

Strengthening Student Character through the Interpretation of Local Wisdom-Based Learning Experience in Social Science Learning: Phenomenological Analysis

Rila Pangesthi, Slamet Subiyantoro, Mintasih Indriayu

Universitas Sebelas Maret
mintasih_indri@staff.uns.ac.id

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Abstract

Strengthening the character of elementary school students faces challenges in integrating local wisdom values into science (IPAS) learning in the era of the Merdeka Curriculum. This study aims to analyze the implementation of strengthening the character of grade V elementary school students through the interpretation of learning experiences based on local wisdom in IPAS learning in three schools in the Untung Suropati Group. The research uses a qualitative approach with phenomenological methods to understand students' learning experiences in depth. The subjects of the study included 6 science teachers, 15 class V students, and 3 principals from three elementary schools. Data were collected through participatory observations, in-depth interviews, and documentation studies. Data analysis used the thematic analysis of Braun and Clarke models. Trustworthiness is maintained through triangulation, member checking, and peer debriefing. Research shows that The study reveals that IPAS learning based on Javanese local wisdom strengthens students' character through experiential, reflective, and conceptual processes, fostering cooperation, responsibility, honesty, and environmental awareness despite limitations in resources and teachers' understanding. These findings imply that integrating local wisdom into IPAS learning can serve as an effective, contextual approach to character education in elementary schools.

Keywords: *Character strengthening, Local wisdom, Elementary school.*

Abstrak

Penguatan karakter siswa sekolah dasar menghadapi tantangan dalam mengintegrasikan nilai-nilai kearifan lokal ke dalam pembelajaran sains (IPAS) di era Kurikulum Merdeka. Penelitian ini bertujuan untuk menganalisis implementasi penguatan karakter siswa kelas V sekolah dasar melalui interpretasi pengalaman belajar berbasis kearifan lokal dalam pembelajaran IPAS di tiga sekolah di Grup Untung Suropati. Penelitian ini menggunakan pendekatan kualitatif dengan metode fenomenologi untuk memahami pengalaman belajar siswa secara mendalam. Subjek penelitian meliputi 6 guru sains, 15 siswa kelas V, dan 3 kepala sekolah dari tiga sekolah dasar. Data dikumpulkan melalui observasi partisipatif, wawancara mendalam, dan studi dokumentasi. Analisis data menggunakan analisis tematik model Braun dan Clarke. Kepercayaan dipertahankan melalui triangulasi, pengecekan anggota, dan diskusi antar teman sebaya. Penelitian menunjukkan bahwa pembelajaran IPAS berbasis kearifan lokal Jawa memperkuat karakter siswa melalui proses pengalaman, reflektif, dan konseptual, menumbuhkan kerja sama, tanggung jawab, kejujuran, dan kesadaran lingkungan meskipun terdapat keterbatasan sumber daya dan pemahaman guru. Temuan ini menunjukkan bahwa mengintegrasikan kearifan lokal ke dalam pembelajaran IPAS dapat berfungsi sebagai pendekatan kontekstual yang efektif untuk pendidikan karakter di sekolah dasar.

Kata kunci: Penguatan karakter, Kearifan lokal, Sekolah dasar.



INTRODUCTION

Character strengthening is an important need in social studies learning because this subject connects natural and social knowledge that students encounter in daily life so that learning needs to lead students to understand values, feel concern for values, and show moral actions in accordance with local culture as a unit that forms good behavior (Lickona, 1991). The PRIMED principle emphasizes that cultural values, positive relationships, intrinsic motivation, exemplary, empowerment, and developmental pedagogy play a major role in shaping students' character when learning is directly linked to their life experiences (Berkowitz, 2021) and meta-analytical findings show that character education has a positive influence on students' academic achievement and behavior (Jeynes, 2019).

