

Needs Analysis of Project-Based Learning Integrated with Local Wisdom to Enhance Literacy in Elementary Schools

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ARTICLE INFO

Keywords:

project-based learning;
literacy;
folklore;
local wisdom;
elementary education

Article history:

Received 2025-05-12

Revised 2025-05-27

Accepted 2025-12-28

ABSTRACT

Literacy in elementary education involves not only reading and writing but also critical, creative, and contextual thinking. However, students often face difficulties in writing due to limited exposure to contextualized learning models and culturally relevant materials. This study explores the need for a Project-Based Learning (PjBL) model integrated with local wisdom to enhance students' writing literacy, particularly in composing folklore. This paper reports on the initial analysis phase of a broader model development effort using the ADDIE framework. A mixed-methods approach was employed, involving 61 fourth-grade students and 3 teachers from SD Negeri Air Balui. Data were gathered through validated questionnaires and semi-structured interviews and analyzed descriptively. The findings indicate a strong need for a culturally contextual PjBL model. Over 85% of students and 75% of teachers expressed that such a model would significantly support literacy development, particularly in writing. Students also identified difficulties in idea generation and writing processes, largely due to limited instructional support and media. Integrating local wisdom into PjBL is seen as an effective strategy to enhance literacy, foster cultural appreciation, and build essential 21st-century skills. The study emphasizes the importance of developing a contextual, collaborative, and meaningful learning model to support both academic and character development in elementary education.

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1. INTRODUCTION

Education is a critical component in building a society of integrity. Education, as a vehicle for character and competency development, helps prepare the next generation to respond to increasingly diverse and complex global dynamics. According to (Fadhila & Rakhmawati, 2024), the purpose of education is to raise a generation of morally upright and intelligent individuals. Good reading skills are a key measure of a country's educational excellence (Dilla et al., 2024). However, statistics suggest that Indonesia's literacy rate is still not perfect. The outcomes of international tests such as PISA and national evaluations through INAP show that many Indonesian students still struggle to grasp, analyze, and conclude information from texts. Guidance or reading and writing exercises can help students improve their reading and writing skills in elementary schools (Alfa et al., 2025).

Literacy among elementary school students plays an essential role in shaping their academic foundations (Yulia & Inayatur, 2025). However, the obstacles to raising reading interest are not limited to the educational environment, but also include the social and familial context. Reading interest among elementary school students is low (Wulandari et al., 2020). Challenges in increasing children's literacy include a lack of access to books, a lack of parental support, and low community involvement (Yulia & Inayatur, 2025). This highlights the need for a more creative, contextualized, and pleasurable approach to learning (Subagyo1, 2025).

To address this issue, innovative teaching strategies are required that inspire students to be more creative and inventive, one of which is the use of a project-based learning model (Made & I, 2024). This strategy encourages students to learn actively by completing challenging projects that require investigation, cooperation, and critical thinking (Fitriana, 2024). Several studies have indicated that project-based learning can help students improve their writing and reading skills by making learning more meaningful and contextual. Furthermore, according to (Handiani, 2025), this technique allows students to examine concepts and experiences in real-world contexts.

Furthermore, using local knowledge will improve the effectiveness of project-based learning. According to (Putri, 2024), local wisdom is a component of a cultural identity that includes values, customs, and information passed down from generation to generation. Including local wisdom in literacy projects not only improves kids' academic skills but also fosters a love of their regional culture (Sarumaha et al., 2024). Folklore studies are an important part of Indonesian language lessons in elementary schools. This is because by teaching folklore material, we have instilled positive values, which are character education in students (Moh et al., 2024).

Thus, the implementation of a project-based learning model combined with local wisdom is one potential solution to overcome the low literacy skills of students. This approach is believed to be able to answer the challenges of 21st-century learning, building students who are not only intellectually superior, but also uphold the values of the nation's culture. Therefore, it is important to develop this learning model systematically to improve the quality of education, especially in writing literacy at the elementary school level (Ramadhan, 2023).

The first stage taken in the process of developing this learning model begins with a needs analysis. Needs analysis is the process of gathering information about what students and teachers need to achieve learning goals and improve the success and accuracy of learning (Harahap & Albina, 2025). Needs analysis is the process of finding and collecting information about students' language learning needs in the form of conditions that exist between what students receive, what students expect, and what students should receive (Oktarina et al., 2023). The results of the questionnaire and interviews with students and teachers showed an urgent need to implement more enjoyable and contextual learning.

Based on interviews with fourth-grade teachers at SD Negeri Air Balui, several challenges were identified in the teaching and learning process. These include limited access to and use of technology in schools, the lack of teacher expertise in applying creative, project-based, or digital teaching

methods, and the varying writing abilities of students. Furthermore, interviews conducted with three students revealed that teachers predominantly use printed textbooks and whiteboards as the main instructional media. Consequently, students tend to be less interested in writing activities, often feel bored, and perceive writing as a difficult task. This leads to a decline in their motivation and writing skills, ultimately hindering the development of their literacy competencies. These conditions underscore the urgent need to design and implement a learning model that is not only innovative but also contextual and engaging—one that connects meaningfully with students' everyday experiences and effectively enhances their interest and performance in writing. Thus, the goal of this research is to examine the needs of students and instructors to build a learning model based on project-based learning combined with local wisdom to increase literacy in the writing of folk stories at SD Negeri Air Balui.

