

## The Use of Storybooks with Science Pillars to Increase Children's Curiosity

**Sulistiyowati<sup>1</sup>, Naning Kurniawati<sup>2</sup>**

<sup>1</sup>RA Fattahul Huda Pungpungan, Indonesia

<sup>2</sup>Universitas Nahdlatul Ulama Sunan Giri, Indonesia

<sup>1</sup>sulisnualma@gmail.com, <sup>2</sup>naningkurniawati@unugiri.ac.id

### ABSTRAK

Penelitian ini bertujuan untuk mendeskripsikan peningkatan rasa ingin tahu anak setelah penerapan buku cerita dengan pilar sains dalam kegiatan pembelajaran di RA Fattahul Huda Pungpungan. Metode yang digunakan adalah deskriptif kualitatif dengan fokus pada perubahan perilaku anak sebelum dan sesudah penggunaan buku cerita berbasis sains. Hasil penelitian menunjukkan bahwa sebelum intervensi, anak cenderung pasif, kurang bertanya, dan belum menunjukkan ketertarikan kuat terhadap kegiatan eksploratif. Setelah penggunaan buku cerita dengan pilar sains, terjadi peningkatan signifikan pada aspek keaktifan bertanya, kemampuan mengamati, kecenderungan eksplorasi mandiri, serta kemampuan menceritakan kembali fenomena sederhana yang terdapat dalam cerita. Stimulus visual dan naratif dalam buku cerita terbukti mampu membangkitkan motivasi belajar dan rasa ingin tahu anak, sehingga mendukung perkembangan literasi sains sejak dini. Temuan ini memperkuat pandangan teori Piaget, Vygotsky, dan Bruner mengenai pentingnya stimulus visual, interaksi sosial, dan pengalaman langsung dalam mengembangkan kemampuan kognitif anak.

### ABSTRACT

This study aims to describe the improvement of children's curiosity after the implementation of science based pillars in learning activities at RA Fattahul Huda Pungpungan. The method used is qualitative descriptive with a focus on changes in children's behavior before and after using science-based storybooks. The findings indicate that before the intervention, children tended to be passive, asked fewer questions, and had not shown a strong interest in exploratory activities. After using storybooks with science pillars, there was a significant increase in aspects such as active questioning, observation skills, tendency for independent exploration, and the ability to retell simple phenomena found in the stories. Visual and narrative stimuli in the storybooks proved capable of stimulating children's learning motivation and curiosity, thus supporting the development of early science literacy. These findings reinforce the views of Piaget, Vygotsky, and Bruner regarding the importance of visual stimuli, social interaction, and direct experience in developing children's cognitive abilities.

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## INTRODUCTION

Early Childhood Education has an important role in shaping the foundation of children's cognitive, social, and emotional development (Annajmi & others, 2024; Tabroni et al., 2022). At the early age stage, children are in an exploratory phase, where curiosity becomes a natural trait that drives them to learn. However, the potential of this curiosity needs to be facilitated through appropriate learning media to develop optimally. One learning medium that is relevant and effective is storybooks containing elements of science (Hardiansyah et al., 2023; Lacandoza et al., 2026). Storybooks designed with a science pillar not only provide information but also offer an enjoyable learning experience (Haber & Kumar, 2025; Wijaya et al., 2025). The use of such media is very suitable for the learning characteristics of young children, which are imaginative, concrete, and visual. Therefore, the development of learning based on science storybooks becomes a strategic effort to stimulate children's curiosity from an early age.

Storybooks with a science focus provide simple yet information-rich narratives, making it possible to connect scientific concepts with children's everyday experiences (Munif, 2025; Sahri et al., 2023; Yu et al., 2026). For example, stories about rain, living beings, celestial objects, or plant growth processes can help children naturally understand natural phenomena. Children are more interested in learning when scientific information is presented in the form of stories because they feel they are enjoying a tale rather than doing heavy "science learning." This is important considering that young children tend to get bored quickly if learning is delivered conventionally. With a storytelling approach, teachers can instill basic scientific concepts without removing the element of enjoyment in learning. Additionally, visualization in illustrated books provides concrete experiences that children greatly need. Therefore, science-based storybooks have great potential to enrich children's learning experiences while also fostering their curiosity about the environment.

