

# INQUIRY-BASED LEARNING WITH ABCDE METHODS IN EARLY CHILDHOOD EDUCATION

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**Abstract:** *Early childhood has privileges to play. To make them enjoy their learning process, the teacher has to make it more fun for them with play activities. Inquiry-based learning is one of the methods to support children playing while learning. Teachers should make the early childhood curriculum interesting for them. The Purpose of this study is to describe the Inquiry-based Learning with ABCDE Methods in Early Childhood Education. Besides that, the researcher wants to find out how the Inquiry-based Learning keep playing activities in learning process. The researcher collected data through qualitative method and field research approach: interviews, observations, and documents. The researcher takes interviews with the Principal, The teacher, and the Co-Teacher. This Field Research site is RA Banat Kudus. Qualitative Method was adopted to analyze research data. The result of the Research are (1) The step of implementing the Inquiry-based Learning are observing, asking, telling, discussing and evaluation (ABCDE Methods) (2) With a right play activities, learning is more fun.*

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**Keywords:** *Early Childhood Education, Inquiry-Based Learning, Play Activities*

## A. Introduction

Early childhood is a unique person, because early childhood has a lot of potential, as well as a creativity that needs to be developed and stimulated. A child's brain capacity grows to 40% by the age of four and will grow to 80% by the ages of eight. (Padilah, 2018b) Early childhood Education is an important thing to do to increase their ability in their golden age. Children are good learners. They adopt all the lessons they get. They have a big curiosity about a lot of things around them. But sometimes, they cannot do that while the learning happens. The learning methods don't support their curiosity. They must listen to their teacher without time to asking anything. Sofia Hartati in Fitriani say that Early childhood's characteristics are (1) have great curiosity, (2) are unique personalities, (3) like fantasy and imagination, (4) potential time to learn, (5) have an egocentric attitude, (6) have a short concentration vulnerability, and (7) are part of a social being. (Fitriani & Noor, 2021) These characteristics can be decrease if the learning methods didn't consider it in the learning process. According to Christianti, it is stated that play can also form effective learning as it can give pleasure so that it can generate instrumental motivation of children to learn (Suryaningsih et al., 2016).

The ability to think critically cannot be formed instantaneously, the ability of critical thinking requires latency and continuous time. (Hadi et al., 2021) Mulyono stated, that the teacher's way of teaching affects the way the child learns, more effective the teacher teach, the better, child will learn. (Rohayani, 2018) Teachers are a main part of the learning process. They have to understand their students and choose the right method.

One of the methods which consider playing in the learning process is Inquiry-based Learning. The inquiry method used for learning science is that children have the skills of observing concluding and experimenting. (Padilah, 2018a) It's easier to use it in science, but inquiry-based learning, not only used in science lesson. It could be used in another subject.

Gulo stated, that Inquiry-based learning means a set of learning activities that involve the maximum of the child's ability to search and investigate systematically, critically, logically, and analytically, so that he can formulate his own discoveries with confidence.

(Salim & Hariyanti, 2014) Albert state: "Inquiry-based learning is a process where student is involved in their learning, formulate question, investigate widely and then build new understanding, meaning and knowledge. That knowledge is new to the student and may be used to answer a question, to develop a solution or to support a position or point of view. The knowledge is usually presented to other and may result in some sort of action" (Nurdyansyah & Fahyuni, 2016).

Gulo stated, that the skills required to carry out inquiry learning are as follows: 1) Asking questions or problems, Inquiry activity begins when questions or issues are raised. To make sure the question is clear, it is written on a board, then the student is asked to formulate a hypothesis. 2) Formulate a hypothesis, a hypothesis is a temporary answer to a question or solution to a problem that can be tested with data. To facilitate this process, the teacher asks the student for an idea of a possible hypotheses. Out of all the ideas available, select one of the hypotheses that are relevant to the given problem. 3) Collecting data, the hypothesis is used to guide the data collection process. The resulting data can be a table, a matrix, or a graph. 4) Data analysis, Students are responsible for testing the hypothesis that has been formulated by analyzing the data obtained. And 5) Making a conclusion, the closing step of inquiry learning is making a provisional conclusion based on the data obtained by the student (Magasida, 2017).

Piaget stated, that the inquiry method is a method that prepares students in a situation to conduct their own experiments in an open way so that they can understand and see what is happening, want to do things in an attempt to find solutions to the problems they encounter, ask various questions in accordance with the given concept, find their own answers, and be able to link the discovery they have found with the discoveries that have already existed, and able to compare the results of their discovery with those that already exist (Khusnaya & Kusumaningtyas, 2022).

