



The Use of Picture Storybooks on Literacy in Early Childhood

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Abstract

Picture storybooks not only attract children's attention with colorful illustrations, but can also improve language skills, especially in terms of literacy. By listening to stories and looking at pictures, children can recognize new words, understand the context in which they are used, and enrich their understanding of the world around them. This study aims to find out the description of the use of picture storybooks in early childhood, find out the description of literacy skills, and find out the influence of the use of picture storybooks on early childhood literacy skills. This study uses a quantitative approach to determine the effect of the use of picture storybooks on literacy in early childhood. The research design used is Pre Experimental in the form of *One Group Pretest-Posttest Design*. The data analysis technique used in this study is descriptive statistical analysis, Inferential Statistical Test (*Wicoxon Signed rank test*). The results of the study showed that the results of the N-Gain analysis, the literacy ability of early childhood after using picture storybooks increased in the medium category, showing moderate development and only 2 children were in the low category. These findings suggest that the use of picture storybooks is effective in improving literacy skills, although the increase has not yet reached the high category. Thus, it can be concluded that the use of picture storybooks has a positive and significant effect on improving early childhood literacy skills. The research is expected to be a reference and open up new study space related to the use of learning media in improving children's abilities. Findings on improving abilities obtained after treatment show that the selection and modification of appropriate learning media has the potential to have a positive impact on children's development.

Keywords: Books, Illustrated Stories, Literacy, Literacy, Early Childhood

Introduction

The education provided at this age must include various aspects that support children's growth and development, including language development. Language is used as a tool or means

of communication between individuals with each other. Vygotsky stated that language is used as a tool to express ideas, questions, and produce concepts in a thought (Gustina, 2018). According to the Minister of Education Regulation Number 10 of 2025 concerning Competency Standards for Early Childhood Graduates, it establishes 6 foundational abilities of early childhood including Religious Values and Noble Morals, Physical, Motor, Cognitive, Language, Social-Emotional, Creativity and Imagination. Early Childhood development must include six foundational abilities that are the basis for children's learning readiness at the next level (Luthfillah et al., 2022). In relation to this statement, the achievement of language development of children aged 5-6 years can be known by several activities such as children understanding the commands given at the same time, repeating more complex sentences, understanding the rules in a game, composing simple sentences in a complete structure (subject sentence-predicate-description), showing understanding of concepts in storybooks, communicating orally, mentioning known letter symbols, Mention groups of images that have the same initial sounds/letters, understand the relationship between sounds and letter shapes, and have vocabulary. (Gustina, 2018).

Literacy is basically not only understood as reading and writing skills, but also includes the skills to understand, process, and use information in daily life. According to UNESCO (2018), literacy is a person's ability to recognize, understand, interpret, create, communicate, and calculate by utilizing texts in a variety of situations. This is supported by the Ministry of Education and Culture (2017) that literacy is the skill of accessing, understanding, and using information intelligently through listening, speaking, reading, and writing.

Meanwhile, literacy is interpreted as a basic ability related to literacy, reading, writing, and numeracy skills. Nurhadi (2004) stated that literacy is the ability to recognize letters, syllables, words, and sentences and use them in reading and writing correctly. This is an important provision that needs to be introduced from an early age through fun learning activities. These two concepts can be understood that literacy and literacy are interconnected. Literacy gives a broader meaning to language and communication skills, while literacy becomes the technical basis for reading and writing. Both combine in the term early childhood literacy, namely the child's initial ability to recognize letters, read, write, as well as understand the meaning of the language used.

Based on problems in the field and the results of observations in class in group B in kindergarten, there are still many students who face difficulties in recognizing letters, arranging words, and understanding the content of simple reading. One of the reasons is that learning methods tend to be monotonous and lack support for interesting media (Basir at all, 2025). This can be seen when the learning process begins, children tend to be silent and do not want to express opinions simply, besides that during the question and answer activities, there are still many children who are confused in understanding the questions given by the teacher. When the teacher tells stories and explains the story in front of the class, the average child has difficulty in getting words out so that the teacher provokes the child so that all students can tell the story. Another problem was also found to be the lack of learning media that can motivate students in learning. The media used by teachers is generally still monotonous and does not attract children's attention, so that interest in learning is low. When telling stories, teachers