At RA Fattahul Huda Pungpungan, science learning is still often conducted in a simple manner, such as observing objects around or introducing concepts through verbal explanations. Although this method is good, it is not yet fully able to capture all children's attention optimally. Some children seem less actively involved when learning is not accompanied by engaging or visual media. On the other hand, teachers face the challenge

of providing creative and innovative learning media, considering the children's characters that are very easily distracted. Therefore, the use of storybooks with science pillars becomes a very relevant alternative for RA Fattahul Huda Pungpungan. The book can help teachers explain simple concepts such as cause and effect, natural changes, and the characteristics of living creatures in a more interesting way. With this media, children can be more focused, enthusiastic, and participate in learning activities.

A child's curiosity is an aspect of cognitive development that must continually be nurtured. Children with high curiosity tend to ask more questions, explore, and try new things. However, in practice, not all children have the courage to express their questions, especially if the learning environment does not stimulate them directly. Through science storybooks, children will discover many interesting phenomena that prompt them to ask questions. When children see pictures of rainbows, clouds, growing flowers, or moving animals, they are encouraged to learn more. Teachers can use this moment as an entry point to encourage simple discussions that build critical thinking skills. Thus, the use of science storybooks is not only a medium for conveying stories but also a driver of curiosity.

In addition to stimulating curiosity, storybooks with a science pillar can also improve the quality of interaction between teachers and children. When a teacher reads a story aloud, children not only listen but also engage emotionally and intellectually. Teachers can ask prompting questions such as "Why did this happen?", "What will happen next?", or "What if...?". These questions help children express their ideas and opinions. At RA Fattahul Huda Pungpungan, an interactive approach is very much needed because some children tend to be passive in the learning process. With storybooks as a medium, teachers can create a more lively and communicative learning atmosphere. This not only increases curiosity but also trains children's language and communication skills.

The visual aspect in science storybooks also plays an important role in attracting children's attention. Colored pictures, character expressions, illustrations of natural phenomena, and other visual elements can enhance children's understanding of the story content. Young children tend to learn through observation, so visual media provide strong stimuli. Science storybooks accompanied by interesting illustrations can make children more focused and sustain their attention longer during reading activities. At RA Fattahul Huda Pungpungan, the use of visual media is very necessary so that learning does not become monotonous. Thus, the use of science storybooks can create a learning experience

that is enjoyable, meaningful, and in accordance with the developmental needs of children.

Based on the description above, the use of storybooks with a science pillar is an important learning innovation to be implemented at RA Fattahul Huda Pungpungan. This medium not only introduces simple scientific concepts but also fosters children's curiosity, increases their engagement, and enriches their learning experiences. Storybook-based learning enables teachers to deliver material creatively and attractively, allowing children to learn in an enjoyable and meaningful way. In addition, integrating scientific elements into stories helps children understand natural phenomena more naturally and contextually. Therefore, this study aims to examine the implementation of science-based storybooks in enhancing the curiosity of early childhood learners at RA Fattahul Huda Pungpungan, as well as to explore how this learning medium contributes to creating a more active, inspiring, and enjoyable learning environment for young children.

## **METHOD**

This research uses a qualitative approach with a field case study design aimed at gaining an in-depth understanding of how the use of science-based storybooks can enhance children's curiosity (Methods, 2021). The research was conducted at RA Fattahul Huda Pungpungan during the 2025/2026 academic year, specifically from January to March 2026. The research subjects included teachers and children aged 5–6 years in Group B, who were directly involved in learning activities using science storybooks. This age group was selected because children at this developmental stage demonstrate increasing curiosity and are actively engaged in exploratory learning activities. Data collection techniques were carried out through participatory observation, in-depth interviews with teachers, and documentation of learning activities. Observation was used to monitor children's responses and engagement during the learning process, while interviews aimed to explore teachers' views regarding the effectiveness of the method.

Data analysis was conducted interactively through the stages of data reduction, data presentation, and drawing conclusions (Majid, 2017). The researcher first organized the data from observations, interviews, and documentation, then grouped the findings relevant to the research focus. Data validity was maintained through source and method triangulation techniques, by comparing data from various informants and different data collection techniques. The results of this analysis are expected to provide a

comprehensive picture of the implementation of using storybooks based on science pillars in enhancing children's curiosity in the RA Fattahul Huda Pungpungan environment.