In general, the learning process using an inquiry learning strategy can follow the following steps: 1. Orientation 2. Formulate a problem 3. Submit a hypothesis 4. Collect data 5. Test hypotheses 6. Formula a conclusion. (Rohayani, 2018) For example, drawings play an important role in children's science

inquiry. They represent ideas and help children acquire scientific knowledge. Drawings enable the teacher to know about levels of children's inquiry as well as their understandings. When children are on a scavenger hunt for science-related information, their drawings can expose what they know, what they would like to know, and what they have learned. With the aid of drawings, teachers can help children increase science inquiry skills and seamlessly integrate other subject areas into science inquiry (Chang, 2005).

This research is to find out the Inquiry-based Learning with ABCDE Methods in Early Childhood Education. This research takes place at RA Banat Kudus. Besides that, the researchers want to find out how the Inquiry-based Learning keep playing activities in learning process. This study has the same theme with the study of Chang, Rohayani and Suryaningsih, the inquiry methods, but the differences between them are Chang study about science inquiry in drawing learning. Rohayani only does literature study about inquiry. And Suryaningsih study about Guided Inquiry.

Martin in Lee stated:

“Many have listed both basic (observing, classifying, communicating, measuring, predicting, and inferring) and integrated (identifying and controlling variables, formulating, and testing hypotheses, interpreting data, defining operationally, experimenting, and constructing models) inquiry process skills in science learning. These are the scientific actions people apply when they do science.” (Lee & Yoon, 2008)

Lee adds the information that “the more important, it is essential to be able to assess these inquiry process skills in science learning”.(Lee & Yoon, 2008). Early childhood education for those who learn science learning used inquiry-based learning in a simple way according to their abilities.

Inquiry learning is a learning activity that involves the maximum of the student's ability to search and investigate something (objects, humans or events) systematically in observing images, critically in asking questions, analytically so that they can formulate their own discoveries with confidence (Suryaningsih et al., 2016).

Meador in Nurdyansyah said:

“inkuiri learning is a dynamic approach that involve exploring the world, asking question, making discoveries and rigolously testing those discoveries in the search for new understanding” (Nurdyansyah & Fahyuni, 2016).

## B. Method

The type of research used is qualitative. The extraction of information in this study uses the method of interviews, observations, and documentation. The method of interviewing the subject of research to find out the origin and conditions of learning in the field. Interviews were conducted with the head of the school, class teachers, and teachers who were already coaches for other schools. Observations are done to see the learning process. Documentation method is to gather the documentation of the inquiry learning documentation that has been applied. As well as documenting the activities that related to the implementation activities in the RA NU Holy Banat.

## C. Result and Discussion

### Result

The Inquiry-based Learning in RA Banat Kudus is using ABCDE Methods. “A” is *Amati* or Observation, “B” is *Bertanya* or Question, “C” is *Cari* or Search, “D” is *Diskusi* or Discussion and “E” is *Evaluasi* or Evaluation.

#### 1. “A” *Amati* (Observation)

When the teacher wants to teach about cows, the teacher prepares a picture of cows. It’s because, the teacher can’t bring a cow to the class. So, to know better about cows, they bring a picture of the cow. The children observe the picture of the cow from the head to the tail. The teacher can bring a cow doll too. In this session, the teacher prepares a cow doll, a picture of cow, chair, gloves, bowl, a glass of milk, a bottle, a picture of a cow head, ice cream stick, and glue.

The teacher makes them observe the cow doll. They observe part of cow’s body. Then, they saw a video about How to take care of cows and to peel cow’s milk?

2. "B" *Bertanya* (Question)

The teacher of RA Banat uses 5W+1H to give children questions about their theme "cow". The questions are What's a cow's body? What are the cows producing? Why do we have to drink cow's milk? Who created the cow? Where's the cattle's home? When can we fry cow's milk? How to peel a cow? The teacher brings students to explore a lot of information about cows with this 5W+1H Question: What, Who, Where, Why, When, and How.

3. "C" *Cari* (Search)

After that, the teacher makes the children look at the cow's body and search, what is the part of the cow's body? The children find out what kinds of cows are produced. The child finds out how to feed the cow, the child discovers how to grind the cow's milk, the children discover part of cow's body and make a game, match the picture of part of the body.