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often only use books without pictures so that children have difficulty understanding the content of the story, quickly feel bored, and pay less attention to the course of learning. (Aisyah at all, 2023)

The media used by teachers when telling stories is a book media without pictures so that students still do not understand and feel bored and cause students to not pay attention to the teacher when teaching. According to Jiménez (2024), it shows that children's early literacy skills can be grown more optimally through proper learning practices and teacher support, as well as by utilizing appropriate media. One of the solutions to face the difficulties of students in improving their literacy is to choose the right learning media, One of the strategies that can be applied is the use of picture storybooks or visual media that combine text and illustrations. This media helps children more easily recognize letters, arrange words, and understand the content of the story. With interesting media, children will be encouraged to pay more attention to teachers, respond to questions, and express opinions simply.

Adhani & Lestari (2021) Found that the use of picture storybooks is effective in improving children's speaking skills in this age group. In line with research conducted by Nirmala Dewi, et., al (2025) shows that the use of picture storybooks is carried out with careful planning and neatly arranged learning steps by teachers can show that children are actively involved in storytelling activities, able to convey ideas, answer questions, express opinions, and retell the content of the story being discussed. Picture storybooks have a role as an interactive and interesting medium in stimulating the development of early childhood speaking skills. (Kummerling at all, 2015; Ellis, 2016; Purnamasari, 2019; Lena, 2024)

Learning media based on picture storybooks not only supports children's speaking development, this is emphasized in research conducted by Lestari et., al (2025) that picture story books can stimulate children's independence. Picture storybooks can be an innovative approach to stimulate independence in children from an early age. Stories that contain Pancasila values, especially the values of independence, can equip children with practical concepts, responsibility and self-control. This research differs from Abdul Salam, et., al (2023) who argues that using picture storybooks can affect children's cognitive development. Developing children's cognitive knowledge is biased by reading picture story books. By doing this method, we can help children to introduce something through pictures in a storybook. Usually children's learning is only related to writing, singing, teaching and listening to teachers' lectures without using media, this picture story book media creates an interesting impression to direct the focus so that children like to read. (Putri, 2022; Rizkiyah, 2022; Ahmad & Bachtiar; 2024)

Picture storybooks not only attract children's attention with colorful illustrations, but can also improve language skills, especially in terms of literacy. By listening to stories and looking at pictures, children can recognize new words, understand the context in which they are used, and enrich their understanding of the world around them. Halim et al. (2025) concluded that the use of picture storybook media can significantly increase students' interest in reading. Children show high enthusiasm and progress in reading skills and reading comprehension.

Based on the problems found, this study aims to find out the description of the use of picture storybooks in early childhood, find out the picture of literacy in early childhood, and find out the effect of the use of picture storybooks on literacy iteration in early childhood.

Literature Review

Language Development

Language development is a gradual process experienced by children in obtaining, understanding, and using language symbols both verbally and nonverbally for the purpose of communicating, thinking, and establishing social interactions. Language not only serves as a tool to convey messages, but also an important means for children to develop their cognitive, emotional, and social skills. Through language, children learn to express feelings, build relationships with their environment, and practice abstract thinking and literacy skills. Language skills are one of the important aspects in early childhood language development which plays a role as the basis for communication and thinking skills.

According to Beverly Otto (2015), language development in early childhood occurs naturally through interaction with the surrounding environment, but still requires the role of adults to provide stimulation and enrich language experiences. This shows that language is not solely the result of biological innateness, but is also formed through social interaction and learning experiences obtained by children in their daily lives. This is in line with the opinion of Crystal (2010) that language development includes mastering phonology, morphology, syntax, semantics, and pragmatic aspects, which allow children to communicate effectively according to socio-cultural contexts.

Language acquisition is the result of a complex interaction between biological, cognitive, and environmental factors. Rowland (2014) then from a different point of view, Chomsky (2006) argues that every child is equipped with an innate device that allows him to develop language naturally, although it is still influenced by interaction with his environment.

Thus, it can be concluded that language development is a continuous, complex, and multidimensional process, influenced by internal and external factors. This process not only includes receptive and expressive skills in understanding and using language, but also serves as a key foundation in a child's cognitive, social, emotional, and literacy development.