## **RESULT AND DISCUSSION**

### **RESULT**

#### **The use of storybooks with science pillars is applied in learning activities at RA Fattahul Huda Pungpungan**

The use of storybooks with a science pillar in learning activities at RA Fattahul Huda Pungpungan begins with the process of selecting books that are appropriate for the child's developmental level. Teachers look for books with interesting illustrations, simple plots, and basic science concepts such as nature, animals, plants, or weather phenomena. This selection is very important so that the material remains relevant and easy for young children to understand. Teachers ensure that the story is not only entertaining but also contains educational elements that stimulate curiosity. In the initial preparation stage, teachers read the storyline first to understand which parts can be used as discussion points. In addition, Love-Based Curriculum (KBC) that incorporates the use of the book as the main medium. With careful preparation, teachers can convey the story content more effectively and purposefully.

When the activity began, the teacher invited the children to sit in a circle to create a more intimate and interactive atmosphere. The storybook was held up and shown to all the children while asking stimulating questions such as "Children, do you know why rainbows appear?" or "Why can butterflies change their shape?" These questions serve to activate the children's schemata before the story is read. The children appeared enthusiastic, especially because the book used had colorful illustrations and funny story characters. The teacher then read the story with varied intonation to keep the children focused. In addition to reading, the teacher also clearly showed each picture page to strengthen the children's visual understanding. This activity created an engaging learning atmosphere and increased the children's involvement.

After the story is read, the teacher develops simple discussion activities related to the scientific concepts that appear in the story. For example, if the story discusses plant growth, the teacher asks how a seed turns into a tree. Children are given the opportunity to express their opinions, even if they are still simple. The teacher then clarifies the children's answers with short sentences that are easy to understand. In this process, the

teacher gives praise so that the children feel confident to continue asking questions and answering. Discussion becomes an important part of fostering curiosity, as children feel they have a space to express themselves. Thus, science storybook-based learning is not only a process of reading but also a process of understanding and relating it to real life.

At the exploration stage, the teacher invites the children to engage in follow-up activities that correspond to the content of the story. If the story is about rain, the teacher shows a short video about the water cycle. If the story is about living creatures, the teacher brings examples of plants or small animals such as caterpillars or grasshoppers to be observed. The children appear excited when allowed to directly observe science objects related to the story. These exploration activities help children connect the story with reality, making scientific concepts easier to understand. The teacher also gives the children opportunities to touch, smell, or observe the objects with a magnifying glass. Activities like this are very effective in increasing curiosity because children learn directly and concretely. Through a combination of stories and exploration, learning becomes meaningful and experiential. Based on an interview with the teacher, Miss Firoh, she explained that the use of science storybooks greatly helps the learning process. she conveyed that:

"The children at RA Fattahul Huda really enjoy learning using storybooks, especially if the stories are about nature or animals. They ask more questions and are more curious. Usually, when learning without storybooks, they get bored quickly, but with stories, they can focus longer."

This shows that science-based story media have a significant impact on children's attention and motivation. The teacher also added that stories accompanied by illustrations make science concepts easier to understand. Thus, the use of storybooks is not only enjoyable but also very effective as a learning medium. The teacher also explained that the question-and-answer activities after reading the story are the most important part. According to Mrs. Nurul:

"After I read the story, usually the children immediately raise their hands and ask all sorts of questions, for example why clouds are white or how flowers can bloom. From there I know that their curiosity is beginning to grow."

This activity helps teachers assess the extent to which children understand the content of the story and the science concepts presented. Question and answer sessions also train children's communication skills, which have been a learning target at the RA.

With increased verbal interaction, children become more confident in expressing their opinions. This activity ultimately creates an active and dialogical learning environment. The teacher's role in motivating children's questions is an important factor in the success of the program. From the parents' perspective, an interview with one of the students' parents, Mrs. Musfiroh, also provides a positive picture. She said:

“Since often being read science storybooks at school, my child often talks about nature at home. He asks why it rains, why stars are only visible at night. I am very happy because my child likes to ask questions and wants to know.”

This shows that the impact of using science storybooks is not only felt at school, but also carries over into the home environment. Parents feel helped because it is easier to engage children in discussions about everyday phenomena. This interaction strengthens the learning relationship between school and family. Therefore, this method is not only effective in the classroom, but also supports children's development at home.

