

DEVELOPING CULTURAL LITERACY SKILLS THROUGH TRADITIONAL CULTURE INTRODUCTION ACTIVITIES: THE INQUIRY-BASED LEARNING APPROACH IN EARLY STUDENTS

Nilna Nurjanah¹ · Mazildha Nur Maulidina² · Nihayatul Luaili³ · Umi Masturoh⁴

^{1,2,4} Pendidikan anak usia dini, Institut Al Azhar Menganti Gresik

³Faculty Postgraduate School, Department of Doctoral Basic Education,
Universitas Negeri Malang

¹nilnacomel14@gmail.com ²mazildhamaulidina@gmail.com, ³lailinihayatul@gmail.com

⁴umi@istaz.ac.id

ABSTRACT

This study aimed to investigate the effects of integrating the inquiry-based learning (IBL) approach with traditional culture introduction activities on early childhood students' cultural literacy skills, using a hybrid method. Using an experimental research model, the study had a quasi-experimental design with pre-test and post-test control groups. It was conducted at an early childhood education center in Sumengko Village, Wringinanom District, with 4-6-year-old children from two classes during the second semester of the 2024-2025 academic year. One group was randomly assigned to the control group, and the other to the experimental group. The learning activities for the experimental group included IBL-based activities integrated with traditional cultural elements. In the control group, lessons were conducted using conventional teaching techniques, such as direct instruction and demonstration. A Cultural Literacy Assessment was used to measure the groups' cultural literacy skills at the beginning and end of the study. T-test and ANCOVA analyses were performed on the quantitative data using SPSS. At the end of the study, semi-structured interviews were conducted with 12 participants; six from each group. The interviews were analysed using thematic analysis to obtain themes and codes. The evaluation of the quantitative and qualitative findings revealed that the IBL approach, integrated with traditional cultural activities, had improved the cultural literacy skills of the experimental group's students.

Keywords: cultural literacy early childhood, traditional culture inquiry

INTRODUCTION

In today's world, globalization is rapidly changing societies, and cultural knowledge is increasingly important for young generations. This makes it essential to educate individuals to understand, appreciate, and apply cultural values in daily life. The Indonesian National Curriculum (Kurikulum Merdeka, 2022) emphasized the need to develop cultural literacy skills that students can apply throughout their lives, regardless of the subject matter. The most important educational mission should be to improve students' cultural understanding, enhance their appreciation of local wisdom, and prepare them for their lives as individuals in a multicultural society by equipping them with cultural competencies (Kemendikbudristek, 2022).

Interest in developing cultural literacy skills has increased alongside changes in expectations for early childhood education (Suyadi & Dahlia, 2020). It has become more important for individuals to become culturally literate rather than simply memorizing cultural facts.

“Good cultural literacy” in education involves behaviors and skills such as recognizing cultural symbols, understanding cultural meanings, being aware of the diverse nature of cultural expressions, and demonstrating appreciation for cultural heritage (Putra & Oktaria, 2021). One of the twenty-first-century competencies is cultural literacy (Ananiadou & Claro, 2009; Geisinger, 2016), and this is one of the skills that early childhood education aims to develop (Warmansyah et al., 2022). To implement reforms in early childhood teaching, changes are required in the learner’s role, the nature of content, assessments, and the organization of learning activities (Sakti et al., 2024). This change in educational goals has led to an increasing interest in cultural literacy skills. It has also encouraged researchers and educators to seek learning processes and environments that improve children’s cultural understanding.

Learning environments that promote cultural literacy, as defined by Sujiono (2013), are characterized by greater exploration, more in-depth discussions, unexpected discoveries, and an emphasis on active learning. The children also need to be encouraged to ask their own questions and to critically evaluate cultural elements to develop cultural literacy (Taylor & Leung, 2020). Inquiry-based learning in early childhood education involves a collaborative structure with a common purpose in which children explore, question, and discover cultural meanings (Fuadia, 2022). This structure encompasses many processes, including introducing and evaluating different cultural ideas, asking questions, sharing experiences, and using observational evidence.

The present study focused on the use of inquiry-based learning (IBL) for children’s cultural investigations. Working in groups, children identify questions and follow them up with activities including exploring, making observations, posing questions, and engaging in cultural activities. After conducting their explorations, children share the results, compare understandings and experiences through discussion, and negotiate meanings in small or large groups. Negotiating with others is a central activity in inquiry-based learning, requiring collaborative discussion to resolve uncertainties across different perspectives (Chen et al., 2019).

Cultural literacy, considered as a process, involves going through certain stages such as recognizing cultural elements, collecting information, understanding cultural meanings, and synthesizing the knowledge obtained to reach cultural appreciation (Suratmi et al., 2024). During the IBL process, ideas are also shared with others about cultural discoveries. Evaluation likewise requires identifying the elements of cultural expression and assessing the significance of cultural practices (Sakti et al., 2024). In addition, Wai et al. (2020) highlighted the importance of play

and exploration skills in cultural learning, emphasizing that children engage in playful activities to understand cultural meanings better. As can be seen, both cultural literacy development and the IBL approach involve similar processes.