4. "D" *Diskusi* (Discussion)

The children and the teacher discuss the tools and materials that have been used in the activity. They discuss how to grind the right cow's milk. The teacher invites the children to discuss anything that is produced by the cattle and the Master invites children to create the form of the cow.

5. "E" *Evaluasi* (Evaluation)

The child practices roasting cow's milk. The child shows and mentions the product by cow. The child creates cow using bottles and ice cream sticks, the child tells the playful learning of today's experience about cows.

The learning process is to teach children some scope of children's development, such as Religious and moral values, motor physical, cognitive, language, emotional social, and art. There are five children in A class such as: AY, UB, ME, FI, and AR.

1. Religious and moral values

ABCDE Methods in Inquiry-based learning has purposes. One of these is religious and moral values. The children believe in the existence of God through his creation through

the activity of feeding the cattle. The evaluation result has the same point “BSH” *Berkembang Sesuai Harapan* (Grow as expected). They are already accustomed to eating nutritious foods and drinks through regular drinking of cow’s milk. AY embarrassed when feeding cows. UB and ME can feed cows well. FI was very enthusiastic when feeding cows. AR was very enthusiastic and curious with the mouth of the cow toys made.

## 2. Motor Physical

The children learn about how to keep healthy. Children are taught to consume clean, healthy, and nutritious foods and drinks. Such as drinking milk. The evaluation result has the same point “BSH” *Berkembang Sesuai Harapan* (Grow as expected). AY doesn’t like the smell of fresh cow’s milk. UB and AR ask for more milk when they drink milk. ME said the cow’s milk was delicious. FI consuming cow’s milk quickly.

## 3. Cognitive

In this children’s development, the students learn to recognize things around them. The children learn to show and recognize objects by matching objects according to their mates through the activities of matching images produced by cows. The evaluation result has different points; “MB” *Mulai Berkembang* (Begin to develop) and “BSH” *Berkembang Sesuai Harapan* (Grow as expected). AY is still accompanied by the teacher in completing the activity. AR got lack of concentration in completing activities. UB, ME, and FI are better in learning. They complete the activity well.

## 4. Language

The children learn about the alphabet by playing games. In this theme, they learn about “s”, “a”, “p”, “i” with the context and joy. The evaluation result has different points; “MB” *Mulai Berkembang* (Begin to develop) and “BSH” *Berkembang Sesuai Harapan* (Grow as expected). AY still needed the help of the teacher in arranging every letter. The others are better. UB was so quiet and careful in writing his letters. ME was able to repeat the sounds of letters from “s”, “a”, “p”, “i”. FI and AR complete the activity well.

## 5. Emotional Social

The children are taught to have behavior that reflects obedience to everyday rules to train discipline. The child has behavior that reflects obedience to daily rules to train discipline through the activity of waiting for turns when grilling cow's milk. The evaluation result has different points; "MB" *Mulai Berkembang* (Begin to develop) for AY and AR and "BSH" *Berkembang Sesuai Harapan* (Grow as expected) for UB, ME, and FI. AY seemed impatient while waiting for the front line to burst. AR didn't in order when it's in line. She cut the lines. UB, ME, and FI were in line when grilling cow's milk, only FI needed more time to do it.

## 6. Art

The children learn to recognize and produce works and activities of art. Children can showcase artwork and activities using various media through the creation of cow shapes from used milk bottles and ice cream sticks. The evaluation result has different points; "MB" *Mulai Berkembang* (Begin to develop) for AY and AR and "BSH" *Berkembang Sesuai Harapan* (Grow as expected) for UB, ME, and FI. AY still needed the help of the teacher and needed guidance in sticking. AR rushed in a hurry when doing the activities, it made untidy. UB made creations of cows carefully and a neat outcome. ME completed the activity well. FI Hold on and count the number of ice cream sticks made for the cow legs.



**Picture 1.** Cow-shaped work of used bottles and ice cream sticks belongs to AY.





**Picture 2.** Cow-shaped work of used bottles and ice cream sticks belongs to UB.



**Picture 3.** Cow-shaped work of used bottles and ice cream sticks belongs to ME.



**Picture 4.** Cow-shaped work of used bottles and ice cream sticks belongs to FI.



**Picture 5.** Cow-shaped work of used bottles and ice cream sticks belongs to AR.

According to the headmaster, RA Banat doesn't use the Inquiry-based learning all the time because the cost:

“At the beginning of this semester, it has already applied the inquiry method, but this method cannot be taught in all times, in terms of the cost. It's expensive to prepare all the facilities.”

