

FOSTERING LITERACY SKILLS IN KINDERGARTEN THROUGH PROJECT-BASED POP-UP BOOK CRAFTING

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Abstract: This study is an experimental research aimed at determining the influence of project-based pop-up book creakting on literacy skills. The population in this study consists of all kindergarten children in the city of Makassar. The research sample was selected using a probability sampling technique, and the selected kindergartens were Teratai UNM Kindergarten with 15 children and Ceria Kindergarten with 15 children. The study analyzes findings using descriptive analysis techniques and Independent-sample T-test. The results showed that the average post-test score of students who participated in project learning in the creation of pop-up books increased to 83.52, while students who participated in conventional learning reached 66.48. The hypothesis test results showed that the t value was 5.486 with a significance of 0.000, confirming a highly significant difference in literacy skills between the groups that followed project-based learning and conventional learning. Therefore, based on the research findings, improving literacy skills in children requires attention to the learning model used, ensuring that the provided learning activities are suitable and capable of stimulating child development.

Keywords: project-based learning, pop-up book crafting, literacy skills

Learning in kindergarten is largely designed with the teacher playing a central role in imparting knowledge to children. Teaching approaches are geared towards meeting academic demands that expect reading, writing and arithmetic skills in kindergarten children. These demands come not only from the education system, but also from the expectations of parents who want their children to be ready to move on to favorite primary schools. Therefore, education in kindergarten often focuses more on the transfer of knowledge provided by the teacher and uses exercise books as the main tool for learning.

Early childhood education should be based on the needs of the child, adapted to the surrounding values, in accordance with the child's physical and psychological development stage. This should be done in a playful atmosphere and designed to optimize children's potential. This approach is in line with the opinion of Azis et al., (2021), regarding education in PAUD should be designed with a playful approach and in accordance with child development, providing space for creativity and exploration. This is important to create a positive learning environment and support children's holistic development before entering formal education.

One of the main aspects of child development in kindergarten is language, which plays an important role in the process of developing children's literacy. Language is considered the main basis and plays a central role in the literacy development process. Therefore, fostering and stimulating language skills at this early stage has a significant impact on children's literacy readiness at later stages of development.

The definition of literacy in the 21st century education system has changed compared to the previous period. The term "literacy" in modern times has a broader scope and is not only limited to the ability to read and understand meaning. According to Friantary & Eliya, (2023) literacy is no longer limited to the concept of reading and writing symbols or writing on paper. The change in the concept of literacy from a narrow to a more inclusive definition is the result of various factors, including advances in technology and information.

In its development, literacy not only includes the ability to read and write, but is also related to the ability to speak, count, solve daily problems, understand and use one's potential abilities. Today, there are different types of literacy, including basic literacy, digital literacy, media literacy, library literacy and visual literacy. Literacy has developed rapidly, and according to the World Economic Forum (Wardhani et al., 2021) in 2015, there are six types of literacy in basic literacy, such as literacy in reading and writing, numeracy, science, digital, financial, and culture and citizenship. In this study, the focus is on literacy in reading and writing because of the key role this literacy plays in understanding the concept of literacy in early childhood, being a literacy that can be developed early on.

Literacy in preschool children refers to the ability to understand and master the basics of language (Arnianti, 2019). The dimension of literacy in children involves reading and writing skills that have relevance in facilitating children's adaptation to the next level of education, especially at the primary school level (Fahmi et al., 2020; Khomsiyatun, 2019). Reading is considered an early stage in the development of children's ability to recognize letters and words and understand sound symbols in the context of language. From the perspective

of literacy according to Dubeck & Gove, (2015), literacy can be interpreted as a process that involves essential skills such as listening, speaking, seeing, arguing, reading and writing. Literacy skills acquired from an early age are recognized as an important factor in shaping children as continuous learners throughout life.

Children's literacy skills at preschool age is a very important ability to be stimulated in order to strengthen the development of reading and writing, so that learners are ready to continue education at the next level. Ideally, the literacy skills of children aged 5 to 6 years can be reviewed from several indicators, such as based on Permendikbud No 147 of 2014, namely children can show happy reading behavior, can compose simple sentences in a complete structure, recognize symbols for reading and writing preparation, can read and write their own names, continue some stories or fairy tales that have been listened to.