Experiential learning provides a strong foundation for character building because Experiential Learning theory explains that students build understanding as they experience events, reflect, conceptualize, and retry those experiences (Kolb, 1984) and Dewey's thinking shows that real experiences give meaning to learning (Dewey, 1938) and Vygotsky's theory asserts that moral and cognitive development is formed through social interaction, culture, ZPD, and scaffolding that reinforce the process of internalizing values (Vygotsky, 1978). The implementation of the Independent Curriculum in science subjects faces challenges because teachers still have difficulty integrating science and social studies content and experience limitations in teaching materials that support local contexts (Komariah et al., 2023) and previous research has focused more on teaching materials based on local wisdom so that validated learning models for character strengthening have not been developed optimally (Muhammad et al., 2022) while this situation is strengthened by tensions between the adoption of global policies and the preservation of Indonesia's local wisdom (Suprpto, 2020).

The integration of local wisdom in social studies learning faces epistemological problems because education needs to bridge indigenous knowledge and scientific knowledge (Da Silva & Trajano, 2023) and the latest study shows four main needs, namely culturally relevant curriculum, context-based pedagogy, cultural artifacts as mediators, and symbiotic relationships between local and scientific knowledge (Govender & Zidny, 2024) as well as the reality of the field showing the limitations of training teachers, the lack of validated teaching materials, and the character evaluation that is not comprehensive (Hadi et al., 2025).

Various studies have integrated local wisdom in character education, but its application in social studies learning is still minimal. Rukiyati et al. (2017) and Ibnu and Tahar (2021) show that games and cultural practices are effective in instilling values such as honesty, responsibility, and cooperation, but neither are developed in the context of IPAS. Kuswarsantyo et al. (2024) and Pratiwi et al. (2022) prove that ethnopedagogy and digital media based on local culture can strengthen character and cultural awareness, but the focus is not on the direct learning experience in the subject. Suryanti et al. (2020) developed teaching materials based on local wisdom that improve scientific literacy, while Tohri et al. (2022) emphasized the urgency of culture-based character education, but these two studies did not explore the process of students' meaning. Overall, previous studies have not explained how social studies learning based on local wisdom strengthens character through experience, reflection, and meaning, so that a research gap emerges that requires a phenomenological approach to provide space for students as carriers of meaning in the learning process.

The urgency of the research arises because learning based on local wisdom has the potential to strengthen character by connecting students' learning experiences and cultural values that they have, so that a deep understanding of how the process takes place in the context of elementary schools is needed. The novelty of the research lies in the integration of Experiential Learning, local wisdom, and character education in

IPAS learning that focuses on the meaning of student experiences, an approach that has not been studied phenomenologically at the elementary school level. This study aims to analyze the planning, implementation, meaning of learning experiences, developed characters, and learning challenges of social studies based on local wisdom in students. The significance of the research arises because the research findings provide a theoretical and practical basis for the development of a learning model that is culturally relevant, meaningful to students, and effective for character strengthening according to the local context.

Berdasarkan uraian tersebut, rumusan masalah penelitian ini adalah: (1) bagaimana proses perencanaan pembelajaran yang mengintegrasikan kearifan lokal? (2) bagaimana implementasi siklus experiential learning di kelas IPAS? (3) bagaimana siswa memaknai pengalaman belajar berbasis budaya? (4) bagaimana perkembangan nilai karakter melalui pengalaman tersebut? dan (5) apa tantangan serta strategi guru dalam implementasinya? Sejalan dengan itu, penelitian ini bertujuan untuk menganalisis secara tegas kelima aspek tersebut, yakni: (1) proses perencanaan pembelajaran yang mengintegrasikan kearifan lokal, (2) implementasi siklus experiential learning di kelas IPAS, (3) pemaknaan siswa terhadap pengalaman belajar berbasis budaya, (4) perkembangan nilai karakter melalui pengalaman tersebut, dan (5) tantangan serta strategi guru dalam implementasi pembelajaran berbasis budaya.

Theoretically, it contributes to the growing body of knowledge on experiential and culture-based character education, providing an integrated model that connects moral theory, cultural learning, and experiential pedagogy. Practically, the findings offer guidance for educators and policymakers in developing learning models that are culturally relevant, student-centered, and effective in strengthening character within Indonesia's diverse local contexts. Ultimately, this study responds to the broader educational vision of fostering learners who are not only intellectually competent but also morally grounded and culturally connected. By positioning students as active meaning-makers within their own cultural worlds, learning becomes a moral and social process that unites cognition, emotion, and action a holistic approach that ensures education remains rooted in humanity and culture.