2. METHODS

This research is a type of research and development (R&D) that focuses specifically on the analysis stage of the ADDIE model. It employs a mixed-methods approach, combining both qualitative and quantitative methods. The research subjects consisted of 61 fourth-grade students and 3 fourth-grade teachers from SD Negeri Air Balui. The instruments used included questionnaires and interviews. The questionnaire, distributed via Google Forms, contained 37 items using a 4-point Likert scale. It was developed based on predefined variable indicators and expert input, and it was validated prior to use to ensure reliability and appropriateness. A limited pilot test was conducted on respondents with similar characteristics to assess the validity of the instrument. Interviews were conducted with 3 students and 3 fourth-grade teachers using open-ended questions, based on an interview guide that had been reviewed by experts. Prior to data collection, the researcher explained the purpose and procedures of the study to all participants. Written informed consent was obtained from both the students and their parents/guardians, emphasizing that participation was voluntary and that all data would be kept confidential. The student and teacher needs analysis questionnaire is structured as follows:

Table 1. The Questionnaire Grid of Students' and Teacher's Need Analysis

No	Indicator	Number of Statements
1	Learning Structure	20
2	Reaction Principle	4
3	Social System	4
4	Support System	7
5	Instructional Impact and Support	2

3. FINDINGS AND DISCUSSION

3.1 Finding

Identification of learning needs refers to the classification proposed by (Macalister&Nation, 2019), namely (1) necessities are objective needs that students must have to achieve learning targets, (2) lack, are weaknesses or limitations of abilities that students currently have, and (3) needs, are subjective based on the interests and desires of the students themselves. These three components are important aspects used to identify student needs in the development of a project-based learning model, combined with local wisdom, to improve literacy in the material of writing folk tales at SD Negeri Air Balui.

3.1.1 Necessities

Writing learning for students in elementary school necessitates a focus on both process and outcome (Oktarina *et al.*, 2023). To optimize this learning, a project-based learning model is used and paired with local wisdom to help the teaching and learning process (Oktarina *et al.*, 2023). The basic aims of writing learning are (1) to promote a love of writing in students, (2) to build students' writing skills, and (3) to nurture students' creative souls to write (Komalasari *et al.*, 2022).

The use of local wisdom in the project-based learning model is intended to develop students' writing skills through folklore topics. Folklore originating in the surrounding area helps students develop ideas since it is relevant to their lives (Fadhila & Rakhmawati, 2024). Quality writing and learning require an understanding of writing and learning concepts. It is believed that these writing principles would serve as a guideline for teachers as they conduct the writing learning process. Brown proposed the following writing principles (Komalasari *et al.*, 2022):

1. Written learning must be based on practical application.
2. A balance must be struck between the process and the outcome of writing.
3. Consider the cultural basis of students' literacy.
4. Take a whole-language approach, incorporating reading and writing.
5. Optimize the use of realistic writing activities.
6. Implement in three steps: prewriting, writing, and postwriting.
7. Apply interactive, cooperative, and collaborative writing strategies.
8. Correct students' writing errors using the appropriate method.
9. Explain the rules of writing from beginning to end, including the types, rules, and rhetoric of the text.

The greatest challenge in basic education in Indonesia today is students' limited critical and creative thinking skills, which are still mostly focused on memorization methods (Nuril *et al.*, 2024). Implementing project-based learning with local wisdom engages students in both grasping the content and internalizing cultural values in their context. This approach is also expected to foster a sense of social responsibility and solidarity among students, which are important values in local wisdom. This strategy enables students to learn through direct experience, enhance their connection to local culture, and build applicable skills for global concerns. This step is consistent with attempts to maintain culture and improve school quality for 21st-century learning (Nuril *et al.*, 2024).

Project-based learning is a learning approach in which students participate in a project activity that results in a product. The project-based learning approach has the following stages: defining basic questions, designing project planning, setting a timetable for making, monitoring project activity and development, testing outcomes, and evaluation (Eviota & Liangco, 2020).

Project-based learning is innovative learning that is centered on students and teachers who have an important role as motivators and facilitators, students are given the freedom and independence to build their knowledge. The advantages of the project learning model are as follows: (1) motivating students to learn by making projects, (2) making students creative and innovative in learning and problem solving, (3) increasing collaboration between students, (4) fostering scientific attitudes such as honesty, thoroughness, responsibility, and creativity (Arini *et al.*, 2024).

3.1.2 Needs

The dimension of needs pertains to students' subjective needs. The questionnaire and focused interviews revealed that students were more interested in learning activities that required direct practice, group collaboration, and the study of stories or activities relevant to their lives. Many

students expressed an interest in area folklore, activities involving locally sourced materials, and collaborative and difficult learning. These findings highlight the need for implementing a project-based learning paradigm paired with local expertise that can meet students' desires to learn through authentic, meaningful experiences that are relevant to their socio-cultural contexts. The statement items in the requirements analysis questionnaire were created using the following components: (1) Learning structure, (2) Reaction principle, (3) Social system, (4) Support system, (5) Instructional and accompanying impacts (Utami, 2023). The instrument used consisted of 37 statement items, which were grouped into several aspects with details of 20 learning structure items, 4 reaction principles, 4 social systems, 7 support systems, and 2 instructional and accompanying impacts.