According to the results of a survey conducted by PIRLS (Progress in International Reading Literacy Study) and EGRA (Early Grade Reading Assessment) in 2016, Indonesia ranked 62 out of 70 countries (Mullis & Martin, 2017). This illustrates that the literacy level of Indonesian students is still relatively low. The results of another study conducted by PISA (Program for International Student Assessment) in 2018 also indicated similar data to the PIRLS findings. In fact, based on data released by UNESCO (United Nations Educational, Scientific and Cultural Organization), only about 0.001% of the Indonesian population shows an interest or passion in reading, or more specifically, only one in a thousand Indonesians has an interest in reading (Halik et al., 2023).

The Indonesian government is currently trying to improve literacy development in children by making a big movement, the National Literacy Movement. The School Literacy Movement as one of the manifestations of the National Literacy Movement calls on students in schools to do literacy activities for 15 minutes before learning begins. Although it has not yet shown significant progress, this movement has shown a positive impact, especially at the PAUD level. The School Literacy Movement in PAUD is carried out not by assigning students to read but teachers who read books to students (Hutabarat, 2020).

Literacy skills can be trained at school, in this case teachers play an important role in instilling students' literacy skills. Based on the results of a study conducted by Reichow et al., (2016), it was found that students' low reading literacy was caused by the lack of media used by teachers and caused students' disinterest in reading literacy. Embedding reading literacy skills certainly requires quality and diverse facilities, tools and resources tailored to 21st century education (Faisal et al., 2023).

The problem that often occurs in early childhood is that many children have difficulty in acquiring literacy skills. One of the factors that can cause the lack of mastery of literacy skills at an early age is by using conventional learning methods, where parents and teachers teach children to memorize alphabetical names repeatedly with blackboard media and imitate how to pronounce them (Hapsari et al., 2020). Therefore, this should be a concern for all parties, especially parents and educators in order to introduce reading and writing activities to children with fun methods.

One of the appropriate learning models in this problem is project-based learning. The project-based learning model emphasizes students as the center of innovative learning in conducting a project and the position of educators here as facilitators in learning related to everyday life. By using the project method, children gain direct learning experience, both in terms of work and responsibilities they experience in their daily lives (Herman & Rusmayadi, 2018), so that children are trained to do work that can train their literacy skills.

The project learning model itself relies on the constructivist theories of Jean Piaget and John Dewey, which state that learning is a process of "learning by doing" or learning from experience (Ningsih, 2018). The concept of project-based learning was officially recognized by John Dewey as an educational method that focuses on projects based on constructivist principles, with the aim of providing a more active learning experience (Sujana & Sopandi, 2020).

According to Ridha et al., (2022) there are a number of advantages associated with the application of the project-based learning model (PjBL). These advantages include increased motivation, development of problem solving

skills, collaboration, strengthening critical thinking skills, increasing creativity, and improving academic achievement. This is reinforced by the opinion of Chiang & Lee, (2016) which states that project-oriented practical learning can show better learner quality. Project-based learning can also provide different learning experiences to students, where in the learning process by implementing project-based learning, students are required to play an active role in devoting their ideas and pay special attention to gathering information in completing the project.

There are several steps of project-based learning as developed by The George Lucas Educational Foundation (Sujana & Sopandi, 2020), namely (1) Start with the essential question, (2) Design a plan for the project, (3) Create a schedule, (4) Monitor the students and the progress of the project, (5) Assess the outcome, and (6) Evaluate the experience. In addition, there are also stages or steps of learning contained in the Pancasila Student Profile Project guidebook (Sulistiyati et al., 2021), namely (1) The Beginning Stage is a stage to capture children's interest, explore children's curiosity, and raise events around children that need to be presented, (2) The Development Stage is a series of investigative processes. This activity is carried out by children to answer their curiosity and solve the problems they face, and (3) Conclusion Stage is a reflection activity on things that support and hinder so that the next project can be carried out better.

The project learning model according to Ergül & Elif (Anindya, 2019) is more effective for students if learning is linked to everyday life related to knowledge and technology. The project learning model can be balanced with an approach that can make it easier for students to understand a concept to improve literacy skills in students, especially reading and writing skills, namely by creating pop-up books.