The other negative side of inquiry-based learning is for the old teacher. It is because the passion and effort to learn new things is low. But the positive side of inquiry-based learning is this method makes students more enthusiast with the learning process. Because they can play while learning and with the facilities, students get more understanding of the lesson.

### Discussion

Early childhood's characteristics, according to Hartati in Fitriani, contain seven characteristics. They are (1) have great curiosity, (2) are unique personalities, (3) like fantasy and imagination, (4) potential time to learn, (5) have an egocentric attitude, (6) have a short concentration vulnerability, and (7) are part of a social being. (Fitriani & Noor, 2021) The Inquiry-based learning supports the early childhood's characteristics. The children did an observation about cow theme and have a great

curiosity. They have unique personalities, some of them can drink the milk but the others don't like the smell of the milk. They have a will to learn about cows. And there is a child who still distracts with other issues when learning.

Gulo stated, that the skills required to carry out inquiry learning for the first is asking questions or problems, Inquiry activity begins when questions or issues are raised. To make sure the question is clear, it is written on a board, then the student is asked to formulate a hypothesis. (Magasida, 2017) The skill that developed by inquiry-based learning are asking questions or problem even not all the students. They, who are curious about the theme, will ask more questions than others. But the teacher can trigger them with 5W + 1H Question. With a simple theme, the children can develop their ability to ask simple questions. They ever show cows and saw it in the class, so when the teacher triggers them with one question, they will explore other facts.

The second is they formulate a hypothetic, a hypothesis is a temporary answer to a question or solution to a problem that can be tested with data. To facilitate this process, the teacher asks the student for an idea of a possible hypotheses. Out of all the ideas available, select one of the hypotheses that are relevant to the given problem. (Magasida, 2017) The children will make a hypothesis in a simple way. They use their experiences or their imagination to make it.

Just like Piaget, that the inquiry method is a method that prepares students in a situation to conduct their own experiments in an open way so that they can understand and see what is happening, want to do things in an attempt to find solutions to the problems they encounter, ask various questions in accordance with the given concept, find their own answers, and be able to link the discovery they have found with the discoveries that have already existed, and able to compare the results of their discovery with those that already exist. (Khusnaya & Kusumaningtyas, 2022)

The third is collecting data, the hypothesis is used to guide the data collection process. The resulting data can be a table, a matrix, or a graph. (Magasida, 2017) The student saw the picture or the doll of the cow and saw the video to find out data.

The fourth is data analysis, Students are responsible for testing the hypothesis that has been formulated by analyzing the

data obtained. And (Magasida, 2017) The student state the data analysis in a simple way. The compare about the hypothesis and the data to analyze it.

The fifth is making a conclusion, the closing step of inquiry learning is making a provisional conclusion based on the data obtained by the student. (Magasida, 2017) after they get the analyze it, the able to make a simple conclusion about the theme.

In general, the learning process using an inquiry learning strategy can follow the following steps: 1. Orientation 2. Formulate a problem 3. Submit a hypothesis 4. Collect data 5. Test hypotheses 6. Formula a conclusion. (Rohayani, 2018) First step is orientation. Orientation is the particular things that a person prefers to believe, thinks, or usually does. Second step is formulating a problem. To find out something, we have to formulate the problem before the next step. The third step is submit a hypothesis. Then collect the data and do a test hypotheses. And the last step is formula a conclusion.

#### **D. Conclusion**

Inquiry-based learning is a method that prepares students in a situation to conduct their own experiments in an open way so that they can understand and see what is happening, want to do things in an attempt to find solutions to the problems they encounter, ask various questions in accordance with the given concept, find their own answers, and be able to link the discovery they have found with the discoveries that have already existed, and able to compare the results of their discovery with those that already exist. Even they are an early childhood, but they have characteristics that love to explore their environment even in a simple way. ABCDE Methods which is "A" is *Amati* or Observation, "B" is *Bertanya* or Question, "C" is *Cari* or Search, "D" is *Diskusi* or Discussion and "E" is *Evaluasi* or Evaluation, are one of methods that developed their skill. A lot of student's development can increase, such as religious and moral values, motor physical, cognitive, language, emotional social, and art. Besides that, maybe imitating walking cows for motor physics is much better to develop motor physical.

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