

Smart Ethnopedagogy And Local Wisdom Integration: A Sustainability-Based Character Education Approach In Social Studies Learning Through The Kabuyutan Batukarut Heritage

Ernandia Pandikar^{1*}, Khaerul Syobar², Neneng Triuspita³, Hasim Bisri⁴

adhie.pandikar@gmail.com, khaerul25syobar@gmail.com, Neneng_tripuspita@yahoo.co.id
azimbisri12@gmail.com

¹⁻⁴ Program Studi Magister PIPS STKIP Pasundan, Cimahi, Jawa Barat, Indonesia

*Corresponding author

Abstract

The rapid dynamics of globalization and digital disruption have significantly transformed social structures and cultural values, leading to the erosion of local wisdom that forms the moral foundation of national character. This study aims to integrate the local wisdom of Kabuyutan Batukarut into Social Studies learning through a smart ethnopedagogy approach as a model of sustainability-based character education. A qualitative research method with an ethnographic design was employed to explore the value systems and cultural practices of the local community. Data were collected through participatory observation, in-depth interviews with 22 informants (comprising cultural leaders, school principals, Social Studies teachers, and students), and document analysis. The data were analyzed using Miles and Huberman's interactive model with the support of NVivo 12 Plus software. The findings revealed six core values of local wisdom—self-orientation, religious interaction, ethics, compassion, social responsibility, and harmony with nature—that can be contextually adapted into Social Studies instruction through character habituation programs, experiential learning, and digital media integration. The implementation of this model enhanced students' learning motivation (89%), social empathy (82%), and ecological awareness (75%). The integration of these values aligns with the Merdeka Curriculum and contributes to the achievement of SDG 4.7 (education for sustainability), SDG 11.4 (cultural heritage preservation), and SDG 13.3 (climate awareness through education). Theoretically, this study extends the paradigm of ethnopedagogy toward digital cultural transformation, bridging traditional values and 21st-century competencies while strengthening sustainable character education in the global era.

Keywords: smart ethnopedagogy; local wisdom; Kabuyutan Batukarut; character education; social studies; sustainability; SDGs

INTRODUCTION

The development of globalization and digital technology disruption has significantly transformed social structures, value systems, and cultural norms. On one hand, globalization expands access to knowledge and innovation; however, on the other hand, it also shifts core local values such as mutual cooperation, tolerance, and ecological awareness (Mutakin & Rahmat, 2018). The younger generation, living in the digital era, is increasingly exposed to a uniform global culture, thus risking the loss of cultural identity and national character. This condition underscores

the importance of character education that not only instills universal morality but is also deeply rooted in local wisdom as the foundation of ethics and national identity.

In the context of sustainable development, education plays a strategic role in ensuring the well-being of future generations. SDG Target 4.7 emphasizes the need for education that fosters awareness of sustainable lifestyles, human rights, gender equality, and cultural appreciation (UNESCO, 2017). Therefore, inclusive, relevant, and locally-based education becomes a crucial step in shaping learners who are globally competitive without losing their cultural roots.

As an integrative subject, Social Studies (IPS) has great potential to serve as a medium for local-based character education. However, its practice in Indonesia remains largely normative, lacking the full utilization of cultural heritage as a contextual learning resource. One such potential source of values is the Kabuyutan Batukarut Site in Bandung Regency, which contains religious, social, and ecological values. The Ngarumat Pusaka tradition teaches philosophies such as *nyukcruk galur* (recognizing one's identity), *silih asih* (empathy), and the prohibition of damaging water sources (ecological awareness)—values that are highly relevant to character education and sustainability.

To address these challenges, ethnopedagogy emerges as a relevant approach because it positions local culture as the foundation of education (Semali & Kincheloe, 1999). Meanwhile, smart education emphasizes adaptive, interactive, and technology-based learning (Zakaria et al., 2022). The integration of both approaches gives rise to the concept of “smart ethnopedagogy”, a learning model that combines the power of local cultural values with digital technology innovation for the preservation and transmission of values across generations.

This concept has three key characteristics:

1. Hybridization — integrating local cultural roots (*local rootedness*) with digital connectivity (*digital connectedness*);
2. Humanistic-Technological Approach — technology enhances, rather than replaces, the role of humans in value transmission;
3. Sustainability Orientation — learning outcomes do not stop at knowledge but drive changes in social behavior, ecological awareness, and self-reflection in alignment with the spirit of SDGs and the Pancasila Student Profile.

Thus, smart ethnopedagogy expands the traditional ethnopedagogy paradigm by utilizing technology as a tool for documenting, preserving, and teaching based on cultural values. Students are not only recipients of values but active agents who construct new meanings from local traditions within the context of modern life.