Pop-up books are defined as works of literature that combine narrative elements with image elements that move or have three dimensions, creating visual appeal through movement when the page is opened (Sunarti et al., 2023). According to Sukmawarti, (2021), pop-up books utilize parts that can move or have three dimensions, providing an interesting visual

representation of the story. The images that move when the book pages are opened have the potential to increase students' learning motivation and can be used both independently and in groups.

In this study, researchers used the Project-Based Pop-Up Book Crafting learning model to develop children's literacy skills. This model is a learning approach where learners are involved in a pop-up book crafting project. In this context, learners will be involved in a series of creative activities involving 6 rare learning projects ranging from design, construction, to completion of the pop-up book. This approach not only emphasizes on mastering literacy concepts, but also integrates aspects of arts and crafts and presents holistic learning.

Through this project, learners not only improve their reading and writing skills but also develop creative, problem-solving and collaborative skills. The process of creating pop-up books provides an interactive and fun learning experience, creating a high level of interest and motivation in learning. This approach encourages learners to be active in the idea development, design and implementation of the project, enriching the child's overall learning experience.

METHOD

The approach used in this research is a quantitative research approach. Research with a quantitative approach is a method for testing certain theories by examining the relationship between variables. These variables are measured (usually with research instruments) so that data consisting of numbers can be analyzed based on statistical procedures.

The type of research used in this study is a quasi-experimental design. This type of research will compare groups to conclude changes caused by treatment. The experimental research design used is non-equivalent control group design or pseudo experiment. By using a research design non-equivalent control group design, where a group of subjects is taken from a certain population and a pretest is carried out and then subjected to treatment. After being subjected to treatment, the subject is given a posttest to measure the effect of treatment on the group. The instruments given contain the same weight.

The difference between the results of the pre-test and post-test shows the results of the treatment that has been given.

The population in this study consisted of all kindergarten children in Makassar city. The research sampling was conducted using probability sampling technique and two kindergartens were selected, namely Teratai UNM Kindergarten as many as 15 people who would be categorized into the experimental class and Rahma Kindergarten as many as 15 children who would be categorized into the control class. The main consideration in the selection of samples by considering the characteristics of kindergartens that have similarities such as the educational background of teachers, the curriculum used, infrastructure facilities, the social and geographical environment of the school, family characteristics such as the educational background of parents and the socio-economic status of the family.

The instruments and data collection methods used in this study are: (1) Observation sheet. Observations were made to directly observe activities when implementing project learning and record phenomena that occur systematically regarding the activities provided. Observing children's literacy skills before and after applying project learning by checking each item on the indicator according to the development category on the research instrument used. (2) Test. The type of test conducted in this study is a test using a learner worksheet. The learner worksheets used are specifically designed to measure the literacy skills of pre-school children. The instrument consists of several types of questions designed to test basic literacy skills, such as reading words, matching pictures with words, marking and thickening sentences that match the pictures or instructions given. This test was conducted before (pre-test) and after (post-test) children were given project learning to determine literacy skills in children. used are pre-test and post-test. Learners' literacy skills were assessed using four aspects.

The data analysis techniques used in this study were (1) Descriptive statistical analysis. Descriptive statistical analysis was used to determine differences in children's literacy skills before and after being treated with project learning activities. Furthermore, in order to obtain an overview of the average level of

children's literacy skills, the calculation of the average is done using the SPSS application, the presentation of data in descriptive statistical analysis includes calculations to determine the lowest and smallest values, mean, median, mode, standard deviation and variance. (2) Independent-sample T-test. The independent-sample T-test involves comparing two statistically independent sample groups. Using this test, the average difference between two groups can be evaluated to determine whether the difference is significant or not.

The independent sample T-test requirements are: (1) Normality test is used to evaluate whether data from a group or sample follows a normal distribution or not. If the significance value (p-value) of the normality test is more than 0.05, it can be concluded that the data is normally distributed. (2) Homogeneity test, used to ensure that the variances of two or more groups have a significant level of similarity. If the significance value (p-value) is more than 0.05, we can assume that the variance between groups is homogeneous. (3) Hypothesis testing, The hypothesis test used in this study is the T-test, which is an independent test of two means. In this test, the null hypothesis states that there is no significant difference, while the alternative hypothesis states that there is a significant difference. If the significance value (p-value) is less than 0.05, the null hypothesis can be rejected, and we can conclude that there is a significant difference between the two means.