The requirements criteria are shown in the table below:

Table 2. The Percentage Category of Need Score

Average Percentage	Category
76%-100%	Strongly Need (SN)
51%-75%	Need (N)
26%-50%	Less Need (LN)
0%-25%	Not Need (NN)

Source (Oktarina et al., 2023)

The results of the analysis of student and teacher needs at SD Air Balui, Sanga Desa Sub-District, Musi Banyuasin Regency, are presented in the following table.

a) Learning Structure Aspect

The following presents data from the analysis of students' and teachers' needs for the development of a project-based learning model combined with local wisdom to improve student literacy at SD Negeri Air Balui, Sanga Desa Sub-District, Musi Banyuasin Regency. In the learning structure aspect, there are 20 statements analyzed, which are:

Table 3. The Learning Structure

No	Statement	The Result of Students' Category	The Result of Teachers' Category
1	The teacher explains the project design that emphasizes local wisdom as the main focus	91.80% (SN)	83.33% (SN)
2	The teacher shows a learning video containing local wisdom	87.30% (SN)	83.33% (SN)
3	Students listen to a learning video containing local wisdom.	93.85% (SN)	83.33% (SN)
4	The teacher and students interact through discussions and question and answer sessions regarding learning and projects to be implemented	83.20% (SN)	66.67% (SN)
5	The teacher provides examples of local wisdom-based projects that will be worked on by students	89.75% (SN)	91.67% (SN)
6	The teacher divides students into several groups, each group consisting of 4-5 people	78.69% (SN)	75.00% (SN)
7	The teacher and students make an agreement on the chosen theme combined with local	94.67% (SN)	66.70% (SN)

wisdom			
8	Students discuss the framework of the project to be carried out in groups	88.93 %(SN)	50.00%(KN)
9	Discussion results are sent via Google Form	84.84% (SN)	75.00%(N)
10	Teachers and students jointly design a schedule to carry out the project	92.21%(SN)	58.33%(N)
11	Students and teachers set a deadline to complete the project	88.93% (SN)	75.00%(N)
12	Students write together in groups based on the chosen local wisdom theme	88.11% (SN)	75.00%(N)
13	Teachers monitor the process of writing material about the chosen local wisdom	88.40 %(SN)	91.67%(SN)
14	Students discuss the difficulties and challenges faced	87.30 %(SN)	83.33%(SN)
15	Each group presents the results of their project	79.92 %(SN)	91.67%(SN)
16	Students and teachers conduct a Q&A session	77.46% (SN)	91.67%(SN)
17	Teachers help students in discussions to provide suggestions, responses, and assessments	84.84 %(SN)	100%(SN)
18	Teachers provide responses and input for improvement.	82.38 %(SN)	83.33%(SN)
19	Students make revisions according to suggestions from educators and colleagues	77.05%(SN)	83.33%(SN)
20	Students share learning experiences while doing the project	80.33%(SN)	75.00%(N)
Average Percentage		85.99%(SN)	79.16%(SN)

The results of the needs analysis reveal a consistently high level of interest and perceived necessity among both students and teachers regarding the integration of local wisdom in project-based learning.

The first statement, emphasizing the importance of teachers explaining project design based on local wisdom, showed a strong perceived need, with over 90% of students and more than 80% of teachers categorized in the *strongly needed* (SN) category. Similarly, the second statement, concerning the presentation of instructional videos incorporating local wisdom, received strong support from over 85% of students and more than 80% of teachers, also classified as *strongly needed*.

For the third statement, which involved students listening to instructional videos based on local wisdom, more than 90% of students and over 80% of teachers rated it as *strongly needed*. The fourth statement, relating to collaborative activities such as discussions and Q&A between students and teachers, was identified as *strongly needed* by over 80% of students and more than 65% of teachers.

The fifth statement, regarding teachers providing examples of local wisdom-based projects, was identified as *strongly needed* by over 85% of students and over 90% of teachers. The sixth statement, which focused on dividing students into groups of 4–5 members, was rated as *needed to strongly needed* by approximately 80% of students and 75% of teachers.

The seventh statement, addressing agreement on project themes incorporating local wisdom, indicated a *very high need* among students (>90%), whereas teachers reported a *moderate need* (>65%). Similarly, the eighth statement, involving group discussions on project frameworks, was perceived as

strongly needed by over 85% of students, but only 50% of teachers, placing it in the *less needed* (LN) category from the teacher perspective.

The ninth statement, related to submitting group discussion results via Google Forms, showed a high level of need, with over 80% of students and 75% of teachers categorized as *strongly needed* or *needed* (N). The tenth statement, on collaboratively scheduling project implementation, was seen as *very strongly needed* by more than 90% of students, while only 55% of teachers expressed a *moderate need*.

For the eleventh statement, which concerned setting deadlines for project completion, 88.93% of students and 75% of teachers indicated a high level of need. The twelfth statement, involving group writing based on a local wisdom theme, was similarly rated, with 88.11% of students and 75% of teachers expressing a *strong need*.

The thirteenth statement, focusing on teacher monitoring during the writing process, showed very strong support from both students (88.4%) and teachers (91.67%), categorized as *strongly needed*. The fourteenth statement, on discussing challenges during the project, was also rated as *strongly needed* by 87.30% of students and 83.33% of teachers.

The fifteenth statement, regarding group presentations of project outcomes, was rated *strongly needed* by 79.92% of students and 91.67% of teachers. The sixteenth statement, which included student-teacher Q&A sessions, showed moderate to high demand, with 77.46% of students and 91.67% of teachers rating it as *strongly needed*.

The seventeenth statement, addressing teacher support through suggestions, feedback, and evaluation, revealed a very high need, with 84.84% of students and 100% of teachers rating it as *strongly needed*. The eighteenth statement, concerning teachers' suggestions for improvement, was rated as *needed* by 67.62% of students and *strongly needed* by 83.33% of teachers.

The nineteenth statement, about students revising their work based on feedback, was *strongly needed* by 77.05% of students and 83.33% of teachers. Finally, the twentieth statement, which involved students sharing their learning experiences during the project, was perceived as *strongly needed* by 80.33% of students and *needed* by 75.00% of teachers.