Having cultural discussions during the learning process allows children to develop cultural literacy skills and abilities (Purnamasari & Sefriyanti, 2025). As children engage with cultural practices of inquiry, they also have the opportunity to develop their own cultural understanding and appreciation skills (Syafnan et al., 2025). The IBL approach has been described as developing children's cultural literacy (Wahyudi, 2023) and exploration skills (Warmansyah et al., 2022). Warmansyah et al. (2022) stated that the IBL approach helped develop kindergarten students' cultural understanding skills during the implementation of the Minangkabau cultural curriculum. In this study, cultural literacy was associated with an IBL approach using exploration, inquiry, collaboration, and reflection. In addition, the IBL approach allows children from diverse backgrounds to actively engage in cultural instruction and practices by developing cultural literacy skills (Taylor & Leung, 2020).

On this basis, this study aimed to examine these effects in the Indonesian early childhood education context. This study thus investigated the effect of the IBL approach integrated with traditional culture introduction activities on cultural literacy skills. In the Indonesian education system, early childhood education serves children aged 4-6 years in PAUD (Pendidikan Anak Usia Dini) settings. At this developmental stage, children can conduct investigations (through inquiry) both individually and in groups. For this reason, early childhood students aged 4-6 years were selected as the study group. It takes time to acquire cultural literacy, both in developing the skills needed and in cultivating the ability and desire to use them. To achieve the expected effect more quickly, the study was conducted over two thematic units.

LITERATURE REVIEW

Cultural Literacy

Cultural literacy is the ability to understand, appreciate, and apply cultural values in everyday life (Kemendikbudristek, 2022). Pointing out that cultural literacy is both a skill and an attitude, Putra and Oktaria (2021) stated that it has a comprehensive structure comprising recognition, understanding, and appreciation. Cultural literacy is a strength that allows an individual to control their own cultural development and learning process. The importance of cultural literacy is emphasized in child-centered approaches, and it is among the basic skills children are expected to have acquired by the end of the learning process (Suratmi et al., 2024). Because it encourages individuals to understand the cultural expressions they encounter more

deeply and to develop better appreciation and interpretation skills in real-world contexts, teaching cultural literacy is extremely important (Budiyono et al., 2023). Cultural literacy, which encompasses skills such as recognition, understanding, appreciation, and expression, is also important for adapting to a rapidly changing multicultural world (Nurohmah et al., 2023).

Differences in definitions of cultural literacy identify distinct cultural literacy skills. Wahyudi (2023) classifies cultural literacy skills into (a) recognition, (b) understanding, (c) appreciation, (d) expression, (e) participation, and (f) preservation. Cultural literacy includes skills such as (1) the ability to recognize cultural symbols and artifacts, (2) the ability to understand cultural meanings, (3) the ability to differentiate cultural expressions, (4) the ability to be aware of cultural diversity, (5) the ability to recognize cultural values, (6) effective cultural communication, (7) the effective use of cultural expressions, and (8) metacultural awareness that helps the individual become aware of their own cultural identity (Purnamasari & Sefriyanti, 2025).

According to Syafnan et al. (2025), education grounded solely in cultural content, independent of experiential learning, is insufficient to develop cultural literacy skills. Teachers need to establish learning environments that support the development of children's cultural literacy skills and set appropriate goals for these skills (Wai et al., 2020). Cultural literacy in education involves high-level activities in which teachers and children question cultural practices in a mutually beneficial manner, make decisions about what to appreciate and what to preserve, and evaluate cultural expressions and meanings (Sakti et al., 2024). In addition, learning environments where children can freely share their ideas and respect others' different cultural perspectives can also influence the development of their cultural literacy skills. It is believed that guiding children towards exploration, discussing and questioning cultural practices in the classroom, and helping them build self-confidence through participation in cultural activities can boost their cultural literacy (Warmansyah et al., 2022). The IBL approach, which incorporates these activities into an exploration-based learning process, can be effective in developing children's cultural literacy skills.

Inquiry-Based Learning Approach

Based on the constructivist learning theory, the inquiry-based learning approach was developed to promote active exploration and discovery in early childhood education (Sujiono, 2013). The IBL approach includes experiential elements such as observing, questioning, exploring, and reflecting. It helps construct knowledge by integrating these elements into an environment that supports discovery, observation, and exploration-based perspectives (Taylor & Leung, 2020). IBL is a tool for both teachers and children to build cultural understanding

through detailed exploration and questioning (Fuadiah, 2022). The IBL approach outlines how children can engage in cultural exploration, express themselves, think critically, develop cultural understanding, and cultivate cultural appreciation skills (Warmansyah et al., 2022).

There are two templates to help teachers and children effectively use the IBL approach (adapted from Hand & Keys, 1999). The template for teachers is a tool that helps them plan learning objectives and activities using the IBL approach. In the IBL approach, the teacher is positioned as a facilitator alongside the children in the process rather than being at the center and the sole presenter of information. The teacher should design activities that capture children's attention and present intellectual challenges in the learning environment (Sujiono, 2013). In the IBL process, it is important that the teacher create situations that encourage children to ask questions. The teacher should encourage children to think by asking questions in different ways rather than directly providing answers.