Stages of Language Development

The journey of language development in children takes place through regular stages from the beginning of life. Korompot (2023) argues that this process starts from the pre-linguistic phase, then continues to babbling, the use of one word, two words, until it reaches the form of telegraphic language and finally the multi-word stage which becomes the foundation of language skills at the next age. In line with this, Clark (2022) emphasized that at around the age of one child begins to be able to recognize sounds and some simple words, by the age of two they can already combine words, while at the age of three to four children show

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the ability to produce complex sentences, including relative clauses and various forms of questions.

More recent findings were put forward by Vyshedskiy et al. (2025) through the use of the Language Phenotype Assessment (LPA) instrument, which succeeded in identifying three main milestones in the development of language comprehension. The results of the study showed that some children had reached the Command stage at the age of 1.6 years, Modifier at about 3 years of age, and *Syntactic* at the age of 3.7 years. In general, the majority of children master *the Command* stage at the age of 3, Modifier at the age of 4, and Syntactic at the age of 5. These findings confirm that language development is not only related to the ability to express oneself through speech, but also to the increase in linguistic comprehension capacity that develops increasingly complex with age.

Types of Language Development

Language skills in children encompass various dimensions that develop as they grow, not just speaking skills. Crystal (2010) affirms that the first dimension is a.) Phonology, which is a child's skill in recognizing, distinguishing, and producing language sounds. (phonemic awareness) and training. b.) Morphological, related to the mastery of word forms, including the understanding of suffixes and variations of word forms that function to enrich the structure of language (Saxton, 2017). c.) Synraksis, which refers to the ability to arrange words into regular sentences according to grammatical rules (Otto, 2015). d.) Semantics is related to understanding the meaning of words and sentences, which is shown through vocabulary mastery and the ability to understand messages (Clark, 2022). e.) Pragmatic, which is the skill of using language in a social context appropriately, such as understanding the turn of the speaker, adjusting the language style with the interlocutor, and conveying the intention politely (Astuti & Yafie, 2025)

From these various aspects, it can be understood that children's language skills consist of phonological, morphological, syntactic, semantic, and pragmatic skills that are interrelated. Each aspect has an important role in supporting the effectiveness of communication while providing a foundation for children's cognitive, social, and emotional development.

Literacy

According to the Great Dictionary of the Indonesian Language (KBBI), the meaning of the word literacy is something related to writing and reading. Literacy comes from the root word of the script. The word "Aksara" which means letters, can also be called literacy is writing or reading. Recognizing colors, reading pictures, reading symbols, imitating the initial letters of names, writing letters in their names is the beginning of the introduction of early literacy. Literacy in early childhood is often referred to as early literacy.

One form of language skill is literacy. Early literacy is included in learning in early childhood education. According to Hajaroh and Raudatul (2018) stated, "Early literacy is the basic ability of children to read and write in the recognition of vowels and consonants" while Khasanah (2020) argues that early literacy is an explanation of children's learning ability to learn how to write and read. Actually, the child has been in the process of becoming an asarawan from the age of one to two years, which is a sign of early literacy.

Literacy is the basic key for early childhood to learn to read and write, as well as being a foundation in other academic fields (Listriani & Sumadi, 2021). According to Reghe (2021), reading and writing skills in the early stages are very important basic skills for children in preparing themselves to learn more complex learning activities. Early literacy learning is very important to be carried out as a basic skill possessed by children before entering elementary school.

Based on some of these opinions, it can be concluded that literacy is a person's basic ability to read, write, and understand written information. It's not just about being able to spell or copy words, but more about how a person can really understand what they're reading and be able to convey their ideas through writing. For example, when someone reads instructions for the use of drugs and then understands how to take them, or writes a simple letter to convey a clear message, it is an example of the application of literacy in daily life.