To strengthen children's understanding, the teacher also creates follow-up activities such as drawing or coloring according to the story's content. Children are asked to draw rain, growing plants, or animals that appear in the story. This activity serves as a visual reflection of what they have learned. Through drawing activities, the teacher can assess the extent of children's understanding of the science material presented. In addition, this activity also trains children's fine motor skills. The teacher gives praise for each work to keep children motivated. Follow-up activities like this help deepen the mastery of science concepts previously introduced through stories.

At the end of the activity, the teacher conducted a simple evaluation through reflective questions. The teacher asked again about the concepts that had been discussed, such as what causes rain or how plants can grow. Children who were initially passive began to be brave enough to answer after getting used to this method. The teacher assessed that delivering material through storybooks made evaluation easier because the children truly understood the content of the lesson. Informal evaluations like this are considered more effective than written tests in early childhood education. In addition, the teacher can identify which parts still need to be reinforced. Thus, the learning cycle becomes more structured and meaningful.



Picture 1 Storybook Pillar

The use of storybooks with a science pillar at RA Fattahul Huda Pungpungan has been proven to improve the quality of learning and children's curiosity. Learning becomes more interesting, interactive, and aligned with the characteristics of early childhood. Teachers can convey science concepts more easily because the stories provide a concrete and enjoyable context. Meanwhile, parents observe positive changes in their children regarding their questioning abilities and environmental awareness. This method also strengthens collaboration between the school and families in fostering children's interest in learning. With these various benefits, the use of science storybooks is highly relevant to continue developing at RA Fattahul Huda Pungpungan. This approach becomes one of the effective strategies to enhance children's curiosity and critical thinking skills.

### **The level of children's curiosity before the implementation of storybooks with science pillars at RA Fattahul Huda Pungpungan**

Before using storybooks with a science pillar, the level of curiosity in children at RA Fattahul Huda Pungpungan was still considered low and had not developed optimally. In daily learning activities, children tend to wait for instructions from the teacher without showing initiative to ask questions. This is evident when the teacher introduces a new topic; many children only listen without asking follow-up questions. Children are not yet accustomed to expressing their curiosity, either through questions or exploratory actions. One of the causes is that learning is still conventional and has not utilized engaging media. This condition makes children passive and less motivated to develop their curiosity. Therefore, teachers feel the need for new media that can stimulate children's activeness.

Children's behavior that shows a lack of curiosity is evident from their minimal involvement during observation activities. When the teacher asks the children to pay



attention to plants, animals, or objects around them, only a few children respond. Most just glance briefly without showing signs of wanting to know more. They rarely ask questions like "Why does this happen?" or "How is this process?" In fact, questions like these are early indicators of curiosity. The teacher found that learning activities that are not accompanied by supporting media often cause children to lose focus. This situation has become an important concern in the learning planning process at RA Fattahul Huda Pungpungan.

In storytelling activities before the existence of science storybooks, the stories used by teachers mostly contained moral elements or fables. These stories were good from the perspective of character education, but they lacked scientific stimuli that could foster curiosity. Children listened to the stories merely as entertainment, not as a means of exploring knowledge. They enjoyed the pictures and characters, but were not prompted to ask questions about natural phenomena or scientific processes. Teachers realized that the lack of scientific elements in the stories made children less driven to find out the causes and effects of events. As a result, learning had not fully trained children's critical thinking skills. This limitation of the media is one of the reasons for the low level of curiosity in children. Based on interviews with the teacher, Mrs. Siti Fathonah, the condition of children's curiosity before using science storybooks was indeed quite concerning. She conveyed:

"The children are actually smart and active, but before there were interesting media, they rarely asked questions. When I explained about nature, they often just nodded without showing further interest."

The teacher also added that children quickly get bored if learning is only in the form of explanations without visual media. This affects the low engagement of children during learning activities. According to him, children need strong stimuli to make them curious and ask questions. From the interview, it can be concluded that the learning media at that time was not yet able to optimally stimulate children's curiosity.

Children's involvement in discussions was also very limited before the implementation of storybooks with a science pillar. During question-and-answer sessions, teachers often had to prompt children with questions to get them to speak. However, only one or two children dared to respond, while the others preferred to remain silent. This indicates that the learning activities had not provided enough space to practice children's questioning skills. Children were not yet accustomed to seeing natural

phenomena as something interesting to explore. In addition, the learning had not involved exploratory activities that could stimulate their curiosity. As a result, teachers felt that children needed more stimulating learning media. An interview with one of the students' parents, Mrs. Fathonah, also reinforced the image of children's low curiosity before the use of science storybooks. She said:

“In the past, my child rarely talked about what was learned when coming home from school. When I asked something about nature, he only gave short answers. It was as if he was not interested in knowing more.”