FINDINGS AND DISCUSSION

Findings

The results showed that the application of the project learning model in making pop-up book works proved effective in improving the literacy skills of children aged 5-6 years. Data were collected through performance tests covering four aspects of reading and writing literacy skills. The validity test of the test instrument confirmed that the four test items had an adequate level of validity and high reliability. Before the treatment, the tendency test of literacy skills in the control and experimental classes showed insignificant diversity (homogeneous). However, after the treatment,

there was a very significant difference between the mean post-test scores of literacy skills in the experimental and control classes. The average post-test score of literacy skills in the experimental class, which applied the project learning method in making pop-up books, was significantly higher than the control class.

Observations of learning implementation in both classes reached the excellent category. The pre-test was conducted in two classes, namely UNM Lotus Kindergarten (R₁) and Ceria Kindergarten (R₂), followed by project learning in the creation of pop-up book creation in R₁ class and conventional learning in R₂ class, then a post-test was conducted after the learning was completed. Furthermore, each research group can be described more fully as follows

Description of Learning Implementation Observation Data

Efforts to ensure the learning process according to plan were carried out through observations of learning implementation in control and experimental classes, with the results presented in Table 2.

Tabel 2. Experimental and Control Class Learning Observation Results

Class	Learning Implementation	Criteria
Experimen	93.46	Very Good
Control	93,44	Very Good

Judging from the table data, it can be said that the implementation of experimental and control class learning is included in the very good category.

Description of Pre-test Data of Experimental and Control Classes

The experimental class pre-test results showed the average value of liration ability of 63,64 with a standard deviation of 6.731. The lowest score was 52 with a frequency of 3 students. The highest score obtained was 75 with a frequency of 2 students. While the pretest results of the control class showed the average value of literacy skills of 62,54 with a standard deviation of 6,352. The lowest score was 53 with a frequency of 2 students. The highest score obtained was 76 with a frequency of 1 learner.

Furthermore, a summary description of the pre-test data for the experimental class and control

class will be presented in the frequency distribution table as follows.

Table 3. Frequency Distribution of Pre-test Results of Literacy Skills of Experimental and Control Classes

Score	Category	Experiment Class		Control Class	
		Frequency	Percentage	Frequency	Percentage
$(86 < \text{ITKL} \leq 100)$	Very good	0	0%	0	0%
$(70 < \text{ITKL} \leq 86)$	Good	4	27%	6	40%
$(55 < \text{ITKL} \leq 70)$	Simply	8	53%	5	33%
$(40 < \text{ITKL} \leq 55)$	Insufficient	3	20%	4	27%
Total		15	100%	15	100%

The frequency distribution table shows that in the experimental class, only 27% had literacy skills in the good category. As many as 73% of students in the experimental class had literacy skills in the sufficient and deficient categories. In the control class, 40% had good literacy skills. The remaining 60% fell into the fair and poor categories. This shows that the literacy skills of students aged 5-6 years in both experimental and control classes are inadequate.

Description of Post-test Data for Experimental and Control Classes

The experimental class post-test results showed an average literacy score of 83,52 with a

standard deviation of 9.253. The lowest score was 66 with a frequency of 1 learner. The highest score obtained was 98 with a frequency of 1 learner. While the post-test results of the control class showed the average value of literacy skills of 63,48 with a standard deviation of 6.958. The lowest score was 54 with a frequency of 1 learner. The highest score obtained was 77 with a frequency of 3 learners. Furthermore, a summary description of post-test data for experimental and control classes will be presented in the frequency distribution table as follows.

Table 4. Frequency Distribution of Post-test Results of Literacy Skills of Experimental and Control Classes

Score	Category	Experiment Class		Control Class	
		Frequency	Percentage	Frequency	Percentage
$(86 < \text{ITKL} \leq 100)$	Very good	3	20%	0	0%
$(70 < \text{ITKL} \leq 86)$	Good	8	53%	9	60%
$(55 < \text{ITKL} \leq 70)$	Simply	4	27%	4	27%
$(40 < \text{ITKL} \leq 55)$	Insufficient	0	0%	2	13%
Total		15	100%	15	100%

The frequency distribution table shows an overview of the final literacy skills. It is known that the experimental class for the good and very good categories is 73%. A significant increase (up to 46%) compared to students' literacy skills during the pre-test. The moderately good and less good categories were only 27%, while in the control class the good category was 60%. Up 20% compared to the literacy skills of students at pre-test. At the time of the post-test in the very good category the control class was still 0%. The

sufficient and less sufficient categories amounted to 40%. This fact shows that classes that use project learning in making pop-up book creations can improve students' literacy skills to be higher.