Literacy is like the initial key to opening the door to other knowledge. Without being able to read and write well, a person will have difficulty taking lessons at school, understanding important information, or even simply going about daily affairs that require these basic skills. So, literacy is an important foundation for a person to develop and be empowered in his life

Types of literacy

According to Nur Ilmi Khotimah (2024), literacy is divided into five types, including:

1) Reading Literacy

Reading literacy is the ability to understand and use written forms of language that are needed by society or appreciated by individuals. Young readers can build the meaning of various texts. Examples of pre-reading literacy for early childhood are: (1) Reading books for children every day, (2) Asking questions while reading, (3) Reading anything around us, (4) Playing alphabet magnets/flashcards (reading word cards), (5) Looking at store signboards while on the street.

2) Writing Literacy

Writing is an activity used to express knowledge. However, writing is essentially a person's language skills that aim to pour ideas or ideas into graphic form (Yusuf, 2015: The above understanding can explain that writing literacy Writing is an activity that is used to present is a process that aims to develop children's ability to develop. The development of children's writing skills consists of 6 (six stages), namely (Susanto, 2011:92): 1) Scribble stage: children begin to learn about written language and how to teach this writing, 2) Linear repetition stage: children think that a word refers to something big and has a long rope, 3) Random writing stage: children can already change writing into words that contain messages, 4) In this phase, various words that contain the same noble suffix are presented with words and writing, and 5) The stage of writing short sentences: the sentences that are written and 6) The stage of writing short sentences, sentences written by children in the form of subjects and predicates.

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3) *Listening Literacy*

Listening is an early stage skill that must be mastered in language skills, listening can be interpreted as a way that can be done to obtain information conveyed by a person so that it can be developed in the next stage, namely speaking, reading and writing which will be conveyed to others (Palupi, et al. 2020).

4) *Speaking Literacy*

Speaking is generally defined as a way of conveying intentions (ideas, ideas, thoughts, or hearts) from one person to another, using words as a way of conveying them so that they can be understood by others (Karlina 2018:2). According to Ismaya, Elihami, and Galib (2022), communication skills are also known as Relationship Skills. Relationship Skill or in Indonesian relationship skill is a person's ability to build and maintain relationships that can benefit each other, both individually and in groups. Relationship Skills are not only aimed at adults, but start in Early Childhood. Children in the early age category develop their ability to identify feelings. They also learn how to manage their emotions and behave appropriately

5) *Numeracy Literacy*

Numeracy literacy is a learning activity that involves aspects of knowledge and skills to use various kinds of numbers and symbols related to basic mathematics learning to solve practical problems and various contexts that exist in daily life, in addition to this numeracy literacy is also used to analyze information through various forms of display such as graphs, tables, diagrams, charts and so on to provide a prediction and ways to make decisions (Fiangga et al., 2019:10)

It is concluded that the literacy assessment is very important in arranging the implementation in learning, indicators or assessments will be very important guidelines to determine the implementation and success of a learning. For this reason, prospective researchers take the opinion expressed by the Regulation of the Minister of Education and Culture, Research and Technology Number 4 of 20022.

Picture Storybook

Ngura et al (2020) stated that a picture story book is a book in which a story is written in a light language style, tends to be a conversation style, equipped with pictures which are the unity of the story to convey facts in order to build children's abilities in a sentence.

Picture *books* have two meanings, the meaning in a narrow sense and a broad meaning. In a narrow sense, a picture book is a book that is simply seen as a picture book format, which means books in which there are pictures. Meanwhile, in a broad sense, picture books have the scope of various types of books such as *picture story books*, *informational books*, *concept books*, *counting books*, and others. Picture books are used as reading for children and adults (Nurgiantoro, 2018)

Menurt Huck (Nurgiantoro, 2018), picture story books carry the meaning of books that convey messages in two ways, namely by using pictures and writing. Drawings (illustrations) and writing in picture storybooks are not something that stands alone, but rather complement

and support each other to express the message. This is in line with Alfiatul & Kurniawan (in Melina et., al 2023:11) who argue that a picture story book is a book that can convey a message in two ways, namely through narrative and illustration as a complementary unit, and has a light language style. Children's storybooks that are equipped with pictures that match the topic of the story can be used as a learning medium.

Gita & Dewa (2020) also stated that a picture story book is a story reading book for children that contains illustrations and narrative texts. Draw here to embellish the book and to reinforce the story in the book. Picture storybooks are used to convey messages through two events, namely through illustrations and writing, this is shown to children at an early age to an older age.