The research ensured trustworthiness based on Lincoln and Guba's (1985) four criteria: credibility, transferability, dependability, and confirmability. Credibility was strengthened through four months of field engagement, consistent observation, triangulation of data sources and methods, peer debriefing, and member checking with teachers and students to validate interpretations. Transferability was achieved by providing rich contextual descriptions of the schools, local culture, and learning settings, allowing readers to assess the applicability of findings to other contexts. Dependability was maintained through an audit trail that recorded analytical steps, coding processes, and decision logs to ensure methodological transparency. Confirmability was supported by reflective journals and triangulation to reduce researcher bias and enhance neutrality. Informed consent was secured from all participants after clear explanation of the study's aims and procedures. Participant identities were protected using pseudonyms, and all data were stored securely in encrypted files. Special attention was given to child protection, ensuring that student participants were interviewed using child-friendly language and supported environments to maintain comfort, safety, and voluntary participation.

METHOD

The research uses a qualitative approach because the research wants to analyse the students' experiences in depth. The research chose the phenomenological method because this method helps researchers explore the meaning of students' experiences in learning social studies based on local wisdom. The research uses a hermeneutic phenomenological design because it allows researchers to interpret

students' experiences in their social and cultural contexts (Creswell & Poth, 2024; Farrell, 2020). The research builds a theoretical framework by combining Kolb's Experiential Learning Theory, Vygotsky's sociocultural theory, and Lickona's character education.

The research took place in the Untung Suropati Group which consisted of three public elementary schools, and was conducted over four months from August to November 2025. The researcher chose the location purposively because the school has implemented the Independent Curriculum for at least one year, has an initiative to integrate local wisdom, reflects diverse socio-economic backgrounds, and is willing to participate. The study involved six science teachers in class V who had at least three years of teaching experience. The study involved fifteen grade V students from three schools taking into account verbal communication skills and gender representation. The research also involved three principals from each school in the group.

The researcher conducted participatory observations of forty-eight learning sessions over one hundred and forty-four hours to understand the implementation of student learning and interaction. Researchers conducted in-depth interviews with six teachers for sixty to ninety minutes, fifteen students for thirty to forty-five minutes with a child-friendly approach, and three principals for forty-five to sixty minutes. The research also studied documents such as lesson plans, teaching materials, student work, school policies, and visual documentation. All interviews are recorded and transcribed verbatim.

The study analyzed the data using thematic analysis according to Braun and Clarke (2006). The researcher begins the analysis by reading all the data, creating initial codes using NVivo 12, grouping the code into themes, reviewing themes, naming themes, and compiling reports. The analysis took place iteratively with a constant comparison method. Researchers conducted peer debriefing with two independent researchers to reduce bias and reinforce interpretation.

RESEARCH AND DISCUSSION RESULTS

This research aims to analyse the strengthening of students' character through the meaning of learning experiences based on local wisdom in social studies learning. Thematic analysis of observation, interview, and document data found five main themes. The theme includes learning planning based on local wisdom, the implementation of the experiential learning cycle, students' interpretation of learning experiences, character development through local wisdom, as well as implementation challenges and strategies. This section analyzes each theme and relates the findings to the theoretical frameworks of experiential learning, sociocultural theory, and character education. These themes include local wisdom-based learning planning, implementation of the experiential learning cycle, students' interpretation of learning experiences, character development through local wisdom, and implementation challenges and strategies. To strengthen the findings of the thematic analysis, the distribution of themes and the frequency of occurrence of codes from the NVivo analysis are presented in the following table:

Table 1. Distribution of Themes and NVivo Coding Frequencies

No	Main Theme	Emerging Subthemes	Code Frequency (n)	Percentage (%)	Representative Quote
1	Lesson Planning Based on Local Wisdom	Integration of cultural context in lesson plans, use of local environment, teacher	62	18.3%	"The teacher connected IPAS concepts with cultural practices such as the water

		collaboration			reservoir and traditional games.”
2	Implementation of the Experiential Learning Cycle	Concrete experience, reflection, conceptualization, application	87	25.7%	“Students understood the concept of force and motion through the <i>engklek</i> game.”
3	Students’ Meaning-Making of Learning Experiences	Personal relevance, cultural pride, concept transfer	71	21.0%	“I feel proud because the knowledge from my family is considered scientific.”
4	Character Development through Local Wisdom	Cooperation, responsibility, honesty, environmental awareness	79	23.4%	“If we cheat, the game is not fun anymore and no one trusts us.”
5	Challenges and Implementation Strategies	Limited resources, time constraints, variation in teachers’ cultural understanding	39	11.6%	“I have to find information from village elders and old books.”
Total			338	100%	