Testing Data Analysis Requirements

In this experimental research design, the equality test is one of the control measures so that the experimental results are not affected by initial ability. The analysis technique used is the

independent sample t-test. The requirements in the t-test are normality test and homogeneity test.

Data normality test is conducted to determine whether the sample comes from a normally distributed population. Then the normality test was carried out using the Lilliefors test. The data normality test requirement is H_0 accepted if $L_{count} < L_{table}$ and H_0 rejected if $L_{count} > L_{table}$. The hypothesis formulation is as follows: H_0 = The sample comes from a normally distributed population. H_1 = The sample comes from a population that is not normally distributed.

To determine the criteria for population normality with the Lilliefors test, a significance level (α) of 0.05 is used. In this case: Reject H_0 if the largest L_{oprice} (L_{oMax}) $>$ from L_{otable} at $\alpha = 0.05$ where the L_{table} price is $L_o(0.05)(10) = 0.258$. Based on the results of the calculation of data

normality in all research groups, it is known that L_{count} for all groups is smaller than L_{table} , this means that all research groups are normally distributed.

In this study, the variance homogeneity test used the Kolmogorov-Smirnov test which was carried out on two groups of treatment variable data, namely the variance homogeneity test on two groups of cell data in the experimental design, namely the variance homogeneity test of the experimental class and control class.

Normality Test and Pre-Test Homogeneity Test on Experimental Class and Control Class.

The pre-test normality test is intended to test whether the children in the experimental class and control class are normally distributed.

Tabel 5. Normality Test

Kelas		Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Value	Pre-test Eksperiment	.206	15	.099	.857	15	.024
	Pre-test Kontrol	.189	15	.127	.905	15	.037

Tabel 6. Homogeneity Test

Levene Statistic	df1	df2	Sig.
.432	1	28	.937

Tabel 7. Test of Equality of Two Means Pre-test

		t-test for Equality of Means									
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference		
										Lower	Upper
Value	Equal variances assumed	.002	.964	.188	28	.836	.533	2.760	-5.120	6.186	
	Equal variances not assumed			.188	27.833	.836	.533	2.760	-5.121	6.188	

homogeneous. These conditions fulfill the inferential statistical assumption test so that the Quasi-Experimental process can be continued in the experimental and control classes.

Based on table 7, it can be seen that the t value is 0.188 at Sig. 0.836 so that H_0 is accepted, and H_1 is rejected. Thus, it can be concluded that there is no difference between the experimental and control classes on the pre-test

of literacy skills. In other words, the two groups are equal

Normality Test and Post-Test Hypothesis Test on Experimental Class and Control Class

The post-test normality test is intended to test differences in literacy skills based on the treatment given, so an Independent Sample T-test was conducted.

Tabel 8. Normality Test

Kelas		Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Value	Post-test Eksperiment	.303	15	.85	.885	15	.384
	Post-test Kontrol	.164	15	.76	.918	15	.264

Tabel 9. Hypothesis Test

		t-test for Equality of Means								
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Value	Equal variances assumed	.003	.960	5.486	28	.000	15.547	2.574	9.593	20.140
	Equal variances not assumed			5.486	26.842	.000	15.547	2.574	9.583	20.150

It can be seen that the final ability of the experimental class literacy skills with a Sig value. 0.384 is greater than 0.05 so that H_0 is accepted which means that the experimental class is normally distributed. While the control class post-test results with a Sig value. 0.264 is greater than 0.05 then H_0 is accepted so that the control class is normally distributed. So, it can be concluded that the population of post-test scores of experimental and control classes is normally distributed.

Based on the figure above, it can be seen that the t value obtained is 5.775 at sig. 0.000 then H_0 is rejected. Thus, it can be concluded that there is a very significant difference in the literacy skills of students between the experimental and control classes. Project learning in making pop-up book creations is more effectively applied to improve students' literacy skills in experimental classes compared to conventional learning applied in control

classes. This can be seen from the average post-test value of literacy skills of R_1 class as an experimental class of 83,52 higher than R_2 class as a control class which is 63,48. After carrying out a series of studies in experimental and control classes, then collecting data both pre-test and post-test, the final conclusion is that project learning in making pop-up book creations is declared effective in improving students' literacy skills.