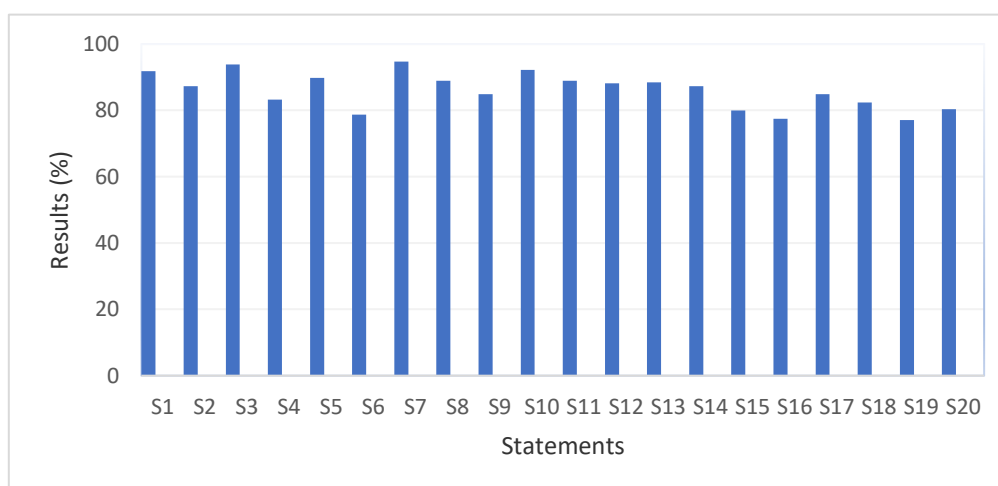


Figure 1. Students Needs For The Learning Structure Aspects

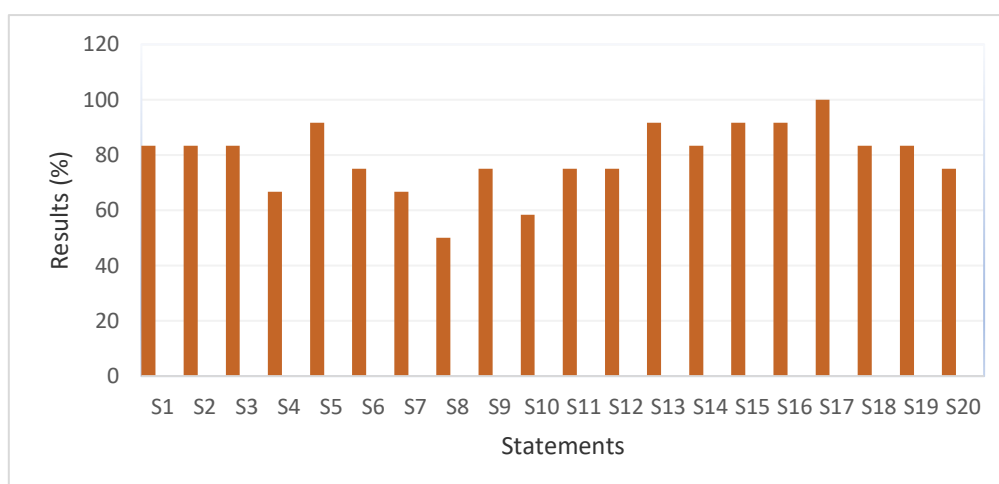


Figure 2. Teachers Needs For the Learning Structure Aspects

b) Principal Aspect of Reaction

The data presented below are from a study of students' and teachers' needs for the development of a project-based learning approach paired with local wisdom to promote student literacy at SD Negeri Air Balui. There are four statements, and the findings achieved are as follows:

Table 4. Reaction Principle

No	Statement	Students' Category Result	Teachers' Category Result
1	Teacher as facilitator	96.72%(SN)	100%(SN)
2	Teacher as motivator	91.36% (SN)	75.0%(N)
3	Teacher as manager	75.41% (N)	83.33%(SN)
4	Teacher as evaluator	70.49% (N)	75.0%(N)
Average Percentage		83.49%(SN)	83.33%(SN)

The first statement, regarding teachers providing supervision and constructive criticism throughout the project, shows it is strongly needed, with 96.72% of students strongly needing it and teachers scoring 100%, categorized as strongly needed (SN).

The second statement, regarding teachers promoting discussion and reflection for students to connect literacy to real-life experiences, shows it is strongly needed, with 91.36% of students strongly needing it and teachers scoring 75%, categorized as need (N).

The third statement, regarding teachers encouraging students to think critically and creatively by linking literacy to local culture, shows a moderate need, with 74.59% of students needing it and teachers scoring 83.33%, categorized as strongly needed (SN).

The fourth statement, regarding teachers evaluating the outcomes of students' efforts, shows a moderate need, with 70.49% of students needing it and teachers scoring 75%, categorized as need (N).