Picture storybooks are one of the uses of media as a tool in learning with the classification of Edgar and Dale. The classification is known as a cone. Dale's cone of experience is the most widely used description as a reference or media in the learning process. Picture storybooks are developed into learning media that help children understand and change their behavior. Based on government regulation No. 19 of 2005 concerning national education standards, article 19 paragraph 15 states that the learning process in educational units is held interactively, inspiring, fun, challenging, motivating students to participate actively and providing sufficient space for crafts, creativity and independence in accordance with the talents, interests and physical and psychological development of Natalia & Liyanovitasari students (in Mas Intan 2020:63)

According to Nurgiyantoro (in Masruro & Ramiati 2022:10) with the pictures of interesting stories presented, children will read with earnestness following and trying to understand the flow of the action images they see, and it is possible to do it many times. The images of the story are one of the driving forces for developing fantasy through imagination and logic.

Rothlein (in Nurasita 2021:59) argues that there are several criteria for a good book., Anggara et., al (in Nursita 2021; 21) also states that a good storybook includes: (1) the content and theme of the story provides learning on moral values related to daily activities., (2) a storybook presents interesting images and colors and only a little writing., (3) Story books are able to develop a child's imagination and creativity., (4) Story books provide a clear moral message that can be understood by children, and., (5) Storytelling that provokes curiosity in children.

Supriyadi & Nurhasanah (2022) argue that culture-based learning is important to instill the value of the nation's character through learning activities in PAUD. In addition, Mahmudah (2021) emphasized that folklore visualized in the form of picture storybooks is effective in internalizing local cultural values to children. Thus, picture storybooks not only support the development of children's language, vocabulary, and concentration, but also strengthen cultural identity and foster a sense of pride in their own culture. Picture story books can be used as a means of culture-based learning in early childhood. (Ismawati, 2023; Annas, 2024; Annisa, 2025)

Research Method

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This study uses a quantitative approach to determine the effect of the use of picture storybooks on literacy in early childhood. This type of research uses pre-experimental design. According to (Rukminingsih, Adnan, 2020) Pre-experimental research design is experimental research involving one group and there is no comparison group (control group).

The research design used is Pre Experimental in the form of One Group Pretest-Posstest Design. One Group Pretest-Posstest Design is a design that is applied to only one group by giving a pretest and then observing the effect/posstest. According to (Sugiyono, 2011: 74). This design can be described as follows.

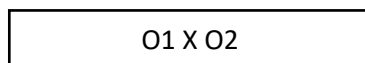


Figure 3. 1 *One Group Pretest-Posttest design*

Source: (Sugiyono, 2011)

Description:

X : *Treatment* given (Use of picture storybooks)

O1 : *pretest* experimental group

O2 : *Posttest* group experiment (After treatment)

The effect of treatment on this design is (O1-O2) (Sugiyono, 2011:75). The thing that was tested was the difference between O2 and O1. If there is a difference where O2 is greater than O1, then the hype storybook has a positive effect on the literacy of children aged 5-6 years, and if O2 is smaller than O1, it has a negative effect (Sugiyono, 2009:223). Variable X (picture storybook) applies as a treatment. The above illustration explains the absence of a random system because subjects have formed in a group naturally. This group was taken in its entirety. This study consisted of only one group that was given *treatment*.

Research Procedure

Preparation Stage

The steps are carried out in the preparatory stage, namely:

- 1) Conduct initial observations and consult with the school, especially the principal and homeroom teachers concerned to obtain permission to conduct research.
- 2) Determine the class to be used as the subject of research
- 3) Compiling research instruments in the form of oral tests

Implementation Stage

The steps used in the implementation stage are:

- 1) Provide a *pretest* to the class that is used as a sample.
- 2) Provide *treatment* (X) with the use of picture storybooks in learning.
- 3) Giving a *posttest* to the class that is used as a sample to find out how the use of picture storybooks influences.

Final Stage

The final stage includes activities to process research data results. The data obtained were analyzed to answer the hypothesis whether there is an effect of the use of Picture Storybooks on Literacy in Early Childhood .

