25
19	TMR	70	80	10	100
20	UF	80	95	15	225

Normality Test

In this test, the researcher used the Shapiro-Wilk method because the sample was less than 50. The decision was made based on the following criteria:

1. If the significance value > 0.05, the data is said to be normally distributed.
2. If the significance value is < 0.05, the data is not normally distributed.

The table of results of processing normality test data using IBM SPSS Statistics version 26 is presented to show the results of this analysis.

Table 8. Normality Test

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
pretest	.161	20	.184	.894	20	.032
posttest	.216	20	.015	.918	20	.091

a. Lilliefors Significance Correction

The table above explains that the decision-making process for the normality test in the table shows the pretest and posttest results, with significant values or sig. 0.032 and 0.091, respectively. This means that the pretest and posttest research data are normally distributed and can be said to meet the assumptions of the normality test because the

significant value is greater than 0.05.

T-Test Results

Next, the researcher used the Paired T-Test, this aims to prove that there is an increase in knowledge in students.

Table 9.Paired T-Test

Paired Samples Statistics					
		Mean	N	Std. Dev.	Std. Error
Pair 1	pretest	66.25	20	9.014	2.016
	posttest	84.00	20	6.996	1.564

Based on the table above, it can be seen that the mean of the pre-test assessment is 66.25 while the mean of the post-test is 84.00 with N as the number of samples, namely 20. The standard deviation in the pre-test and post-test is 9.014 while the standard deviation in the post-test is 6.996.

Table 10.T-Test Pretest and Posttest

Paired Samples Test									
		Paired Differences							
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference		t	df	Sig. (2-tailed)
					Lower	Upper			
Pair 1	pretest - posttest	-17.750	8.347	1.866	-21.656	-13.844	-9.510	19	.000

The table above shows that the result of the paired T-Test is a sig (2-tailed) <0.05. Therefore, it can be concluded that there has been an increase in student knowledge. This increase occurred after the learning treatment using pop-up books in dance lessons. The comparison of the pretest and posttest scores for student knowledge improvement is illustrated in the following diagram.

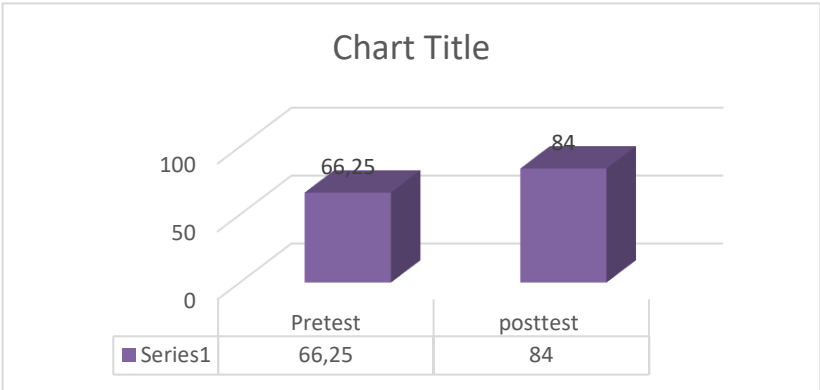


Figure 10. Comparison of the average values of the pretest and posttest

Based on the diagram presented above, it is concluded that there is an increase in the pretest value to the posttest with an average pretest value of 66.25 and an average posttest value of 84, therefore dance learning using pop-up book media is very significant in increasing student knowledge at SDN Margalaksana West Bandung.

3.5 Discussion

Based on the results of observations, interviews, and tests, this study identified the initial conditions of students' knowledge about dance before, during, and after the implementation of pop-up book media. Before the treatment, interviews with fifth and sixth grade homeroom teachers on March 5, 2024, showed that students' knowledge about dance was sufficient, but observations on May 6, 2024, revealed that students' understanding was still lacking. The pretest results showed a highest score of 80, a lowest score of 65, and an average of 66, indicating students' knowledge was still limited.

Learning media at SDN Margalaksana, West Bandung is still minimal, with the primary use being textbooks and a more one-way teaching method, making learning less effective. Researchers observed that students experienced difficulties and lacked enthusiasm in dance learning, and the lack of expert dance teachers and engaging learning media contributed to their low level of knowledge. To address this issue, researchers implemented pop-up books as a treatment to improve students' dance knowledge. This media is expected to provide more engaging visualizations and support more effective learning. In line with the views ([Imanulhaq and Ichsan 2022](#); [Angraeni et al. 2023](#)), this approach aims to facilitate student understanding through direct and concrete experiences.

In this study, the use of pop-up books in dance instruction demonstrated significant changes in student responses. This method enabled students to become more active and their dance knowledge increased. The learning process took place over four sessions:

1. The first meeting began with apperception and opening questions about types of flying insects, specifically butterflies, as the dance lesson focused on the *Kukupu* dance. The goal was for students to recall various types of butterflies and understand their metamorphosis process. In this meeting, students successfully answered questions about butterflies, demonstrating both basic understanding (C1) and conceptual understanding (C2).
2. Second Meeting: Researchers distributed pop-up books and monitored students' analysis of the history of the *Kukupu* dance. Cooperation among students began to emerge. Students were asked to analyze the history of the *Kukupu* dance, which involved analytical skills (C4), including analysis of elements, relationships, and rules.
3. Third Meeting: Students analyze the meaning of movement and makeup in the *Kukupu* dance using a pop-up book. They begin to relax more and are able to apply (C3) the meaning of dance movements related to *Kukupu* movements.
4. Fourth Meeting: Students demonstrate the *Kukupu* dance movements and give appreciation to other groups. A post-test is given to evaluate students' knowledge of the *Kukupu* dance. In this meeting, students are able to evaluate (C5) the *Kukupu* dance costume, distinguishing between clothing and accessories.

Overall, the use of pop-up books enhanced students' knowledge of dance, facilitating the understanding, application, and evaluation of the *Kukupu* dance concept. Research shows that the use of pop-up books in dance instruction provides significant benefits for both students and teachers. The implementation of this media is effective in enhancing students' knowledge of dance. According to ([Sudiarta et al. 2022](#); [Harini et al. 2024](#);

Hamzah and Baalwi 2022) that "visual-based learning media is learning media that conveys messages through the sense of sight."

The posttest results showed an increase in students' knowledge after using pop-up book media, with the highest score reaching 95 and an average of 84. Data analysis, which used a T test with $\alpha = 0.05$, showed a significant difference between the pretest and posttest. This study, using IBM SPSS Statistics ver.26, proved that pop-up book media effectively increased students' dance knowledge at SDN Margalaksana West Bandung.

4 CONCLUSION

The results of the study showed that the use of pop-up book media in dance learning during four meetings had a significant positive impact. Before the use of the media, the knowledge of fifth and sixth grade students at SDN Margalaksana West Bandung about dance was still lacking, due to the lack of competent teachers and limited learning media at the school. However, after the application of pop-up book media, students' knowledge increased significantly. Learning with pop-up book media made students more active and enthusiastic, and made it easier to understand dance material through interesting 3D visualizations. The steps in the learning included: (1) dividing students into groups to increase cooperation, (2) introducing pop-up books to students, (3) providing materials and assignments, and (4) evaluation to measure student understanding. This media was effective in encouraging student involvement and making the learning process more enjoyable and easier to understand, which contributed to increasing students' knowledge about dance.

5 AUTHORES' NOTE

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