Parents feel that their child's learning atmosphere at home is not greatly influenced by school learning. The child has not developed the habit of asking about simple phenomena such as rain, wind, or plants. This acknowledgment shows that previous learning has not been able to encourage the child to explore knowledge independently.

The lack of learning media that are visual and contextual is the main factor in the low curiosity of children. Repetitive learning makes children lack new and interesting learning experiences. Teachers realize that early childhood is more interested in things that provide visual stimulation, lively stories, and hands-on activities. Without appropriate media, children find it difficult to perceive the connection between learning and everyday life. When children do not find that relevance, they become less interested in asking questions. Non-varied learning also lowers children's motivation in participating in activities. This condition leads teachers to start looking for new media that are more suitable for children's learning characteristics. Table 1 shows the students' conditions:

| No | Indikator Rasa Ingin Tahu                        | Description of Condition Before Implementing the Science Storybook                                                              | Category |
|----|--------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|----------|
| 1  | The child asks questions related to learning     | The child rarely asks questions, waits for the teacher's instructions, and is often silent during question-and-answer sessions. | Low      |
| 2  | The child asks questions related to learning     | The child pays little attention during observation activities and does not show further interest.                               | Low      |
| 3  | The child is actively involved in the discussion | Only 1–2 children dare to respond, the majority are passive and do not participate.                                             | Low      |

| No | Indikator Rasa Ingin Tahu                        | Description of Condition Before Implementing the Science Storybook                                     | Category   |
|----|--------------------------------------------------|--------------------------------------------------------------------------------------------------------|------------|
| 4  | The child tries to explore objects or activities | The child only glanced without trying to touch, observe, or ask further.                               | Low        |
| 5  | The child retells learning experiences           | Children rarely tell their teachers or parents what they have learned.                                 | Low        |
| 6  | Children's response when the teacher uses media  | Children easily get bored if learning is without visual media, losing focus after a few minutes.       | Medium-Low |
| 7  | The ability to connect stories with real life    | The child is not yet able to relate the teacher's story or explanation to the surrounding environment. | Low        |
| 8  | The child's courage to express opinions          | The child seems hesitant to express ideas, mostly just following friends.                              | Low        |

Based on all these findings, it can be concluded that before the implementation of storybooks with a science pillar, the level of curiosity in children at RA Fattahul Huda Pungpungan was still low and required intervention. Children showed little desire to ask questions, explore, or understand the phenomena around them. The learning media used at that time were not yet effective in stimulating curiosity. Both teachers and parents observed that children needed a more engaging and meaningful learning method. Therefore, the use of science-based storybooks emerged as an appropriate solution to increase children's learning motivation. With this approach, teachers hope to nurture the natural curiosity that every child possesses. This condition prompted the implementation of storybooks with a science pillar as an innovative learning method at RA Fattahul Huda Pungpungan.

### **Increase in children's curiosity after using storybooks with science pillars in learning activities**

The increase in children's curiosity after using storybooks with a science pillar was very significant for almost all students at RA Fattahul Huda Pungpungan. Before using this media, many children tended to be passive in asking questions, but afterward, they began to show courage in expressing questions spontaneously. Science storybooks that include everyday phenomena such as color changes, water movement, or light make it easier for children to understand simple concepts. The presentation of an interesting storyline makes children feel emotionally involved, thereby increasing their desire to know more. Teachers also noted that reading activities no longer run in a one-way manner but develop into active interactions between teachers and children. Children seemed to compete to

answer questions and express their opinions about the story's content. This shows that science-based storybooks are an effective stimulus in sparking children's curiosity. Thus, the use of storybooks is not only entertaining but also deeply educational.

Changes in children's behavior during exploration activities also showed a notable increase. After the teacher introduced several simple experiments related to the book's content, the children began to try doing the activities independently. They appeared enthusiastic to mix colors, blow up balloons, or observe changes in the shape of objects when given certain treatments. Activities that were previously considered difficult or frightening instead became interesting experiences for the children. The teacher noted that the children's interest in making observations increased to almost twice as much compared to before using the storybook. The children also demonstrated the ability to compare objects or phenomena based on what they saw in the story. This situation reflects that active involvement in science allows children to understand concepts more concretely. Learning also becomes more meaningful because children learn through direct experiences connected to the story.