Discussion

Project learning in making pop-up book creations is a learning process that encourages students to gain a deeper understanding through active exploration of real-world challenges and problems, by integrating children's literacy skills (Anindya, 2019). The results showed that the literacy skills of students aged 5-6 years were on

average in the sufficient category. The problem of literacy skills is at the level of practical teaching in the classroom. Therefore, to overcome the problem of low literacy skills in students, the most appropriate way is to do innovative and fun learning at school.

Project learning in the creation of pop-up books is applied by referring to the learning stages developed by The George Lucas Educational Foundation (Sujana & Sopandi, 2020) which consists of 6 steps, namely (1) at the Start with essential question stage, the activity carried out is that the researcher invites students to the reading corner and asks questions related to reading books; (2) At the Design Project stage, the activity carried out is that the teacher reads the pop-up storybook and the researcher gives an understanding to students about the design schedule; (3) At the Create schedule stage, the researcher gives an understanding to students about the stages and schedule of activities to be carried out; (4) At the Monitoring the students and progress of projects stage, the activities carried out are making a cover book from using the marbling paint technique, writing the storyline that has been made by imitating the storybook, making pictures to complement the story, drawing and cutting patterns and sticking the storyline and pictures, and putting together all the pop up paper sheets that have been made so that they can produce pop up books; (5) Assess the outcomes, the activities carried out are teachers and researchers assessing the results of the project and students telling what activities have been carried out; (6) Evaluate the experience, the activities carried out are researchers asking questions to see children's understanding of literacy skills.

As a facilitator in teaching, teachers must also be able to teach reading in an interesting, stimulating and varied way. In short, various teacher efforts to achieve improved learner literacy skills must be developed. This research is in line with the research and development of PjBL-based teaching materials conducted by Izzania, (2021) which states that PjBL-based teaching materials are very practical to use, because these teaching materials provide important components needed by teachers to create learning activities that can facilitate students in improving and developing literacy skills and these results are in accordance with

research conducted by Adriyawati et al., (2020) that STEAM-integrated PjBL-based learning can improve students' literacy skills.

The results of the research on the pre-test can be seen under the literacy skills in the experimental class obtained on average in the sufficient category. The post-test results showed that 73% of students had good and very good category literacy skills. The average pre-test score of 63,64 increased significantly in the post-test score to 83,52. Project learning in pop-up book creation proved to be effective in improving the literacy skills of learners after 5-6 years.

To ensure that the increase in literacy skills is truly caused by the use of project learning in the creation of pop-up books, control measures were taken to control several variables. The control measures involved conducting the experiment concurrently at the school site, applying the experiment to teachers, administering a literacy test before treatment, using project learning and conventional learning, providing the treatment within a short time span, and conducting the study without informing the subjects so that the results would not be contaminated by treatment material factors.

This finding supports the theory that project learning plays an important role in learning activities. The main functions of project learning, such as increasing learning motivation, problem-solving skills, effectiveness in solving complex problems, collaboration, and development of communication skills, are reflected in the results of this study (Anhusadar & Wulandari, 2019; Winastawan & Sunarto, 2015).

The use of interesting learning models, such as project learning in pop-up book creation can provide direct learning experiences to students. Thus, learning not only takes place effectively but is also fun and can optimally improve early childhood literacy skills. The results of this study are in line with previous findings, showing that the use of project learning can improve literacy skills in early childhood (Adriyawati et al., 2020; Firmansyah, 2019).

Thus, from the results of this study which are also supported by the results of previous studies and it can be concluded that the use of project learning in pop-up book creation can make the learning process run in a happy atmosphere. The use of an interesting learning model will make learners interested in

improving literacy skills. Indirectly learners develop reading and writing skills, so that they can improve literacy skills with the use of project learning.

CONCLUSION

Based on the analysis and discussion, it can be concluded that the application of the project learning method in the context of making pop-up book creations has a significant positive impact on improving literacy skills in 5-6 year old students. Through hypothesis testing using the independent sample t test, the results show that the experimental group that received learning with the project learning model experienced a higher increase in literacy skills compared to the control group that applied the conventional learning model.