Based on Table 1, the most frequently occurring theme was the implementation of the experiential learning cycle, followed by character development through local wisdom. These data demonstrate a strong focus on direct experience and character values in culture-based science and science learning.

Learning Planning Based on Local Wisdom

Teachers in three schools prepare lesson plans by integrating local wisdom in teaching modules and IPAS lesson plans. Document analysis shows that teachers include traditional games, cultural activities, and the surrounding environment as learning contexts, in accordance with the principles of place-based education that place the local context as a source of meaningful learning (*Smith & Sobel, 2010*). Teachers who understand local wisdom well are able to connect cultural practices, scientific concepts, and character values more clearly, in line with the finding that the integration of local wisdom requires explicit connections between culture, academics, and character values (*Rukiyati et al., 2017*). This can be seen when Mrs. S, a teacher of SD 01, stated, “*I use the reservoir as the starting point of the water cycle and connect it with the value of environmental concern. I prepare reflective questions so that children understand the function of the reservoir and the process of water gathering there.*” Other teachers emphasized that the learning objectives are designed to strengthen the concept of IPAS as well as mutual cooperation, responsibility, and environmental concern as recommended by a holistic character approach (*Berkowitz & Bier, 2004; Lickona, 1991*).

However, teachers face obstacles in planning because they do not always find a strong connection between science concepts and cultural practices. Pak B, a teacher of SD 04, said, *"I am still confused about finding the right cultural examples, especially in materials such as the digestive system."* This challenge is consistent with the finding that science teachers have difficulty integrating science, social studies, and local wisdom coherently (Komariah et al., 2023) and require stronger ethnoscience and ethnopedagogy knowledge (Hadi et al., 2025). Factors that affect the quality of planning include teachers' understanding of culture, training experiences, availability of learning resources, and professional community support. The principal of SD 02 emphasized the role of collaboration, *"We regularly meet every month to share best practices and invite traditional elders so that teachers can understand the culture firsthand."* This corroborates the finding that professional learning communities help teachers improve the quality of planning and integration of pedagogical innovations (Döring et al., 2024).

Implementation of Experiential Learning Cycle

The implementation of social studies learning in three schools shows that teachers apply learning experiences based on local wisdom through direct activities, reflection, conceptualization, and application as analyzed in the experiential learning framework (Kolb, 1984; Kolb & Kolb, 2017). At the concrete experience stage, teachers use traditional games such as engklek, gobak sodor, and congklak as well as environmental observation to explain the concepts of style, movement, and cooperation. Observation notes record the enthusiasm of the students, for example when Rn says, *"If two legs are easier because the body is supported by two legs,"* after trying two jumping techniques. Dn also affirms the value of honesty by saying, *"If you cheat, friends won't want to play anymore,"* suggesting that cultural experiences provide cognitive and character understanding that is in line with Vygotsky's view that social value is formed through community practice (Vygotsky, 1978).

In the reflection stage, teachers give time to think and trigger questions to help students understand the meaning of their experiences, according to the finding that *wait time* improves the quality of students' responses (Rowe, 1986). Gr Dw explained, *"I always give time to think so that more students can give thoughtful reflections."* Rn attributes the value of mutual cooperation to the context of school when he says, *"We can connect by helping friends learn."* The teacher then helps students connect cultural experiences with the scientific concept of IPAS through scaffolding that is relevant to the Zone of Proximal Development (Vygotsky, 1978). Gr Ad emphasized, *"I invite students to draw their body positions when jumping and then analyze the direction of the force."* Some teachers still have difficulty finding authentic scientific relationships, such as Gr Jk's confession, *"The connection is too forced,"* according to the note that the integration of culture and science requires caution so as not to cause distortions (Michie, 2023; Zidny et al., 2020).