Enthusiasm in participating in science-based pillar learning also appears to have increased very rapidly. Whereas previously some children seemed to get bored easily or had difficulty focusing, they are now better able to maintain attention during activities. Teachers stated that the classroom atmosphere has become much livelier because children actively respond when asked questions. Stories combined with engaging visuals prompt children to observe every detail. This strengthens attention and focus because children find the activities enjoyable. Every story learning session is now eagerly awaited by the children as it is considered a moment of exploration full of surprises. They often even ask what activity will be done next. This situation shows that increased curiosity has a positive impact on overall learning motivation.

Children's ability to connect the content of stories with scientific phenomena also experiences significant development. After reading a story, some children are able to retell the plot while explaining parts that contain scientific elements. For example, when the story is about a rainbow, children are able to mention that light can 'break' into many colors. Teachers consider this ability as one of the indicators of curiosity that develops through critical and analytical thinking processes. Children do not just receive information passively, but strive to understand and relate it to their experiences. Often, children retell to friends or parents about scientific things they have just learned. This

activity shows that children understand concepts not only on the surface but in a broader context. Thus, the use of science pillar storybooks helps strengthen children's knowledge transfer ability.

The increase in curiosity is also evident from the communication patterns between children and teachers during the learning process. Children begin to ask follow-up questions such as “why can it change color?”, “how can water move?”, or “how can it fly?”. These questions indicate that their curiosity has developed naturally. Teachers feel that such interactions are very helpful in building a more meaningful learning relationship. Children are no longer shy to speak because they feel they have new experiences and knowledge they want to share. In addition, small group discussion activities also become more lively because children actively exchange opinions with their peers. Teachers state that this development also enhances children's language and social skills. With the increase in questions and discussions, children's curiosity becomes more organized and directed.

The increase is also seen in children's courage to try new things, which is part of the expression of curiosity. Some children who previously tended to hesitate or were afraid to touch experimental tools now show higher courage. They voluntarily try stirring colors, blowing bubbles, or dripping water on various objects. These activities provide exploratory experiences that satisfy their curiosity. Teachers also note that children appear more confident when asked to demonstrate something in front of the class. Hands-on activities integrated with stories make children feel safe and comfortable to experiment. This serves as evidence that science pillar storybooks can create a learning environment that is not only engaging but also empowering. With this increased courage, children are more prepared to face various forms of subsequent learning. The results of using the storybook pillars are shown in the table below:

| No | Indicators of Curiosity                              | Before<br>(Number of<br>Children) | Before<br>(%) | After<br>(Number of<br>Children) | After<br>(%) | Increase<br>(%) |
|----|------------------------------------------------------|-----------------------------------|---------------|----------------------------------|--------------|-----------------|
| 1  | The child actively asks questions                    | 9                                 | 30%           | 26                               | 86.7%        | <b>+56.7%</b>   |
| 2  | The child engages in independent exploration         | 8                                 | 26.7%         | 27                               | 90%          | <b>+63.3%</b>   |
| 3  | The child shows enthusiasm during science activities | 10                                | 33.3%         | 28                               | 93.3%        | <b>+60%</b>     |

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|----|------------------------------------------------------------------------|-----------------------------------|---------------|----------------------------------|--------------|-----------------|
| 4  | The child is able to retell the story content with scientific elements | 7                                 | 23.3%         | 25                               | 83.3%        | <b>+60%</b>     |
| 5  | The child conducts more detailed observations                          | 9                                 | 30%           | 27                               | 90%          | <b>+60%</b>     |
| 6  | The child shows a desire to try new things                             | 8                                 | 26.7%         | 26                               | 86.7%        | <b>+60%</b>     |
| 7  | The child shows a spontaneous expression of curiosity (wow, why, how)  | 12                                | 40%           | 29                               | 96.7%        | <b>+56.7%</b>   |
| 8  | The child is discussing with a friend about a science story            | 6                                 | 20%           | 24                               | 80%          | <b>+60%</b>     |

The increase in curiosity after using storybooks based on science pillars has a significant impact on children's cognitive, social, and emotional development. Learning at RA Fattahul Huda Punggungan appears more dynamic and exploration-oriented. Children not only learn to read but also learn to understand phenomena through stories and direct experiments. Teachers feel that the classroom atmosphere becomes more productive and full of positive interactions. Parents also report that children often talk about science activities at home, indicating a transfer of interest from school to the family environment. This change signifies that children's curiosity has developed into a daily thinking habit. Thus, the use of storybooks with science pillars not only increases learning interest but also plays a role in shaping children's characters to be critical, active, and enthusiastic learners.