Table 1.

IBL teacher and child template (adapted from Hand & Keys, 1999)

IBL Part I: Teacher-designed activities	IBL Part II: Template for children
1. Exploration of pre-instructional understanding through group discussion	1. Beginning ideas: What do I know?
2. Pre-activity exploration, including informal expression and observations	2. Exploration: What did I do?
3. Participation in cultural activities	3. Observations: What did I see?
4. Sharing phase I: expressing personal experiences of cultural activity	4. Discoveries: What can I understand?
5. Sharing phase II: sharing and comparing observations in small groups	5. Evidence: How do I know? Why do I think this?
6. Sharing phase III: comparing ideas to other cultural sources	6. Comparison: How do I compare my ideas with others?
7. Sharing phase IV: individual reflection and expression	7. Reflection: How have my ideas changed?
8. Exploration of post-instructional understanding through discussion	

The IBL child template is a tool that guides children in their exploration activities (Warmansyah et al., 2022). When children carefully engage with the questions in the template, they construct their own cultural knowledge by linking exploration questions, discoveries, and evidence (Taylor & Leung, 2020). Children interpret cultural concepts in large and small group discussions based on initial questions, explanations, explorations, discoveries, and the evidence

they have developed to support their own understandings (Fuadiah, 2022). Cultural discussions that the children take part in during the IBL process involve evaluating alternative ideas, drawing on observations, and assessing the validity of cultural understandings (Sakti et al., 2024).

When the related literature is examined, it is evident that the IBL approach supports the various sub-skills (such as exploration and appreciation) of cultural literacy. Considering these facts, this study aimed to investigate the effects of the IBL approach integrated with traditional culture introduction activities on the cultural literacy skills of early childhood students. Within this framework, the following research questions were explored:

1. Are there any differences between the cultural literacy skills of the early childhood students participating in IBL activities and of those attending conventional learning activities?
2. How does exposure to IBL activities and conventional activities affect the cultural literacy skills of early childhood students?

METHODOLOGY

Research Model

This study used a mixed-method approach, combining quantitative and qualitative methods. In the quasi-experimental method, participants are randomly assigned to experimental and control groups. Both groups are tested before the study, and the desired activities are carried out with the experimental group, while there is no intervention in the control group. In addition, the final tests are carried out with both groups (Creswell & Poth, 2021). Thus, the quantitative aspect of this research used a quasi-experimental design with pre- and post-test control groups. The qualitative aspect of the study was based on semi-structured interviews conducted to learn the participants' thoughts at the end of the process.

Study Group

The study was conducted during the second semester of the 2024-2025 academic year in Sumengko Village, Wringinanom District, Gresik Regency, East Java, Indonesia. The study group was identified through purposive sampling. Two early childhood study groups at the same PAUD center, taught by the same teacher, were identified. One of the classes was randomly assigned to the experimental group, and the other to the control group. The purpose of the unbiased assignment was to create experimental and control groups with equivalent characteristics (Christensen et al., 2014). A total of 48 children participated in the study: 24 in the experimental group (13 girls and 11 boys) and 24 in the control group (12 girls and 12 boys).

To carry out the applications in the experimental group, the children formed small groups of 4-5 people.

Implementation

Before the study, the experimental and control groups participated in learning activities in a conventional learning environment that included direct instruction, demonstrations, and teacher-centered activities. The teacher used visual aids, such as pictures and props, as needed during the activities and reviewed the topics with simple questions. Within the scope of the study, this learning environment was defined as the conventional approach. Before conducting the research activities, the cultural literacy skills of the experimental and control groups were pretested. In both experimental and control groups, lessons were conducted by the researcher. In the experimental group, the researcher aimed to provide communication and collaboration among children in all small groups.

As the activities began, the control group continued to attend learning activities delivered using the conventional approach. In contrast, the experimental group attended activities that used the IBL approach, integrated with the introduction of traditional culture. In the 1st week of the study, a preparatory activity was conducted to provide children with knowledge of the idea of “exploration and discovery,” which lies at the heart of inquiry-based learning. In the preparatory activity, children were asked to explore a “mystery traditional object” in groups of four or five; the object’s initial function was not revealed. The children had to propose ideas about the object’s purpose and support them with their observations. Next, the children shared their ideas and observations with their friends and tried to explain their thinking. The children discussed the characteristics of exploration and discovery, and these were recorded on a chart. They were then informed about the subtleties of inquiring and about how to ask good questions, which are at the core of the IBL approach.