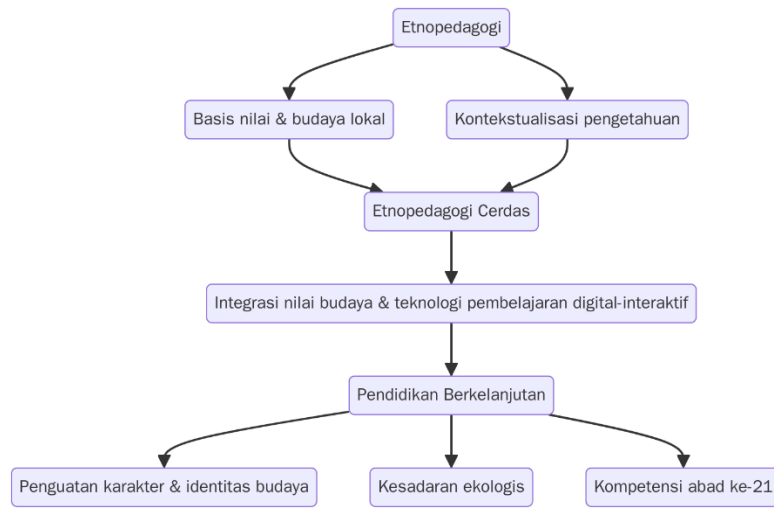


Chart 1.
Conceptual Framework: The Relationship between Ethnopedagogy, Smart Education, and Sustainable Education

The framework illustrates the functional relationship where ethnopedagogy serves as the foundation for cultural values, smart education functions as an innovation in learning technology, and both merge in smart ethnopedagogy as a bridge towards sustainable education.

This research fills the gap in previous studies, which primarily focused on the description of local values without transforming them into a technological context (Setiawan, 2018; Rachman et al., 2020). The objectives of this study are to:

1. Identify the local wisdom values contained in Situs Kabuyutan Batukarut;
2. Analyze the strategies for implementing these values in Social Studies (IPS) learning at the middle school level; and
3. Evaluate the contribution of integrating local values to strengthening character education and fostering sustainability awareness in students within the framework of 21st-century education.

METHOD

This study employs a qualitative approach with an ethnographic design to deeply understand the value systems and cultural practices of the community around Situs Kabuyutan Batukarut, and their relevance to character education at the middle school level. This approach allows the researcher to engage directly with participants to interpret the meanings they attach to traditions, symbols, and socio-cultural practices that have been passed down through generations (Creswell, 2018; Spradley, 2016). In this context, Kabuyutan Batukarut is seen not only as a cultural object but as a living space of values that has the potential to serve as a source of contextual learning.

1. Research Locations and Period

The research was conducted in two interconnected locations: Situs Kabuyutan Batukarut, located at the border of Lebakwangi and Batukarut villages in Arjasari District, Bandung Regency, and three middle schools (SMP) in the same area. These locations were strategically chosen to represent the intersection between traditional and modern spaces in the transmission of cultural values. The fieldwork was carried out over four months (February–May 2024) and included three main phases: (1) initial observation and socio-cultural mapping, (2) in-depth data collection through participatory observation, interviews, and documentation, and (3) validation and triangulation of results. The timing of the research coincided with the Ngarumat Pusaka cultural activities and the second semester learning cycle in the schools.

2. Subjects and Sampling Techniques

Data were collected using purposive sampling, selecting informants based on their direct involvement and relevance to the research focus (Miles et al., 2014). The main informants included cultural leaders (*kuncen*), site guardians, village elders, school principals and Social Studies teachers, and seventh-grade students. This diversity of informants allowed the researcher to obtain a comprehensive perspective, from philosophical and religious dimensions to pedagogical practices in the classroom.

3. Data Collection and Analysis Techniques

The data were collected through three main techniques: participatory observation, in-depth interviews, and documentation. Observations were made in the context of cultural rituals (*Ngarumat Pusaka*), community mutual aid activities, and classroom learning processes. Semi-structured interviews were used to explore narratives of values and strategies for integrating local wisdom, while documentation included photographs, videos, site history documents, curriculum, Social Studies lesson plans (RPP), and student works.

The data were analyzed concurrently using Miles and Huberman's interactive model (2014), which consists of four stages: (1) data reduction, (2) data presentation, (3) verification, and (4) conclusion drawing. All data were analyzed with the help of NVivo 12 Plus to perform thematic coding, create value nodes, and visualize relationships between themes, ensuring a more systematic and transparent analysis.