At the application stage, students apply understanding through modification of traditional games and cultural projects that demonstrate the transfer of learning as analyzed in the deep learning literature (Bransford et al., 2000). Ahd explains, *"We made the engklek with a longer distance and a zig-zag shape. Each form has a different level of difficulty."* Some schools hold local wisdom festivals as the peak of learning. Ks Sr stated, *"Students take great pride when explaining the principles of science behind the game. Parents are surprised that traditional games contain scientific principles,"* showing the application of character and understanding concepts in an integrated manner, in line with the principle of *Empowerment* in the framework of PRIMED (Berkowitz, 2021). The application stage strengthens responsibility, confidence, social concern, and understanding of IPAS that are connected to the local culture.

Students' Interpretation of the Learning Experience

Interviews show that students interpret learning as an experience that is fun, relevant, and close to their lives, a characteristic of *meaningful learning* when students associate new material with personal experiences (Ausubel, 1968). Students analyzed learning as "fun" and "not boring," as when Bd said, "*Learning social science with traditional games is really fun... I remember it easier because I felt his style when I was running.*" This experience fosters intrinsic motivation because students feel directly involved, in line with the principles of *Intrinsic Motivation* (Berkowitz, 2021; Ryan & Deci, 2000). Learning based on local wisdom also makes students more courageous to ask questions and try because the context used is familiar to them.

Learning has personal relevance because activities remind students of family activities such as cooking, farming, or playing traditional games. St from SD 06 explains, "*I often see my grandmother making klepon, but I never thought there was a chemical process there.*" This experience gave rise to intergenerational dialogue and strengthened family ties, in line with the findings that culture-based learning supports the transmission of family values (Kuswarsantyo et al., 2024). Dw from SD 07 showed a broader understanding when he said, "*Now I understand why there is a rule of turning water in the rice field because there are principles of science and the value of justice.*" This learning gives legitimacy to the knowledge of the family and the culture of the students, in accordance with the idea that the school needs to respect the *cultural capital* of the students (Bourdieu, 1986). Mr. from SD 05 emphasized this, "*The teacher said that the knowledge from our parents is important and scientific. I feel proud.*"

The meaning of learning can also be seen from the ability of students to reinterpret the concept of science in their own language and give examples from various contexts. Rn from SD 02 explained the concept of style, "*If the style is big, our leap is far... It's like if we kick the ball.*" Other students such as Dn from SD 06 were able to transfer their understanding to a new phenomenon, "*In jumping rope we give force to the ground so that we can jump vertically, as opposed to the more horizontal ankle.*" This ability shows that learning does not stop at memorization but moves towards *deep understanding* and *transfer of learning*, a characteristic of meaningful learning (Ausubel, 1968; Bransford et al., 2000).

Character Development through Local Wisdom

Social studies learning based on local wisdom develops students' character through mechanisms that are in harmony with *Lickona (1991) character education*. Teachers model the values of mutual cooperation, responsibility, and honesty in cultural activities, consistent with the *principles of modeling* in PRIMED (Berkowitz, 2021). Students observe and imitate the teacher's behavior, in line with the concept of *vicarious learning* (Bandura, 1977). Activities such as splices and traditional games provide space for students to practice their grades in person. Ln said, "*Mutual cooperation works together for a good cause even though we have different opinions.*" Teacher Ay observed a noticeable change when students began to help friends without being asked. Responsibility also develops through activities such as the Local Wisdom Festival; Gr Bw stated, "*Children become very detailed because they feel it is trustworthy.*" Some students understand responsibility as a form of maintaining trust, such as Pt who said, "*Duty is a mandate that must be maintained.*"

Learning also strengthens honesty. Activities that are not always supervised encourage students to build an *internal locus of moral authority* (Lickona, 1991). Gr Ls facilitated an explicit discussion after the game stacked values, "*If everyone cheats, the game won't be fun and there's no trust.*" Ek from SD 04 shows deep internalization, "*If you cheat a little, it's okay to think first, but I realize that it damages integrity.*"

Reflections like this help students develop conscious and articulated *moral knowing*. This process also reinforces the collaborative skills that are essential for democratic life, in line with *Dewey's (1916) thought* about the importance of cooperation in education.