## Discussion

The increase in children's curiosity after using storybooks with a science pillar is very evident in every learning activity. Children become more active in observing various phenomena that appear in the stories and show interest in simple explanations about nature. This aligns with Piaget's view that young children have a natural tendency to explore, and this tendency develops rapidly when given appropriate visual and narrative stimuli (Guadalupe & Meryan, 2025). Science storybooks provide concrete illustrations that help children connect abstract concepts with everyday experiences. Thus, curiosity increases because children feel the material they learn is close to their real world. In

addition, stories that are structured sequentially allow children to follow basic scientific reasoning. This development shows that science literacy through storybooks can cultivate stronger learning motivation.

Children begin to show improvement in the aspect of asking questions more spontaneously and relevantly. If previously the child's questions were random and unfocused, they now ask questions related to the phenomena presented in the story. According to Vygotsky's theory, children's language development and thinking abilities progress rapidly when they are given stimuli that encourage the internalization of concepts. Science storybooks act as cognitive triggers that spark curiosity through cognitive conflict, which occurs when children encounter something new that they have not yet understood. The questions that arise indicate that children are trying to connect new experiences with the knowledge they already have. This process confirms that the use of storybooks can enhance children's basic inquiry skills. The improvement in questioning ability also shows that children are beginning to actively engage in the process of knowledge construction.

In addition to an increase in questioning activity, children show a higher interest in conducting independent exploration. This is evident from their desire to try simple experiments or activities inspired by the science stories they read. According to Bruner, story-based stimulation helps children move from the stage of iconic representation to enactive representation, which is when children want to practice what they have understood. Activities such as mixing colors, observing shadows, or noticing changes in objects become more appealing than before. Storybooks provide an initial illustration so that children have visual cues about what they want to explore. Thus, curiosity increases along with the growing motivation to conduct their own experiments. This process makes learning more meaningful and deeper for children.

The child's ability to make observations also improves after using storybooks with a science pillar. Children become more meticulous in paying attention to picture details and connecting them with real-life phenomena. According to cognitive development theory, strong visual stimulation can enhance observational skills and activate the process of mental elaboration. When stories feature certain objects or events, children are prompted to compare them with the reality they see around them. Children begin to notice small changes such as differences in color, movement, shape, or pattern. This improvement in observation skills is a sign that curiosity has developed cognitively, not

just emotionally. Thus, storybooks help children improve the quality of attention and accuracy in observing. This aspect is very important because it forms the basis of scientific thinking ability.

The child's ability to make observations also improves after using storybooks with a science pillar. Children become more meticulous in paying attention to picture details and connecting them with real-life phenomena. According to cognitive development theory, strong visual stimulation can enhance observational skills and activate the process of mental elaboration. When stories feature certain objects or events, children are prompted to compare them with the reality they see around them. Children begin to notice small changes such as differences in color, movement, shape, or pattern. This improvement in observation skills is a sign that curiosity has developed cognitively, not just emotionally. Thus, storybooks help children improve the quality of attention and accuracy in observing. This aspect is very important because it forms the basis of scientific thinking ability.

Interactions among children in learning activities also increased, indicating the development of greater curiosity. Children more frequently discuss with friends about the content of stories, simple phenomena, or things they discover during activities. According to social interactionism theory, knowledge develops more optimally when there is an exchange of ideas between individuals. Storybooks act as a trigger medium that encourages children to exchange opinions naturally. The discussions that occur allow children to confirm their understanding while also stimulating new questions. The question-and-answer process among children also shows that curiosity does not stop at one point but continues to develop along with social interaction. This condition indicates that storybooks play a role in creating an active and participative learning environment.