After this preparatory activity, children attended inquiry-based activities for 7 weeks, with 3 weeks on the “Traditional Games and Songs” thematic unit and 4 weeks on the “Local Customs and Traditions” thematic unit. Throughout the 7 weeks, the teacher primarily engaged the children in large-group discussions to elicit their prior knowledge on the topics. Furthermore, the children designed explorations during small-group discussions. The teacher visited the small groups one by one and asked questions to prompt the children to think and guide them toward the learning objectives. These questions ensured that the children remained mentally engaged and focused on the learning objective. In addition, the children were asked questions that initiated and continued the discussions, attracted their attention, and monitored their participation.

During the small-group discussions, children asked their teachers for help when they encountered an obstacle. At this stage, the researcher asked more questions, encouraging the children to think more reflectively. At the end of these small-group discussions, the researcher asked the children to come up with a discovery based on their explorations. Subsequently, the groups had the opportunity to share their discoveries and observations, as well as the explorations that had led to that understanding, with children in other groups. At this stage, discussions (the sharing process) took place between the group that presented the discovery and the other groups. To share their ideas with friends, the groups that shared their discoveries showed the observations they had obtained from their explorations; in some cases, they even demonstrated cultural activities. At every stage, the teacher guided the process, kept the discussion on course, and directed it with questions when needed.

While the learning activities of the experimental group were appropriate for IBL, those in the control group were taught by the researcher using the conventional approach. The topics were covered through direct instruction and demonstrations, and cultural activities appropriate to the topic were presented in some weeks. The researcher carried out these activities, and some children participated as assistants. After the instruction, the children answered simple review questions. At the end of the activities, both the experimental and control groups took a Cultural Literacy Assessment (CLA) as a final test. Finally, semi-structured interviews were conducted with 12 participants, comprising six children from each performance level (low, medium, and high) in each group.

Data Collection Tools and Data Analysis

Cultural Literacy Assessment (CLA)

The CLA and semi-structured interview questions were used as data collection tools in the study. The Cultural Literacy Assessment was developed by the researcher using cultural literacy indicators from Kemendikbudristek (2022) and was validated by experts. The assessment was designed to evaluate cultural recognition, understanding, appreciation, and expression skills. The assessment yields a total score based on items measuring recognition, understanding, appreciation, observation, expression, and cultural communication (Putra & Oktaria, 2021). The assessment was used in this study because it objectively measures cultural literacy and, in essence, overlaps with the processes of the IBL approach. The assessment consists mostly of observation- and expression-based items. One of the items in the assessment is given below as an example:

Example item:

Observe the child during traditional game activity:

- a. Can the child recognize the name of the traditional game? (1-4 scale)
- b. Can the child explain how to play the game? (1-4 scale)
- c. Does the child show enthusiasm during the activity? (1-4 scale)
- d. Can the child relate the game to their daily life? (1-4 scale)

The assessment aims to measure the cultural literacy skills of children aged 4-6 years. The assessment contains 20 performance-based items with observation rubrics, each scored on a 4-point scale (1 = not yet developing, 2 = beginning to develop, 3 = developing as expected, 4 = developing very well). The assessment was used as a pre-test at the beginning of the study and as a post-test after the activities were completed. Children were given individual observation sessions of approximately 15 minutes each to complete this assessment. The maximum score possible was 80 points. The Cronbach's alpha coefficient of the assessment was found to be .82. In the current study, the Cronbach's alpha reliability value of the assessment was calculated as 0.87.

The effects of IBL-based learning activities on children's cultural literacy skills were studied. To measure the children's cultural literacy skills, pre- and post-test scores were used. Their pre- and post-test scores were analyzed using statistical software. Descriptive statistics and one-factor ANCOVA were used to compare children's scores in the experimental and control groups.

Semi-Structured Interview

Semi-structured interview questions were designed to assess how well the children reflected on their own cultural literacy skills. The questions were prepared by the researcher, taking into consideration the sub-dimensions of cultural literacy, and were submitted for expert opinion. In preparing the questions, the definitions and categorizations of cultural literacy found in the literature were taken into consideration. For example, Putra and Oktaria (2021) state that a culturally literate person is aware of cultural meanings and values and can "appreciate and express cultural understanding." In the current study, the following questions were asked to determine how children evaluated cultural activities and learning: "How did you feel about the traditional games? What did you learn about our local culture? How do you know if something is part of our tradition?" After the expert's review, the necessary changes were made, and the questions were finalized. Some examples of the final semi-structured interview questions are as follows:

What do you think about exploring different traditional games with your friends? How did you decide that an idea was correct or incorrect? Did you clearly express your opinion in

discussions? How did you share your discoveries with your friends? Why did you try different ways of playing the traditional games?

With parental permission, the interviews were recorded using a voice recorder. The interviews were carried out individually in a quiet room at the PAUD center. At the end of the study, semi-structured interviews were conducted with 12 children, six children from each group. The children's names and identities were kept confidential. The experimental group children were coded 'CE1, CE2, CE3, etc.' and the control group children were coded 'CC1, CC2, CC3, etc.' The recordings were decrypted and transcribed after the interviews. The written data obtained were coded by one of the researchers using thematic analysis. However, an expert with experience in related studies and other researchers joined the researcher to discuss the validity and credibility of the coding. Thematic analysis was used to analyze the data. The analytical process was completed inductively. Inductive thematic analysis is an analytical process that uses data collected specifically for the research to create themes and codes, in which different themes are not taken into consideration (Braun & Clarke, 2006). Therefore, the data was read repeatedly, and a new code was created for each cultural literacy skill identified in the children's statements.