Social studies learning based on local wisdom also develops environmental awareness through the interpretation of cultural practices that maintain the balance of nature. He explained, *"Water is not unlimited. Everyone is connected in the ecosystem."* This understanding reflects *systemic ecological literacy (Capra, 1996)*. Guru Rt emphasized the effectiveness of culture-based learning, *"Scientific data alone makes students understand, but it does not always make them care. Local wisdom makes them truly care."* These findings are consistent with studies that *culturally grounded and place-based environmental education* is more effective in developing caring attitudes and pro-environmental behaviors (*Sobel, 2004; Zidny et al., 2020*). Overall, learning based on local wisdom encourages the integration of moral knowing, moral feeling, and moral action so that character grows through meaningful experiences.

Implementation Challenges and Strategies

Teachers face challenges when implementing social studies learning based on local wisdom because learning resources are limited and cultural information is not neatly organized. This is in accordance with the findings of *Hadi et al. (2025)* regarding obstacles to the implementation of character education in elementary schools. Gr Tg explained, *"I have to look for information from the internet, village elders, and old books. Then I have to connect it to the appropriate IPAS material. This process is very time-consuming."* Teachers stated that teaching materials that combine local wisdom, IPAS concepts, and character values have not been adequately available, in line with *Muhammad et al. (2022)* who highlight the lack of ready-to-use teaching materials. Teachers also have difficulty balancing the demands of material completion with the need to provide space for cultural exploration. Gr Wt stated, *"I had to choose between pursuing the material target or giving students the opportunity to understand the culture more deeply."* This challenge reflects the tension between the curriculum and the local context as *explained by Suprpto (2020)*.

Teachers develop several strategies to overcome these difficulties. Teachers form learning communities at the cluster level to share teaching materials and experiences, a practice that is in line with the findings of *Stoll et al. (2006)* on the importance of teacher collaboration. The group's coordinator, An, said, *"We hold regular meetings to share learning examples and provide input."* Teachers also work closely with community leaders and parents to gain relevant cultural knowledge. Gr Bb explained, *"I invited the village elder to the class to explain traditional farming practices. The students are very enthusiastic."* Teachers use simple photos and videos to document cultural practices so that they can be reused as learning mediums, as recommended by *Pratiwi et al. (2022)*. Teachers adjust open teaching materials to suit the student's environment, in line with a culturally responsive learning approach (*Gay, 2018*).

The difference in teachers' ability to understand local culture is also a challenge. Teachers who are not from Java feel less confident when explaining the local culture, as Gr Ls expressed, *"I am not Javanese so I study with students and ask them to share their knowledge."* Teachers use students' experiences as a learning resource so that students feel valued. Although the challenges are quite large, teachers see a positive impact on students. Gr Hd said, *"Even though it takes more effort, I see that students are more enthusiastic, more caring, and understand the concept of learning better."* This view is in line with the thinking of *Dewey (1916)* and *Noddings (2005)* that

education should develop meaningful attitudes, care, and relationships, not just academic knowledge.

CONCLUSION

This study explains that science learning based on Javanese local wisdom strengthens the character of grade V elementary school students through the application of experiential learning cycles. Researchers found that students experience cultural practices at the concrete experience stage so that students feel emotionally involved. The reflective observation stage helps students understand the experiences and values that emerge. The abstract conceptualization stage connects cultural experiences with scientific concepts of science. The active experimentation stage provides an opportunity for students to try the application of concepts in new situations. The character of mutual cooperation, responsibility, honesty, and concern for the environment develops as students learn through the cultural context they are familiar with.

Research also shows that teachers face obstacles because learning resources are limited and teachers' understanding of local wisdom is different. This research contributes by developing an IPAS learning framework that combines experiential learning and ethnopedagogy based on local wisdom. The researcher recommends the provision of teaching materials that are appropriate to the cultural context, teacher training on ethnoscience and ethnopedagogy, the formation of professional learning communities, and cooperation with cultural institutions and community leaders. Further research is needed to assess the long-term influence of learning based on local wisdom on student character.

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