The increase in curiosity after the use of storybooks with science pillars demonstrates the success of a planned learning strategy. Storybooks become an effective medium because they combine visuals, narrative, and simple scientific elements that are acceptable to early childhood. Piaget, Vygotsky, and Bruner's theories provide a strong foundation that children's cognitive development improves when they are actively involved in the exploration process (Qizi, 2025). Through activities such as reading stories, discussions, and simple practices, children gain meaningful learning experiences. This increased curiosity becomes an important foundation for the development of children's critical thinking and science literacy skills. Thus, the use of storybooks based



on science pillars is a relevant learning innovation that can be sustainably applied at RA Fattahul Huda Pungpungan. This approach not only supports cognitive development but also enriches children's learning experiences comprehensively.

## CONCLUSION

The use of storybooks with a science pillar has been proven to significantly increase children's curiosity in learning activities at RA Fattahul Huda Pungpungan. Before the intervention, most children showed low engagement, were less active in asking questions, and did not yet have a strong drive for exploration. After the implementation of science-based storybooks, children became more active in asking questions, made more careful observations, and showed a desire to try activities related to natural phenomena. Storybooks that combine attractive illustrations with simple explanations of scientific concepts successfully stimulated learning motivation and basic inquiry skills in children. This improvement aligns with Piaget's theory of cognitive development, Vygotsky's social constructivist theory, and Bruner's learning theory, which emphasize the importance of visual stimuli, narratives, and hands-on experiences in supporting the development of curiosity.

## REFERENCES

- Annajmi, K. A., & others. (2024). How Primary Education Shapes the Cognitive and Social Development of Children. *Madrasatuna*, 4(2).
- Guadalupe, G. H. S., & Meryan, O. V. M. (2025). Teoria de la Mente por Jean Piaget (Theory of Mind by Jean Piaget). *Revista Veritas de Difusão Científica*, 6(2), 2185–2194. <https://doi.org/https://doi.org/10.61616/rvdc.v6i2.742>
- Haber, A. S., & Kumar, S. C. (2025). Reimagining Science Learning in Early Childhood Through Storybook Reading. *Education Sciences*, 15(10), 1361. <https://doi.org/https://doi.org/10.3390/educsci15101361>
- Hardiansyah, F., Zainuddin, Z., Sukitman, T., & Astutik, C. (2023). Development of learning media smart book to improve understanding of elementary school students in science learning. *Lentera Pendidikan: Jurnal Ilmu Tarbiyah Dan Keguruan*, 26(1), 72–87. <https://doi.org/10.29303/jppipa.v11i12.13963>
- Lacandoza, M. J. B., Apuya, A. A., & Juliano, M. D. (2026). The Effectiveness of Science Theme-Digital Storybooks in Physics Concepts. *Gabaldon International Journal of Educational Methodology*, 22–29.

- Majid, A. (2017). *Analisis Data Penelitian Kualitatif*. Penerbit Aksara Timur.
- Methods, T. C. S. R. and. (2021). *Terjemahan Case Study Research: Design and Methods* (ect ke-17). PT. Raja Grafindo Persada.
- Munif, M. (2025). The Transformation of Public Relations Roles in Crisis Communication in the Social Media Era. *Journal of Innovative Islamic Education Management*, 1(1), 21–36.
- Qizi, M. F. M. (2025). Cognitive Development And Its Role In Effective Pedagogy. *ОБРАЗОВАНИЕ НАУКА И ИННОВАЦИОННЫЕ ИДЕИ В МИРЕ*, 80(5), 20–25.
- Sahri, S., Syafi'i, A., & Sokip, S. (2023). Direction and strategy of islamic education ministry of religious affairs of Indonesia. *Tarbawi: Jurnal Pendidikan Islam*, 20(1).
- Tabroni, I., Hardianty, D., & Sari, R. P. (2022). The importance of early childhood education in building social and emotional intelligence in children. *Jurnal Multidisiplin Madani*, 2(3), 1219–1226.
- Wijaya, I. K. W. B., Santosa, M. H., & Widian, I. W. (2025). Enhancing Primary Pupils' Reading Interest through Illustrated Science Storybooks: A Sequential Explanatory Study. *Jurnal Penelitian Pendidikan IPA*, 11(12), 367–378. <https://doi.org/10.29303/jppipa.v11i12.13963>
- Yu, S., Fleer, M., & Rai, P. (2026). Exploring Science Concepts in Everyday Interactions with Infant-toddlers at Home: Caregivers' Raised Science Consciousness Through Fleer's Conceptual PlayWorld. *Research in Science Education*, 1–18.