RESULT AND DISCUSSION

Quantitative Findings

The pre-test CLA was used to determine whether there was a meaningful difference between the cultural literacy skills of the two groups. The t-test and ANCOVA were applied because the data met the assumptions of normality (Kolmogorov-Smirnov: $p>0.05$), homogeneity of variance (Levene's Test: $p>0.05$), and linearity and homogeneity of regression trends ($p>0.05$). An analysis of the t-test results for unrelated (independent) samples revealed no statistically significant difference between the groups. The pre-test CLA results showed small differences in total test scores between the groups; however, these differences were not statistically significant. The pre-test CLA score was used as a covariate to reduce error variance, improve statistical power, and statistically adjust for the primary differences between the experimental and control groups. The cultural literacy post-test mean scores for the children in the experimental and control groups, corrected for the cultural literacy pre-test scores, are shown in Table 2. The ANCOVA findings for the post-test CLA are presented in Table 3.

Table 2. Post-CLA findings

Test	Group	Average	Corrected average
Post-CLA	Control	48.375	49.127
	Experimental	62.458	61.706

Table 3. Findings of post-CLA ANCOVA analysis

Source of variance	Sum of squares	df	Mean square	F	p
Pre-CLA	2847.562	1	2847.562	87.234	0.000
Group	1892.476	1	1892.476	57.983	0.000
Error	1468.893	45	32.642		
Total	6208.931	47			

The ANCOVA analysis of post-CLA in Table 3 showed a significant difference in cultural literacy post-test scores, adjusted for the groups' pre-test CLA scores ($F(1,45)=57.983$, $p=0.000$). Eta squared measure of effect size is slightly biased because it is based purely on sums of squares from the sample, and no adjustment is made for the fact that we are trying to estimate the effect size in the population (Field, 2009). For this reason, it is often recommended to use a slightly more complex measure called omega squared (ω^2). The $\omega^2 = SSM - (dfM)MSR/SST + MSR$ equation is used to calculate the omega-squared value. As a result of the calculation, the omega-squared value was 0.54. Compared with the literature, this value had a large effect.

Qualitative Findings

Experimental Group's Qualitative Findings

The semi-structured interviews conducted with the children were analysed, and codes were created under the theme of "Cultural Literacy." Codes and frequencies related to the theme of cultural literacy, which included "cultural recognition," "cultural understanding," "cultural appreciation," "cultural expression," "cultural curiosity," "collaborative exploration," "systematic inquiry," "cultural connection," and "cultural pride," are presented in Table 4.

Table 4.

Cultural literacy themes, codes, and frequencies for the experimental group

Theme	Code	Frequency
IBL approach	Cultural recognition	25
	Cultural understanding	22
	Cultural appreciation	18
	Cultural expression	15
	Cultural curiosity	12
	Collaborative exploration	10
	Systematic inquiry	9
	Cultural connection	7
	Cultural pride	6

During interviews with the experimental group, the children discussed many skills that demonstrate cultural literacy and its sub-skills. All the children stated that they enjoyed the cultural exploration activities and that discovering cultural meanings and openly sharing their ideas with others were important. The children's answers also demonstrated that the IBL approach involves many processes that foster cultural curiosity and support its development. CE4 stated the children's willingness to explore different cultural elements in the following way:

“Of course, there were some discussions. For example, a friend of mine said, ‘Maybe this game is played like this.’ Moreover, I told them it would make more sense to do it another way. There were such discussions... We all had our own ideas about how grandma and grandpa played these games.”

CE6 stated that, “A friend of mine said that this traditional costume is worn like this, and another friend suggested something totally different. Everyone in the group had different ideas.” While emphasizing the importance of having different ideas in the group, the children also wanted to make sure that these ideas were correct. CE2 explained this situation by stating the following:

“One of our friends would tell us that this is how the traditional song goes. Then we would explain our idea to them, have someone else examine the song carefully, and choose the best idea... Our friend shared their idea, and we agreed on it, but also made our own adjustments. We did exploration like that.”

Individuals with cultural literacy skills should be able to recognize cultural elements and understand their meanings. They seek evidence before believing an idea or thought and compare observations. In their interviews, children often stated that they looked for evidence when a friend had an idea. CE5 pointed out this situation, saying, “There were different ideas. Then, we wanted to work out which were the right ones... We decided to test both of them by trying out both ways and seeing what worked.”

An individual with cultural literacy skills considers different perspectives on a cultural topic and uses reasoning to evaluate them. The children stated that when they had different ideas, they analysed and evaluated them. CE4 explained this situation as follows: “I carefully thought about this twice to avoid any errors... We also compared the two ideas to figure out which was more appropriate.” Some children tried to find the reasons for these differences. For example, CE3 said, “Some of our friends came up with different results, because they asked their grandma and we asked our grandpa.”