REFERENCES

- Adriyawati, Utomo, E., Rahmawati, Y., & Mardiah, A. (2020). Steam-Project-Based Learning Integration to Improve Elementary School students' Scientific Literacy on Alternative Energy Learning. *Universal Journal of Educational Research*, 8(5), 1863–1873. <https://doi.org/10.13189/ujer.2020.080523>
- Anhusadar, L. O., & Wulandari, H. (2019). Pengembangan Model Pembelajaran Seni Berbasis Agama pada Anak Usia Dini. *Al-Athfaal: Jurnal Ilmiah Pendidikan Anak Usia Dini*, 2(1), 58–68. <https://doi.org/10.24042/ajipaud.v2i1.4622>
- Anindya, F. A. (2019). Pengaruh Model PjBL-STEAM pada Materi Cahaya dan Alat Optik Terhadap Keterampilan Memecahkan Masalah dan Komunikasi Siswa. *Thesis*. Universitas Negeri Semarang.
- Arnianti. (2019). Teori perkembangan Bahasa. *PENSA: Jurnal Pendidikan Dan Ilmu Sosial*, 1(1), 139–152.
- Chiang, C. L., & Lee, H. (2016). The Effect of Project-Based Learning on Learning Motivation and Problem-Solving Ability of Vocational High School Students. *International Journal of Information and Education Technology*, 6(9), 709–712. <https://doi.org/10.7763/ijiet.2016.v6.779>
- Azis, D. A., Kamaluddin, K., & Khotimah, K. (2021). Pengembangan Metode Permainan dan Lagu di PAUD/TK Rinjani Universitas Mataram. *Jurnal Ilmiah Abdi Mas TPB Unram*, 3(1). <https://doi.org/10.29303/amtph.v3i1.66>
- The implications of these findings are highly relevant for early childhood education practitioners and provide a basis for designing more innovative and effective learning strategies in the context of literacy development. Educational policy makers are also expected to consider policy adjustments related to the use of innovative learning models, such as project-based learning in making pop-up book creations, to improve the quality of education at the preschool level.
- As a suggestion for future research, it is recommended to further explore the potential of developing project learning models especially for students in early childhood education. A deeper exploration of the new dimensions that can be presented in the development of early childhood literacy will make an important contribution to improving the quality of learning at the preschool level.
- Dubeck, M. M., & Gove, A. (2015). The Early Grade Reading Assessment (EGRA): Its Theoretical Foundation, Purpose, and Limitations. *International Journal of Educational Development*, 40, 315–322. <https://doi.org/10.1016/j.ijedudev.2014.11.004>
- Fahmi, F., Syabrina, M., Sulistyowati, S., & Saudah, S. (2020). Strategi Guru Mengenalkan Konsep Dasar Literasi di PAUD sebagai Persiapan Masuk SD/MI. *Jurnal Obsesi: Jurnal Pendidikan Anak Usia Dini*, 5(1), 931–940. <https://doi.org/10.31004/obsesi.v5i1.673>
- Faisal, M., Aras, L., & Rahman, W. T. A. (2023). Enhancement Learning Aksi Platform Reading Literacy of Elementary Students. *RETORIKA: Jurnal Bahasa, Sastra, Dan Pengajarannya*, 16(1), 35–42. <https://doi.org/10.26858/retorika.v16i1.43499>
- Firmansyah, F. (2019). Penerapan Model Pembelajaran PJBL-STEAM Menggunakan Media Video Camtasia untuk Meningkatkan Literasi pada Pembelajaran. *Jurnal Didaktika Pendidikan Dasar*, 3(2), 499–518.
- Friantary, H., & Eliya, I. (2023). Multiliteracy Learning Model Through Synergy Between the Needs of the Workplace and Learning Language Skills Courses. *RETORIKA: Jurnal Bahasa, Sastra, dan Pengajarannya*, 16(2), 120–130. <https://doi.org/10.26858/retorika.v16i2.24177>
- Halik, A., Salam, R., Rukayah, R., & Hafid, A. (2023). The Analysis of the Educators' Role Toward Elementary School students' Literacy problem Through the Heutagogy Approach.