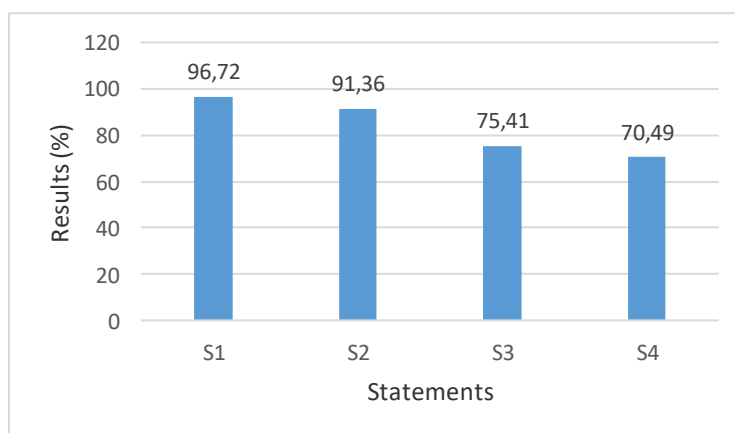


Figure 3. Students Needs For The Principal Aspect of Reaction

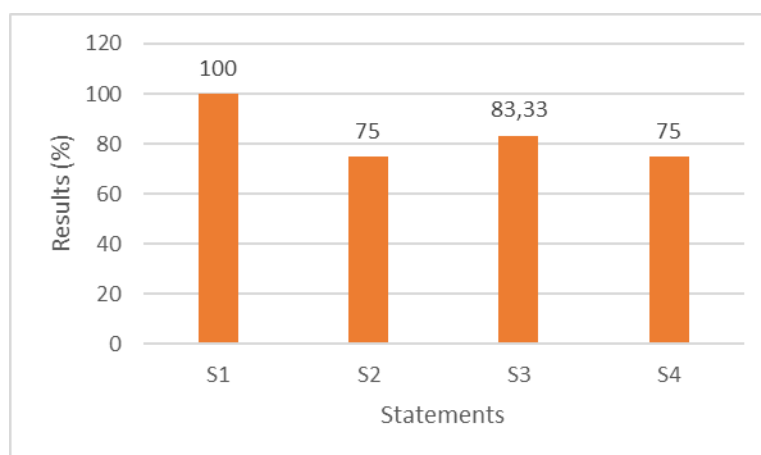


Figure 4. Teachers Needs For The Principal Aspect of Reaction

c) Social System Aspects

The following data comes from an analysis of the needs of both teachers and students at SD Negeri Air Balui for the development of a project-based learning model that incorporates local knowledge to raise student literacy. There are four statements in this aspect of the social system, specifically:

Table 5. Social System

No	Statement	Students' Category Result	Teachers' Category Result
1	Students interact with students during the learning process	91.80%(SN)	83.33%(SN)
2	Students interact with other groups in the learning process	90.57%(SN)	83.33%(SN)
3	Students interact with teachers during the learning process.	90.98%(SN)	83.33%(SN)
4	Teachers interact with groups of students during the learning process	98.77%(SN)	83.33%(SN)
Average Percentage		93.03%(SN)	83.33%(SN)

The findings indicate a consistently high level of need for interaction during the learning process, as perceived by both students and teachers.

The first statement, concerning student-to-student interaction during learning, was rated as *strongly needed* by 91.80% of students and 83.33% of teachers. The second statement, which addressed interactions between student groups, similarly showed a *strong need*, with 90.57% of students and 83.33% of teachers indicating this category.

The third statement, focusing on student-teacher interaction, was also perceived as *strongly needed*, with 90.98% of students and 83.33% of teachers expressing this view. Finally, the fourth statement, related to teacher interaction with student groups, demonstrated the highest level of perceived need, with 98.77% of students and 83.33% of teachers categorizing it as *strongly needed*.

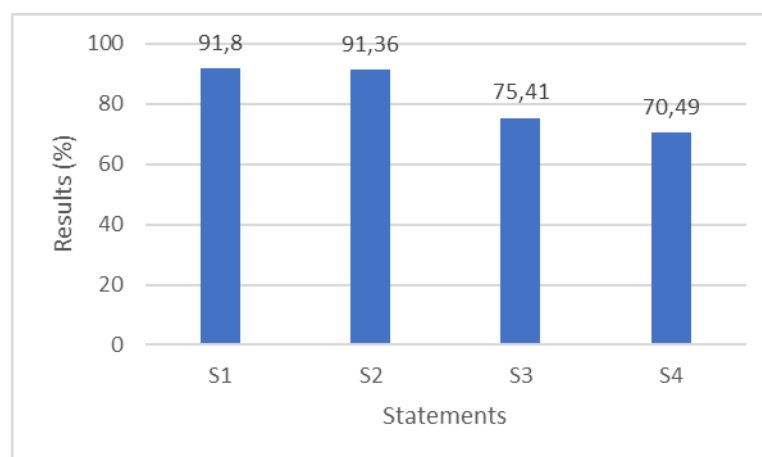


Figure 5. Students Needs For Social System Aspects

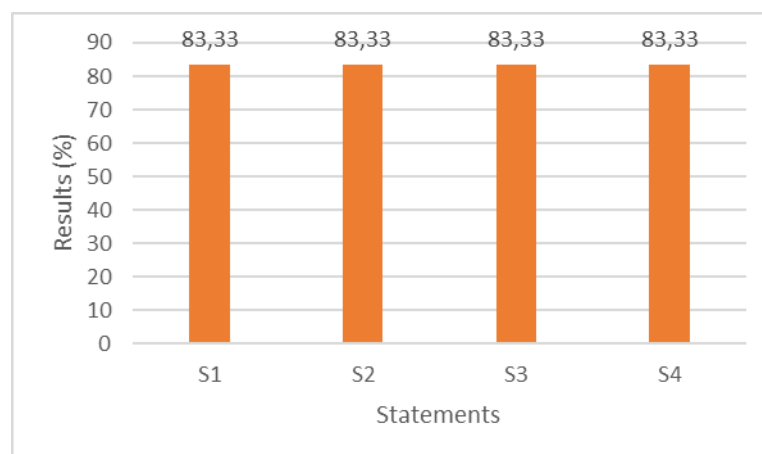


Figure 6. Teachers Needs For Social System Aspects

d) Support System Aspect

The following is the data from the analysis of students' and teachers' needs for the development of a project-based learning model combined with local wisdom to improve student literacy at SD Negeri Air Balui. In this support system aspect, there are 7 statements, which are:

Table 6. The Supporting System

No	Statement	Students' Category Result	Teachers' Category Result
1	The media used in the learning model is in the form of video	95.14% (SN)	75.0%(N)
2	The media used in the learning model is in the form of a PDF	72.95% (N)	58.33%(N)
3	The media used in the learning model is in the form of Power Point	84.02 % (SN)	66.67%(N)
T 4	The media used in the learning model is in the form of YouTube links	85.25% (SN)	83.33%(SN)
5	The equipment used is in the form of an LCD	81.56% (SN)	58.33%(N)
6	The equipment used is in the form of a whiteboard	97.13% (SN)	75.0%(N)
7	The equipment used is in the form of a stable internet network	95.49%(SN)	91.67%(SN)
Average Percentage		87.36%(SN)	72.61%(SN)

The analysis of student and teacher perceptions regarding the use of media and equipment in the learning model reveals a generally high level of need, particularly for technology-integrated instructional tools.