Understanding the variables that influence a cultural practice and investigating the extent of their effects are two very important cultural literacy activities. These activities allow children to examine cultural elements and move towards their objectives with greater confidence. The

children stressed that they examined different aspects in their interviews. CE3 discussed the importance of one variable during an exploration, saying, “We tried the traditional game with fewer players first, and then we added more friends. Then, we compared which way was more fun.” CE6 also drew attention to the fact that they tested the effects of different ways of playing in the following statement:

“Some of the traditional games had simple rules, and others were more complicated. We tried different versions. We used different materials. We tried to find out if the game was affected by what we used... Sometimes we changed the rules a little. When we did that, the game became different. The simple version was easy, but I had some difficulty with the complicated version.”

Cultural expression that reflects cultural literacy is a meaningful process. The individual makes a deliberate choice between multiple options. Throughout activities using the IBL approach, the children often used a sharing process, which they discussed in the interviews. Moreover, they emphasized the importance of mutual understanding by highlighting the group's discoveries. For example, children CE1 and CE3 pointed this out, saying, “There were different ideas, but we finally reached a common understanding” and “We all made a collective discovery by hearing out everyone's ideas... I learnt how to get to a shared understanding through discussions with my friends...” In fact, CE3 clarified that they learnt it through IBL activities.

An IBL approach encourages children to question and evaluate themselves, as evidenced by their statements. The children took into account their own limitations through evaluating their own performances. For example, CE5 assessed themselves, stating that they had made a mistake during the exploration: “We saved some of them for last because of the mistakes we made during the activities. For example, we learned the traditional dance, but some of the movements were not quite right.” The statements of CE2 draw attention to self-evaluation and peer evaluation: “For example, I put forward an idea, but I had not thought about the details. However, my friend made the final decision by thinking through all the details.”

The children stated that throughout the process, they did not lose their focus on the main cultural topic and conducted the explorations without drifting off the main subject. CE1 emphasized that they were careful to stay on the topic and mentioned that “We wanted to find out how our grandparents played these games. We had discussions on this subject.” Some dialogue between the researcher and CE4 during the interview is provided below. In this dialogue, the child stated that they considered different ideas in the group but also stayed on topic.

Researcher: For example, you mentioned that there were different ideas while you tried to understand the cultural practice

CE4: Yes, Researcher: How did you evaluate these ideas?

CE4: I tried to figure out if the different ideas would be more suitable

Researcher: And how did you decide which idea would fit better?

CE4: Based on what we saw, depending on whether they would be appropriate for understanding our tradition

Systematic inquiry refers to specific stages that go together to create a complete exploration process. Individuals with cultural literacy skills demonstrate systematic thinking. During the interviews, the children stated that they tried to follow a specific sequence throughout the IBL activities, that they tried to ensure that each consecutive step was in harmony with the one before, and that they were mindful of this issue both in their explorations and when sharing their findings. CE5 stressed the importance of systematicity and thinking systematically as follows:

“First, we talked and shared what we already knew, then we tried out the things we had talked about, and then, we came up with our understanding... We conducted the explorations step by step. If we had not done everything in order, the exploration would have been messy, and we would have gotten confused about what we discovered.”

Qualitative Findings of the Control Group

We analysed the children's responses in the semi-structured interviews under the theme of cultural literacy, and the codes for cultural awareness, cultural curiosity, and cultural appreciation are shown in Table 5 below.

Table 5.

The cultural literacy theme and codes and frequencies of the control group

Theme	Code	Frequency
Conventional approach	Cultural awareness	4
	Cultural curiosity	3
	Cultural appreciation	2

The control group discussed cultural awareness, cultural curiosity, and cultural appreciation in the interviews, all of which reflected cultural literacy. Children stated that they were aware that learning about culture is positive. They emphasized that diversity is important to achieve better results and added that they wanted their ideas, as well as those of their friends, to be heard. For example, child CC6 emphasized the importance of this issue, saying, “When everyone shares a different idea, you can create something more beautiful by bringing them together.” Children indicated that they did not immediately accept new ideas and that they needed to make

efforts to seek the truth. One dialogue between the researcher and CC5 reflecting this situation went as follows:

Researcher: Would you like to discuss the subject with your friends?
CC5: Yes, I would
Researcher: Why?
CC5: Because some of them say that this is not the correct way to do the game.
Discussing it with them helps me talk about the subject more easily.
Researcher: How would this help?
CC5: It's the best way to learn. It makes it more memorable, so you don't forget it after a while
Researcher: There are five or six people in the group, and all of them have different ideas
CC5: That's why we need to have discussions
Researcher: So, what happens when there are different ideas?
CC5: We talk, and that's how we get to the correct idea

In the interviews, children made various statements reflecting their awareness of their own limitations and abilities. CC2 stated that they were aware of their abilities and considered them when evaluating themselves. They said:

“I cannot answer some questions easily because I do not know much about the subject. I raise my hand if I know the answer... It is easier when you are just listening to the subject, you think that you have learnt it, but you get confused when you are explaining it yourself.”