Data Collection Techniques

Observations

Observation sheets are used to collect data that is carried out by conducting observations in the field of the object being studied. Through this observation activity, observers can observe the ongoing learning process using observation sheets that have been made by prospective researchers and observers observe the implementation of learning using picture storybooks. This technique is carried out by prospective researchers in order to obtain data about the learning situation and process.

Tests

According to Masyhud (2014:215), tests are a series of questions or exercises used to measure individual potential, for example related to learning outcomes, IQ, talents, interests, personality, and other potentials. This method is carried out because as a way to find out whether or not there is an influence of picture storybook media on children's literacy, a measuring tool in the form of a test is needed. The test used in this study was designed by itself and adjusted to literacy skills.

The test is designed in two stages, the first pretest stage after which it is posttested. The test used by the researcher was an oral test made by himself based on the learning outcomes taught in the B1 group.

Documentation

Documentation is a data collection technique to search for data, this technique is used to obtain documentation data in the form of the names of B1 group students, pictures of student activities, and picture storybook displays.

Data Analysis Techniques

The data analysis technique used in this study is descriptive statistical analysis, Inferential Statistical Test (*Wicoxon Signed rank test*).

Descriptive Analysis

Descriptive analysis is statistical analysis used to analyze data by describing or describing the data that has been collected. The data analyzed descriptively are data from observations of the implementation of learning in children as well as the results of pretest and posttest.

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Inferential Statistical Test (Wilcoxon Signed rank test)

The Wilcoxon Signed Rank Test is used to find out whether or not there is a significant difference between the score before and after the book of illustrated stories. This test is an alternative to the paired sample t-test which is used when the data is not normally distributed, making it more suitable for data that does not meet parametric assumptions. In this study, the selection of the Wilcoxon test was carried out based on the results of the normality test which showed that one of the pretest or posttest data was not normally distributed. The basis for decision-making in this test is the p-value, where the p-value ≤ 0.05 indicates a significant difference between the score before and after the treatment, while the p-value > 0.05 indicates that there is no significant difference. Thus, the Wilcoxon Signed Rank Test serves to determine whether the use of picture storybooks has a real influence on improving children's literacy skills.

Hypothesis Test

The hypothesis test in this study was carried out by means of a pair t-test to find out whether or not the use of picture storybooks has an effect on Literacy in early childhood. This hypothesis test was carried out using the Statistical Package for Social Science (SPSS) Version 23 program

Results

The results of this study explain the findings obtained through the process of collecting and analyzing data carried out in accordance with the research objectives. The presentation of results is systematically arranged based on the stages of analysis, including descriptive and inferential analysis, so as to provide a complete picture of the characteristics of the data and hypothesis testing. The full description of the research results is presented in the following section.

Descriptive Analysis

Early childhood literacy ability data was obtained through direct observation conducted by researchers during learning activities. Observations were carried out twice, namely during *the pretest* and *posttest*. *The pretest* is given to children before the implementation of learning using picture reading books to find out the child's initial abilities, while *the posttest* is given after learning using picture reading books. The description of the results of observation of children's literacy ability based on *the results of the pretest* and *posttest* is presented in the following section.

Table 4. 1 Descriptive Analysis

Item	<i>Pretest</i>	<i>Posttest</i>
Number of Samples	27	27
Average	40,37	63,48
Median	41	64
Mode	40	65
Standard deviation	8,4	5,3

Lowest value	35	55
Highest score	47	74

Based on Table 4.1, the results of the descriptive analysis on *the pretest* and *posttest* scores showed that there was a change in the literacy ability of children aged 5-6 years between *the pretest* and *posttest conditions*. The number of samples in both measurements remained the same, namely 27 children. In the *pretest* stage, an average score of 40.37 was obtained with a median value of 41 and a mode of 40, which shows that the data tends to be centered on these values. After being treated with picture storybooks, the average score on *the posttest* increased to 63.48, with a median of 64 and a mode of 45, indicating an improvement in the literacy ability of children aged 5–6 years after the intervention. The standard deviation at *the pretest* was 8.4 and decreased slightly at *the posttest* to 5.3, indicating that the variation in data after treatment was relatively more homogeneous. Meanwhile, the lowest score remained at 35 in the *pretest* and *posttest* of 55, while the highest score was at 47 in the *pretest* and 74 in the *posttest*. In general, the results of this descriptive analysis indicate an increase in the average literacy of children aged 5–6 years, although this increase is still descriptive and requires inferential testing to determine its statistical significance.