The first statement, concerning the use of media in the video-based learning model, was identified as *strongly needed* by 95.14% of students, while 75.00% of teachers rated it as *needed* (N). The second statement, related to the use of PDF-based learning materials, was rated as *needed* by 72.95% of students and 58.33% of teachers. The third statement, involving the use of PowerPoint presentations, received a *strongly needed* rating from 84.02% of students, while 66.67% of teachers categorized it as *needed*.

The fourth statement, which focused on the use of YouTube links as a learning medium, was perceived as *strongly needed* by 85.25% of students and 83.33% of teachers, the latter indicating a *strongly needed* (SN) category. The fifth statement, regarding the use of LCD projectors as instructional equipment, was rated as *strongly needed* by 81.56% of students and *needed* by 58.33% of teachers.

The sixth statement, related to the use of whiteboards during the learning process, was also highly rated, with 97.13% of students identifying it as *strongly needed* and 75.00% of teachers categorizing it as *needed*. The seventh statement, concerning the necessity of a stable internet connection, showed the highest levels of agreement, with 95.49% of students and 91.67% of teachers classifying it as *strongly needed* (SN).

These findings suggest that the preferred learning model requires the integration of various media formats, including videos, PowerPoint slides, YouTube links, and PDFs. Students appear to recognize the advantages of incorporating technology into the learning process, particularly in terms of increasing engagement and motivation. As noted by Jaya et al. (2024), the use of interactive and dynamic media can significantly enhance students' interest in learning. Moreover, technological tools expand literacy activities beyond traditional print-based resources, allowing for a more interactive and enriched learning experience (Prasetyo et al., 2024).

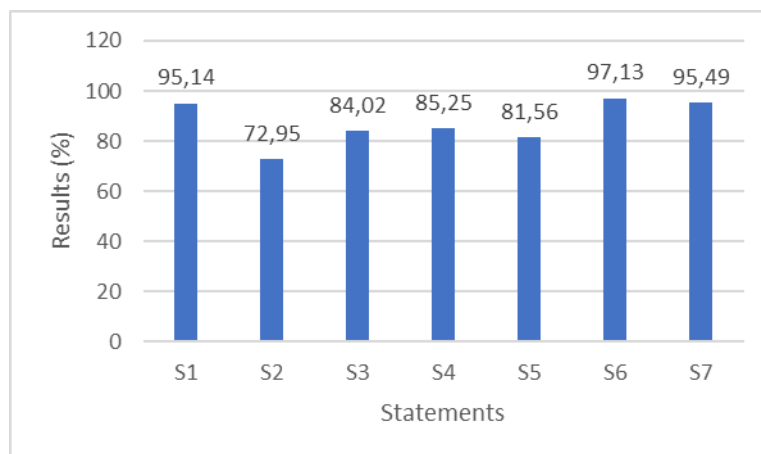


Figure 7. Students' Needs For the Support System Aspect

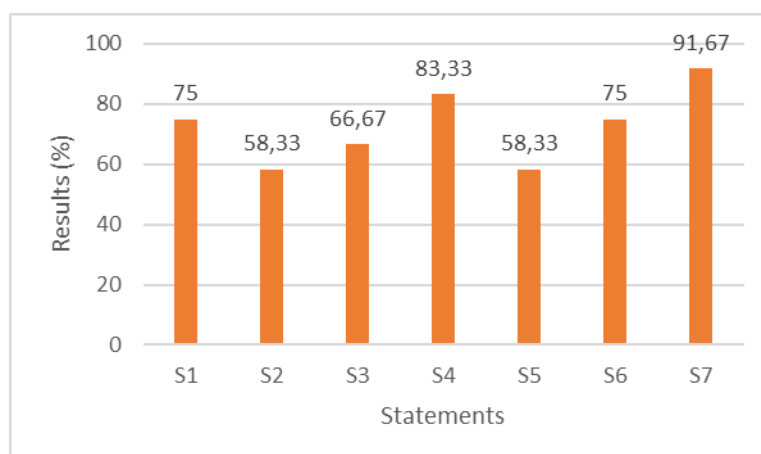


Figure 8. Teachers' Needs For Support System Aspect

e) **Instructional and Accompanying Impact Aspects**

The following data comes from an analysis of the needs of the students at SD Negeri Air Balui to promote literacy through the use of local knowledge when combined with a project-based learning model. There are 2 statements in the aspect of instructional and concomitant impacts, specifically.

Table 7. Instructional Impact and Accompanying Impact

No	Statement	Students' Category Result	Teachers' Category Result
1	Increasing student literacy in cognitive, skills, and attitude aspects towards learning	92.62% (SN)	75.0%(N)
2	Forming student character in accordance with the Pancasila Student Profile, namely mutual cooperation, creativity and independence	95.49% (SN)	75.0%(N)
Average percentage		94.05 %(SN)	75.0%(N)

The first statement, concerning the enhancement of student literacy in cognitive, skill, and attitude components of learning, shows it is strongly needed, with 92.62% of students strongly needing it and teachers scoring 75.00%, categorized as need (N).