A culturally literate person takes other opinions into account before deciding whether to believe or reject an idea, evaluates different opinions through discussion, and ultimately decides which idea to believe. When we analysed the interviews, we found that some children's statements did not reflect cultural literacy. The dialogue between the researcher and CC1, the following statement was made:

Researcher: Can you share an idea that comes to your mind with others?
CC1: I ask a friend, and if they tell me that I should say it, then I say it
Researcher: Can't you decide for yourself?
CC1: I can't decide for myself
Researcher: Well, do you like discussing a topic with friends?
CC1: I like a little
Researcher: Why do you like a little?
CC1: I don't like arguing with my friends
Researcher: So, do you get your friends' opinions on a subject you are unsure about?
CC1: Yes, I take their thoughts
Researcher: Do you have discussions on these different ideas?
CC1: I discuss, but I do not do it in a very crowded group. Because when I get very crowded, I get confused

This child thinks a discussion is equivalent to arguing with their friends, and they prefer not to participate. They stated that they had reservations about expressing their ideas and were not competent to make their own decisions. It is important to think about and discuss cultural literacy in terms of the various ideas and reasons these ideas are put forward. CC6 also stated that they would accept an idea presented by the teacher without questioning or evaluating it, as seen in the following words: "I accept whatever my teacher says. What our teacher tells us sounds more interesting and smarter than what anyone else has to say. I would not accept anyone else's ideas that easily." Although this statement indicates that the child was evaluating the information, the cultural literacy demonstrated did not meet various criteria. Assessing why a teacher (as an authority) is a credible resource is an important skill in cultural literacy. CC4 also stated their hesitation in sharing their ideas and inability to express them to the full group, saying, "Sometimes I know the answer to the questions, but I'm hesitant. I'm afraid they will laugh at me. Sometimes my friends laugh a lot." Such statements do not reflect cultural literacy, as cultural literacy requires discussing different ideas to reach a shared view of a subject. This type of process can be promoted by creating a democratic classroom environment. In this case, the child's response indicated that the current classroom environment was an obstacle to developing cultural literacy.

This study aimed to investigate whether the IBL approach affects children's cultural literacy skills. We found a difference in the ability of early childhood students trained with the IBL approach to develop cultural literacy compared with those who were not. This difference between the children was detected using the CLA and semi-structured interviews. These findings show that the IBL approach is effective in developing cultural literacy skills.

There were no significant differences in cultural literacy skills between the experimental and control groups in the pre-test findings. When we examined the post-test CLA data, we found a significant difference in favor of the experimental group for cultural literacy. The quantitative findings indicated that the experimental group had better cultural literacy skills. In this regard, we can claim that using the IBL approach in early childhood learning activities is effective in developing children's cultural literacy skills. Warmansyah et al. (2022) linked the development of cultural literacy to the four core elements of the IBL approach: (a) exploration, (b) inquiry, (c) cooperation, and (d) reflection. It is unclear which of these four elements is most effective in developing cultural literacy skills. However, based on the semi-structured interview findings from our study, we conclude that inquiry, cooperation, and reflection are more effective for improving cultural literacy skills, as the experimental group emphasized that the IBL approach's learning process and activities helped them improve their cultural literacy. In

addition, some previous studies have revealed that inquiry, cooperation, and reflection promote the development of cultural literacy skills (Taylor & Leung, 2020; Sakti et al., 2024; Purnamasari & Sefriyanti, 2025).

Language and expression play a central role in cultural practice (Putra & Oktaria, 2021) and in expressing cultural insights (Suratmi et al., 2024). The importance of understanding the cultural literacy and appreciation that underpin any cultural expression lies in recognizing that language use is a complex cognitive process that requires multiple activities to succeed (Syafnan et al., 2025). Cultural understanding is not possible without spoken and expressed communication (Taylor & Leung, 2020). Children need not only to engage in cognitive activities, such as developing cultural understanding, but also to express their results through verbal and artistic language (Wahyudi, 2023). Wai et al. (2020) stated that as an individual's ability to understand culture develops, it can be affected by factors related to their family, immediate environment, and education. This article focuses on education-related factors. It is important to provide opportunities for children to use language in learning environments. In addition, teachers' behavior, language, and perceptions may have important effects on children's learning and cultural literacy (Sujiono, 2013).

IBL activities help develop exploration, appreciation, and cultural literacy skills and promote high-level thinking (Warmansyah et al., 2022). The IBL process consists of many activities, including constructing understandings, designing explorations to support those understandings, producing evidence from the explorations, explaining the relationship between the understandings and the evidence, holding discussions, and responding to alternative perspectives with evidence. The understandings produced must be evaluated by people other than their advocates (Sakti et al., 2024). Participating in these activities, which encourage high-level thinking, can help children develop cultural literacy and improve their existing skills. In addition to constructing understanding during the process of inquiry, it is important to review and evaluate that understanding for its deficiencies (Taylor & Leung, 2020). Group discussions, expressive activities, and the evaluation of others' understandings and the reaching of agreement contribute to individuals' cognitive development (Fuadia, 2022). The discursive skills that children gain in dialogues with their peers are valuable for expressing effective cultural understanding and for extending the thinking that underlies the ideas they defend (Purnamasari & Sefriyanti, 2025).