- RETORIKA: Jurnal Bahasa, Sastra, Dan Pengajarannya*, 15(2), 185–197. <https://doi.org/10.26858/retorika.v15i2.47164>
- Hapsari, D. T., Suryono, Y., & Amiliya, R. (2020). 21st Century Skills; the Effect of Project Based Learning to Financial Literacy on Children Aged 5-6 Years. *Educational Administration Research and Review*, 3(2). <https://doi.org/10.17509/earr.v3i2.22370>
- Herman, H., & Rusmayadi, R. (2018). Pengaruh Metode Proyek terhadap Kemampuan Kognitif Anak di Kelompok B2 TK Aisyiyah Maccini Tengah. *PEMBELAJAR: Jurnal Ilmu Pendidikan, Keguruan, dan Pembelajaran*, 2(1), 35. <https://doi.org/10.26858/pembelajar.v2i1.5430>
- Hutabarat, R. M. (2020). Kegiatan literasi di PAUD Petra Sion Indonesia Menggunakan Media Whatsapp. *Prosiding Seminar Nasional PBSI-III Tahun 2020*, 55–60.
- Izzania, R. D. S. M. (2021). Pengembangan Bahan Ajar Project Based Learning (PjBL) Terintegrasi STEAM untuk Memfasilitasi Kemampuan Literasi Sains Siswa Kelas VI Sekolah Dasar. *Jurnal Pembelajaran & Pengajaran Pendidikan Dasar*, 4(2), 146–157. <https://doi.org/10.33369/dikdas.v4i2.15914>
- Khomsiyatun, U. (2019). Pola Pengembangan Literasi Bahasa Pada Anak Studi Kasus di PAUD Wadas Kelir. *Jurnal Metabasa*, 1, 29–34.
- Mullis, I. V. ., & Martin, M. O. (2017). *PIRLS 2016 International Results in Reading*. Chestnut Hill, MA 02467 United States: TIMSS & PIRLS International Study Center. Boston College.
- Ningsih. (2018). Aplikasi Teori Belajar Konstruktivisme dalam Pembelajaran Bahasa Asing. *Foundasia*, 9(1), 43–54. <https://doi.org/10.21831/foundasia.v9i1.26159>
- Reichow, B., Boyd, B. A., Barton, E. E., & Odom, S. L. (2016). Handbook of Early Childhood Special Education. *Handbook of Early Childhood Special Education*, 1–594. <https://doi.org/10.1007/978-3-319-28492-7>
- Ridha, M. R., Zuhdi, M., & Ayub, S. (2022). Pengembangan Perangkat Pembelajaran PjBL Berbasis STEAM dalam Meningkatkan Kreativitas Fisika Peserta Didik. *Jurnal Ilmiah Profesi Pendidikan*, 7(1), 223–228. <https://doi.org/10.29303/jipp.v7i1.447>
- Sujana, A., & Sopandi, W. (2020). *Model-Model Pembelajaran Inovatif: Teori dan Implementasi*. Rajawali Printing.
- Sukmawarti, E. (2021). Pengembangan Media Pop Up Book pada Pembelajaran PKN di SD. *Ability: Journal of Education and Social Analysis*, 2(4), 110–122. <https://doi.org/10.51178/jesa.v2i4.321>
- Sulistiyati, D. M., Wahyaningsih, S., & Wijania, I. wayan. (2021). *Buku Panduan Guru: Proyek Profil Pelajar Pancasila*. Pusat Kurikulum dan Perbukuan Badan Penelitian dan Pengembangan dan Perbukuan Kementerian Pendidikan, Kebudayaan, Riset, dan Teknologi.
- Sunarti, Anggraini, D., Sarie, D. P., & Jana, P. (2023). The Effectiveness Of Pop-Up Book Media in Learning Reading Skills of Grade II Elementary School. *Cakrawala Pendidikan*, 42(2), 493–506. <https://doi.org/10.21831/cp.v42i2.50381>
- Wardhani, L. K., Yuswanto, D. T., & Nurohmah, I. (2021). *Panduan Pelaksanaan Bimbingan Teknis Penguatan Literasi Anak Usia Dini*. Kementerian Pendidikan, Kebudayaan, Riset, dan Teknologi Direktorat Jenderal Pendidikan Anak Usia Dini, Pendidikan Dasar dan Pendidikan Menengah Direktorat Pendidikan Anak Usia Dini 2021.
- Winastawan, G., & Sunarto. (2015). *Pakematik Strategi Pembelajaran Inovatif Berbasis TIK*. Elex Media Komputindo.