The second statement, regarding the development of student character through the Pancasila Student Profile—which includes cooperation, creativity, and independence—shows it is strongly needed, with 95.49% of students strongly needing it and teachers scoring 75.00%, categorized as need (N).

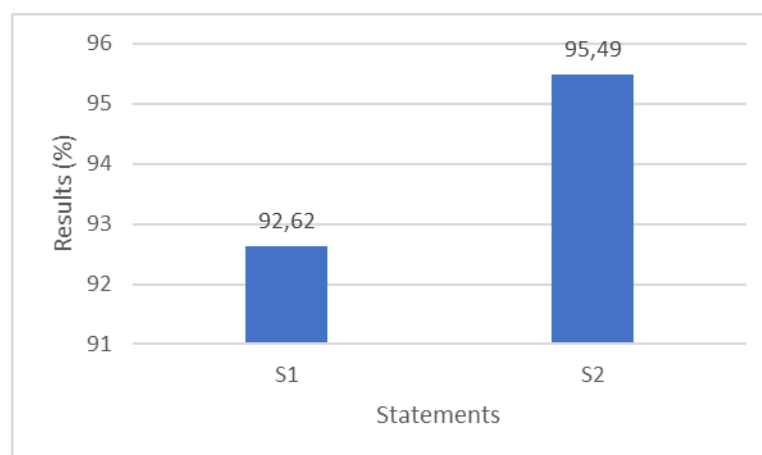


Figure 9. Students' Needs For Instructional Impact and Accompanying Impact

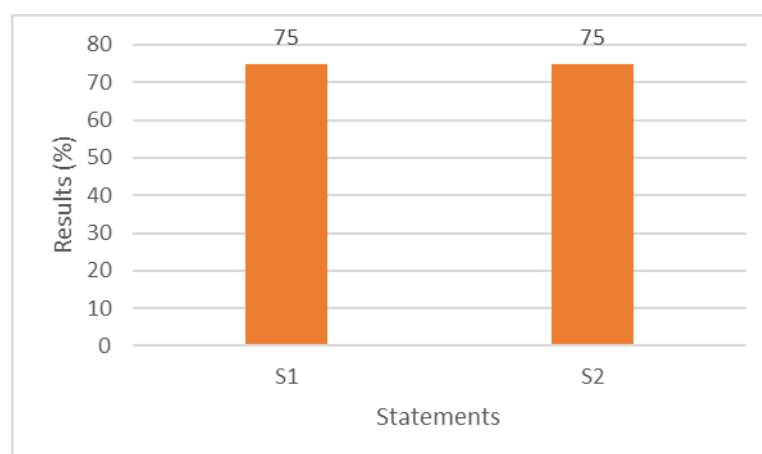


Figure 10. Teachers' Needs For Instructional Impact and Accompanying Impact

All aspects of the needs analysis indicate a high level of need from both students (>85%) and teachers (>75%), with *social system* and *instructional impact* emerging as the highest-scoring aspects. The Project-Based Learning model integrated with local wisdom is perceived as highly necessary by both parties to enhance literacy, particularly in the context of writing folklore.

The aspects of *instructional structure*, *reaction principles*, and *support systems* also show significant levels of need. Although the teachers' need in the support system aspect is slightly lower, it still falls within the "needed" category. These findings highlight the urgency of developing a contextual and collaborative model for elementary school students.

The following presents the percentage of the results of the analysis of student and teacher needs in each aspect in the form of a table.

Table 8. The Analysis Result of Students’ and Teachers’ Needs

No	Aspect	Students’ Percentage Result	Category	Teachers’ Percentage Result	Category
1	Learning Structure	85.99%	SN	79.16%	SN
2	Reaction Principle	83.49%	SN	83.33%	SN
3	Social System	93.03%	SN	83.33%	SN
4	Support System	87.36	SN	72.61%	N
5	Instructional and Accompanying Impact	94.05	SN	75.0%	N

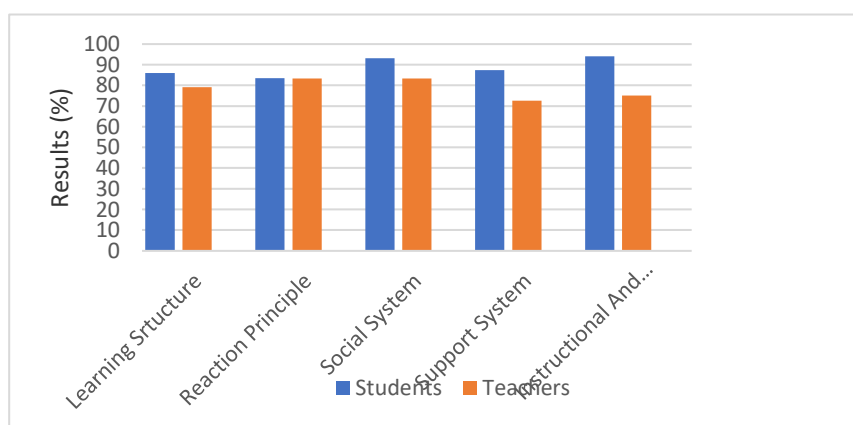


Figure 11. The Analysis Result of Students’ and Teachers’ Needs

3.1.3 Lack

When completing a requirements analysis, identifying shortcomings is a key reference for determining what areas of writing activities need to be improved. Data about shortcomings in the process of learning to write folk tales was collected through the distribution of a needs questionnaire. The questionnaire was distributed on March 7, 2025, at SD Negeri 1 Air Balui, SD Negeri 2 Air Balui, SD Negeri 3 Air Balui, and SD Negeri 4 Air Balui, with 61 students responding. This questionnaire contains 37 questions and one open question about the shortcomings of the learning model used so far in teaching students to write folk tales in grade 4 at SD Negeri Air Balui in terms of learning steps, teacher roles, classroom interactions, learning media, and instructional impacts.