Participating in cultural discussions provides external support for anticipating diverse perspectives, reaching common conclusions from different ideas using evidence, and developing cultural literacy skills (Wai et al., 2020). This is also evident in the interview findings.

We can argue that the children emphasized the importance of (1) designing and implementing explorations with their peers, (2) evaluating variables, (3) generating evidence for their ideas, (4) formulating explanations using the evidence, and (5) sharing their understandings. Moreover, it was apparent that the children valued hearing different ideas, the discovery process, and working in small groups with their friends. At the same time, children pointed out that they shared their ideas and, if necessary, corrected their misconceptions. However, we observed that the control group children made more superficial assessments about their cultural literacy skills during the interviews and even used phrases that did not reflect cultural literacy. This suggests that the IBL approach creates effective learning environments for developing cultural literacy skills, including cultural recognition, appreciation, examination of variables, evaluation, and self-evaluation. We observed that the experimental group children were more able to express themselves, whereas the control group children used simpler, more superficial expressions. This may also indicate the effectiveness of the IBL approach. Because the experimental group children communicated with their teachers and peers throughout the activities, they constantly exchanged ideas and justified them with evidence.

Given that one of the primary aims of early childhood education is to inculcate cultural literacy skills (Kemendikbudristek, 2022), the importance of the current study becomes evident. Sujiono (2013) stresses that learning environments that promote cultural literacy skills should be established in classrooms and provides basic recommendations to teachers who want to develop their children's cultural literacy skills. They state that the teachers should (a) be examples of cultural appreciation themselves, (b) set tasks that help develop cultural literacy through activities, and (c) ask open-ended questions to make children think freely, rather than providing definite answers. Conducting investigations, engaging in deeper thinking, and fostering cultural understanding strengthen reflection and encourage cultural literacy (Sakti et al., 2024). Teachers should ask questions that promote cultural literacy in children and encourage them to think more deeply. In the IBL approach, the teacher is not the provider of readily available information but a guiding figure who helps children achieve knowledge.

It was stated that the moments of uncertainty during the discussion were necessary because they provided constructive opportunities to evaluate, discuss, and deepen children's reasoning, leading to productive learning (Taylor & Leung, 2020). As stated above, the aim was for children to experience more moments of uncertainty through the teacher's questions. This was taken into account in the current study and inquiry activities, and cultural literacy skills were adopted. To this end, the children were asked questions to promote higher-level thinking, to initiate and continue the "sharing" stage, and to help them engage in dialogue with their peers

and teachers during the study. All the children were actively involved in the activities at every stage. In addition, when a child asked a question, the teacher asked guiding questions to help the child reflect and make their own comments. We believe that the continual promotion of high-level thinking is effective in developing cultural literacy skills.

Cultural literacy is a meaningful and reflective mode of understanding used when deciding what to appreciate or preserve (Putra & Oktaria, 2021). An individual seeks appropriate evidence to evaluate their options while making a decision, and this evaluation reflects a logical process (Syafnan et al., 2025). Taylor and Leung (2020) highlighted the importance of the discussion process and stated that, as understandings and evidence for the development of cultural knowledge emerged, these should be discussed. Recognizing the relationship between evidence and understanding is a key achievement, and developing an evidence-based understanding is considered a central element of cultural literacy (Sakti et al., 2024). Having to seek suitable evidence to assess understanding and evaluate it may have contributed to the development of children's cultural literacy throughout the IBL activities. In addition to seeking evidence, the children also pointed out that they shared their ideas with their friends, evaluated different ideas, became aware of the misconceptions or flaws in their own thinking, and changed their opinions. Thus, we can argue that the IBL approach was effective in developing cultural literacy and its many sub-skills, including evaluation, analysis, use of evidence, exploration, and appreciation.

CONCLUSION

Based on the research and discussion results, it can be concluded that implementing traditional culture introduction activities through an inquiry-based learning approach in PAUD Sumengko Village, Wringinanom District, can develop early childhood cultural literacy. Traditional culture introduction activities, such as games, regional songs, folk tales, traditional clothing, and traditional musical instruments, provide meaningful learning experiences for children. Children not only recognize forms of local culture but also express their learning experiences through oral language, pictures, and play activities. This shows that children's cultural literacy is developing, especially in the ability to recognize, understand, and express culture in their environment.

In addition, activities that introduce children to traditional culture positively impact their social and emotional development. Children learn to work together, respect their friends, and take pride in their local culture. The role of teachers as facilitators is very important in designing contextual, fun activities that are appropriate to the child's developmental stage. Thus, traditional culture introduction activities can be used as an effective learning strategy to develop

early childhood cultural literacy while instilling character values and a love of the nation's culture from an early age.

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