Descriptive analysis was continued to look for the *value of Normalized Gain* or N-Gain, which is the value of the difference between *the pretest* and *the posttest* that has been normalized. The results of N-Gain can describe the development of children's literacy from research conducted using picture storybooks. The results of the N-Gain analysis are as follows.

Table 4. 2 Analysis Results *Normalized Gain*

Categories	Criteria	Quantity
Low	N-Gain < 0.30	2
Medium	$0.30 \leq 0.70$	25
Height	N-Gain ≥ 0.70	0

Based on Table 4.2, the results of the *Normalized Gain* (N-Gain) analysis show that most of the children are in the medium category, which is as many as 25 children. A total of 2 children were in the low category, and none of the children were in the high category. These findings show that the improvement in children's abilities is at a moderate level, without a very high increase.

Inferential Analysis

Inferential analysis is carried out to test the research hypothesis. The inferential analysis carried out in this study includes: 1) test of normality assumptions; 2) *Wilcoxon Signed Rank Test* test to determine significant differences in children's literacy development before and after using picture storybooks in children in Group B of Kindergarten Inferential analysis in this study was carried out using the help of R Studio software. The results of the inferential analysis can be seen in the following discussion.

Test of Normality Assumptions

The normality assumption test is used to ensure that the distribution form of the research data is normally distributed. The test used is the *Shapiro-Wilk test* which is an accurate

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normality test approach with a small sample count. The results of the normality test that will be used as a condition for assumptions on the research hypothesis can be seen in Table 4.3 below.

Table 4.3 Pretest and Posttest Data Normality Test

Categories	<i>Shapiro-Wilk Normality Test</i>
Pretest	1,799e-08
Posttest	0,1047

Based on the results of *the Shapiro–Wilk* normality test shown in Table 4.3, it is known that the data on children's literacy at the pretest stage has a significance value of 1.799e-08, which is below $\alpha = 0.05$. This indicates that *the pretest* data is not normally distributed. Meanwhile, at the *posttest* stage, the significance value was 0.1047, which is greater than $\alpha = 0.05$, so it can be concluded that *the posttest* data is normally distributed. Thus, the assumption of normality is not fulfilled in *the pretest* data, but is fulfilled in the *posttest* data. These conditions indicate that follow-up analysis for *pretest* data should use a nonparametric approach that does not require a normal distribution.

Wilcoxon Signed Rank Test

The test used to determine the significance of the difference between the score before and after treatment on paired data is usually the *Paired Sample t-test*. However, in this study, an alternative test, namely *the Wilcoxon Signed Rank Test*, was used, because the assumption of normality in one of the variables was not met. The *Wilcoxon* test was used to determine whether there were significant changes in children's literacy skills before and after the implementation of learning using picture storybooks.

Table 4.4 Test *Wilcoxon Signed Rank Test*

	V	<i>p-value</i>	Conclusion
<i>Pretest-posttest</i>	0	5,789e-6	Reject H_0

Based on Table 4.4, the results of the analysis using *the Wilcoxon Signed Rank Test* obtained a value of $V = 0$ with a $p\text{-value} = 5,789 \times 10^{-6}$, which is far below the significance level of $\alpha = 0.05$. Thus, the decision taken is to reject H_0 .

These findings show that there is a significant difference between *pretest* and *posttest* scores, so it can be concluded that there is an improvement in children's literacy skills after the treatment is given. These results indicate that the learning process using picture reading books has a positive effect on improving the literacy skills of children aged 5–6 years.

Hypothesis Test

Statistical Hypothesis tests are carried out to answer the hypotheses of the research contained in the research. The results of the hypothesis test can be seen in the following discussion.

$$H_0: \mu_{Pretest} = \mu_{Posttest} \text{ Opponent } H_1: \mu_{Pretest} \neq \mu_{Posttest}$$

H0 : There is no effect of the use of picture storybooks on literacy in children aged 5-6 years in Kindergarten Negeri Pembina Pangkep.

H1 : There is an effect of the use of picture storybooks on literacy in children aged 5-6 years in Pembina Pangkep State Kindergarten.