Based on the results of the needs questionnaire, the researcher summarized many student responses, including:

- 1) The teacher does not provide examples of folk tales that can be used as sources of inspiration, causing students to have difficulty with the structure and substance of the required folk tales.
- 2) A lack of teacher explanation of the steps for composing folk stories, leading students to not clearly understand the stages.
- 3) Assignments are given independently, resulting in a lack of student engagement and debate. This contributes to a lack of idea interchange among students, which should increase thoughts and comprehension when writing folk tales.
- 4) Learning becomes less enjoyable when learning resources are limited and do not include media variety such as photos or videos. Visual media, such as images or videos, should be

able to help students grasp the plot, characters, settings, and moral lessons in folk tales in a more clear and enjoyable way.

As a result, teachers must provide and develop creative learning tools that align with their students' writing abilities. Technology can be used to deliver more engaging and dynamic learning materials, such as movies or visual examples of writing. As a result, students will be more inspired to express themselves through writing and improve their writing skills. Researchers also collected information about hurdles in the process of writing folklore through open interviews with grade IV students at SD Negeri Air Balui, using interview rules. The researcher performed the interview on March 10, 2025. Based on the findings of the interviews, researchers discovered several shortcomings in learning, particularly in the material on writing folklore, namely:

- 1) Students are still having difficulty grasping the stages of the folklore writing process.
- 2) Students have a passive approach to learning activities, lack confidence, and are embarrassed to ask questions.
- 3) Some students demonstrate a lack of excitement and motivation for learning to write folklore.

3.2 Discussion

The development of a Project-Based Learning (PjBL) model integrated with local wisdom has a significant instructional impact, especially in improving student literacy in cognitive, skill, and attitude aspects of learning. In addition to integrating technology into learning schools are also responsible for equipping student with computer, information, and digital literacy skills (Luisa et al., 2024). Students become more active, capable of critical thinking, and skilled in organizing and presenting information meaningfully. Additionally, this model also fosters student character in alignment with the Pancasila Student Profile, such as cooperation in group work, creativity in completing projects, and independence in managing the learning process.

This study reinforces previous research indicating that project-based learning incorporating local cultural values effectively enhances students' writing literacy (Berliana Alvionita Pratiwi et al., 2024). By engaging in projects that include local content, students are encouraged to develop structured, meaningful, and creative writing skills. Writing literacy is not only viewed as a technical skill but also as a means of expressing ideas, cultural values, and their learning explorations (Ayu et al., 2024).

These findings align with international studies demonstrating that culturally integrated PjBL significantly improves students' literacy and collaboration skills while fostering strong social values and character. These findings provide important guidance for curriculum developers and teacher training programs to integrate project-based learning models infused with local wisdom. Curricula should be designed to allow active learning that incorporates local cultural values, thus holistically enhancing literacy across cognitive, skill, and attitudinal domains.

Teacher training should focus on strengthening teachers' abilities to manage PjBL effectively, including how to connect learning materials with local culture and develop students' character according to the Pancasila Student Profile. Additionally, teachers need to be equipped with digital and adaptive pedagogical skills to optimize this model in classroom practice. Project-Based Learning is characterized by a situational learning approach that involves collaboration among learners, real-world context, and self-reflection on the learning experience (Kong et al., 2024).

Although the PjBL model integrated with local wisdom shows positive outcomes, key challenges in implementation include teacher digital readiness and supporting infrastructure. Some teachers still face difficulties in effectively utilizing digital technology, while infrastructure such as internet access,

multimedia devices, and other learning facilities remain unevenly distributed, especially in more remote areas.

This aligns with the needs assessment conducted among students and teachers in several elementary schools in Air Balui, which highlighted the need for improved support facilities and adequate training for teachers to implement this model effectively. Collaborative efforts from government, schools, and communities are necessary to overcome these obstacles so that PjBL integrated with local wisdom can be implemented optimally and sustainably.

Needs assessment conducted through questionnaires and interviews with 61 students across four elementary schools in Air Balui (SDN 1, 2, 3, and 4 Air Balui) showed that students strongly need a PjBL model integrated with local wisdom, especially to improve literacy in writing folklore stories. The percentage of student needs was 85.26% for the learning structure aspect (very needed), 83.29% for reaction principles (very needed), 93.03% for social systems (very needed), 87.36% for supporting systems (very needed), and 94.05% for instructional impact (very needed).

Meanwhile, teachers also showed high needs in the learning structure (79.16%), reaction principles (83.33%), and social system (83.33%) aspects in the “very needed” category, with supporting systems (72.61%) and instructional impact (75.00%) in the “needed” category. This indicates that this learning model not only has the potential to improve literacy skills but also promotes student independence and collaboration (Faridah et al., 2022).

4. CONCLUSION

Based on the results of the needs analysis, this study concludes that both students and teachers exhibit a strong demand for a Project-Based Learning (PjBL) model integrated with local wisdom, recognizing its potential to enhance writing literacy while simultaneously promoting character education and appreciation of cultural values. The findings underscore the importance of designing a model that aligns with effective writing instruction principles and incorporates key elements of PjBL, including structured learning design, social interaction, teacher support, and both instructional and affective outcomes. However, the research is limited by its focus on a single school—SD Negeri Air Balui—which may affect the generalizability of the findings. Additionally, challenges such as limited access to instructional materials, inadequate scaffolding, and low student motivation were identified, suggesting the need for a more robust implementation framework. Future research should explore the development and testing of the proposed model across diverse educational settings to evaluate its broader applicability and impact, while also examining strategies to strengthen teacher capacity and improve access to culturally responsive learning resources.

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