Based on the results of *the Wilcoxon Signed Rank test* that has been carried out from *pretest* and *posttest* data on children aged 5-6 years consisting of 27 children, it was found that the *p-value* was 5.789e-6 which is much smaller than the significance level of $\alpha = 0.05$. Based on these results, it can be concluded that H0 is rejected, or it can be said that there is a significant difference in the development of literacy of children aged 5–6 years after being given a picture reading book.

Discussion

This research was carried out in kindergarten by involving children aged 5-6 years as research subjects. The research design used is *pre-experimental (one group pretest–posttest design)*, which is research that only involves one group without a comparison group. The main purpose of this study is to find out whether the use of picture storybooks **can affect the** literacy ability of children aged 5–6 years.

Based on the results of the study, a number of findings were obtained that reflected changes in children's literacy skills after being treated in the form of the use of picture storybooks in learning activities. The results of the descriptive analysis showed an increase in scores from the *pretest* stage to *the posttest*. The average score that was originally at **40.37** increased to **63.48** in the *posttest*. The median and mode also increased, indicating a shift in data concentration towards higher values. The decrease in the standard deviation from **8.4** to **5.3** gives an idea that the variation in scores between children after treatment becomes more homogeneous. The *box-plot visualization* also showed a shift in the distribution of scores to a higher direction in the *posttest* compared to *the pretest*, which further corroborated the finding that there was an increase in literacy skills after the application of picture storybook media.

Normalized Gain (N–Gain) analysis showed that most of the children were in the **medium** category of 25 children, and two children were in the **low** category, while none of the children were in the high category. These results provide an idea that the improvement of literacy tends to occur at a moderate level, which indicates that the use of picture storybooks has a positive effect although not at a very high level. These findings are consistent with the characteristics of preexperimental design which generally provide a moderate improvement due to the absence of a comparison group to distinguish the effects of treatment from external factors.

Furthermore, an inferential analysis was conducted to strengthen the descriptive findings. The *Shapiro–Wilk* normality test showed that the *pretest* data was not normally distributed with a *P-value* of 1.799e-08, while the *posttest* data was normally distributed with a *P-value* of 0.1047. Because one of the data did not meet the assumption of normality, the ***Wilcoxon Signed Rank Test was used*** as an alternative to the parametric Paired Sample t-test.

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The results of the Wilcoxon test showed a **value of $V = 0$** with a ***p-value* = 5.789e-6**, which is far below the significance level of $\alpha = 0.05$. These findings show that there is a **significant difference** between *pretest* and *posttest* scores, so it can be concluded that the use of picture storybooks significantly improves the literacy skills of children aged 5–6 years.

The results of this study are in line with various previous studies that emphasize that picture storybooks are an effective medium in stimulating reading interest, understanding symbols, vocabulary recognition, and early childhood verbal skills. Visual illustrations in picture storybooks play a role in helping children understand the content of the story more easily, while improving the ability to recognize letters, words, and meanings contextually.

Thus, the results of this study not only strengthen existing theories, but also provide empirical evidence that the use of picture storybooks can be an effective learning strategy in improving children's literacy.

Overall, the findings of this study confirm that interventions in the form of the use of picture storybooks have a **positive and significant influence** on improving the literacy skills of children aged 5–6 years. These results show that story-based visual media can be optimized as a tool in the language learning process in early childhood education. This research also provides a practical contribution for teachers and early childhood education institutions to consider the use of picture book media as a variation of learning strategies that can improve children's early literacy as a whole.

Conclusion

Based on the results of research conducted in early childhood, the conclusions of this study are as follows; first, based on the results of the N-Gain analysis, the literacy ability of early childhood after using picture storybooks increased in the medium category with a total of 25 people, showing moderate development and only 2 children were in the low category. These findings suggest that the use of picture storybooks is effective in improving literacy skills, although the increase has not yet reached the high category., second, The results of the Wilcoxon Signed Rank Test showed a value of $V = 0$ with a *p-value* of $5,789 \times 10^{-6}$, which is well below 0.05. Thus, it can be concluded that the use of picture storybooks has a positive and significant effect on improving early childhood literacy skills.

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