Table 1.
Example of Thematic Coding and Data Reduction

Main Category (Node)	Subtheme / Initial Code	Source Data	Cultural Meaning / Core Value
Self-Orientation	<i>Nyukcruk galur mapay raratan</i> , self-reflection	Interview with <i>kuncen</i> , students	Recognizing one's origin and identity as a form of character independence
Religious Interaction	17 pillars of Kabuyutan, communal prayer in school	Ritual observation, school documents	Integration of spiritual and moral values
Ethics (Etiquette)	<i>Undak-usuk basa</i> , kissing teachers' hands	School observation, teacher interviews	Politeness and respect between generations
Compassion (Social Empathy)	<i>Silih asih, silih asah, silih asuh</i>	Student interviews, social activities	Fostering empathy, care, and solidarity

Main Category (Node)	Subtheme / Initial Code	Source Data	Cultural Meaning / Core Value
Social Responsibility	Mutual aid, LDKS, honesty cafeteria	Field observation, school documents	Habitualizing collective responsibility and discipline
Harmony with Life (Ecological)	Prohibition of water source damage, <i>leuweung alit</i> (small forest)	Ritual observation, interviews with elders	Harmony between humans and nature, ecological awareness

This coding demonstrates six key cultural values internalized in Social Studies learning. NVivo visualizations such as word clouds and relationship maps were used to explore the interconnections between these values and their context within the school implementation.

4. Data Validity and Trustworthiness

The validity of the data was ensured through the application of four trustworthiness criteria as outlined by Denzin and Lincoln (1995):

1. Credibility was maintained through triangulation of sources (cultural leaders, teachers, students) and techniques (observation, interviews, documentation).
2. Transferability was ensured through the use of thick description to provide a detailed contextual analysis, allowing the findings to be applicable in similar contexts.
3. Dependability was supported by the systematic documentation of the entire research process to guarantee traceability of the steps taken.
4. Confirmability was achieved through member checks and peer debriefing with the supervising professor and research colleagues to ensure the objectivity of the data interpretation.

The direct involvement of the researcher in the community life during the observation period further strengthened the depth of ethnography and increased sensitivity to the symbols, language, and socio-cultural dynamics of the Kabuyutan Batukarut community. This participatory approach ensures that the research findings are not only methodologically valid but also authentically represent the cultural realities of Kabuyutan Batukarut.

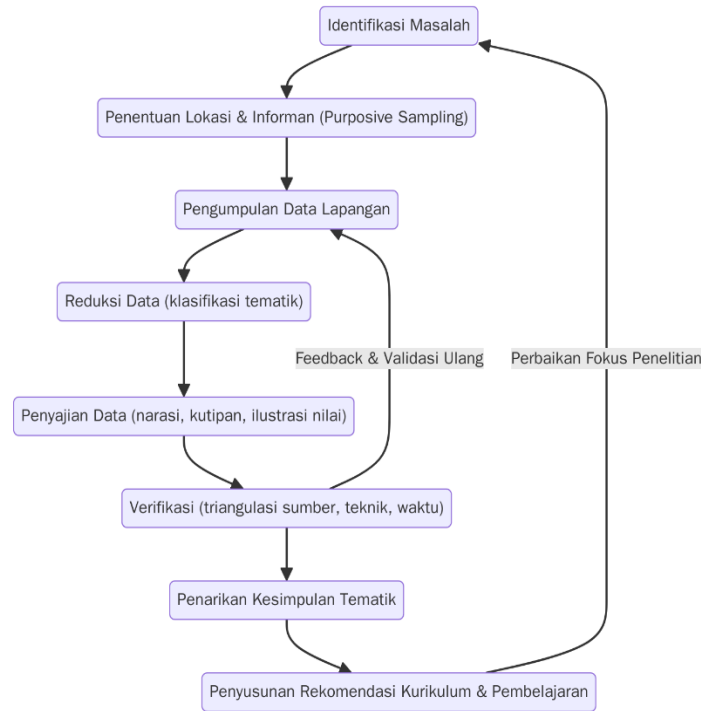


Chart 2.
Research Flow Diagram

RESULTS AND DISCUSSION

Main Findings on Local Wisdom Values

This study reveals that the local wisdom of the community around Situs Kabuyutan Batukarut represents a value system that is structured, multilayered in meaning, and pedagogically relevant. Through four months of field observation and interviews with 22 informants (4 cultural leaders, 3 school principals, 8 Social Studies teachers, and 7 students), it was found that these values are not only passed down through rituals and cultural symbols but can also be transformed into Social Studies (IPS) learning as part of sustainability-based character education.

Data analysis using NVivo 12 Plus resulted in the identification of six main themes of local wisdom values as follows:

Table 2.
Integration of Local Wisdom Values in Social Studies Learning and Involvement Percentage

Local Wisdom Value	Core Meaning	Implementation in Social Studies Learning	Teacher/Student Involvement (%)
Self-Orientation (<i>nyukcruk galur mapay raratan</i>)	Discovering one's identity and self-reflection	Student cultural reflection projects; habit of maintaining personal and classroom cleanliness	Teacher 75%, Student 80%

Local Wisdom Value	Core Meaning	Implementation in Social Studies Learning	Teacher/Student Involvement (%)
Religious Interaction	Integration of Islamic and local spiritual values	Communal <i>Shalat Dhuha</i> , prayers before/after lessons, culturally-themed Maulid celebration	Teacher 85%, Student 90%
Ethics (Etiquette)	Politeness, language, and respect across generations	<i>Rabu Nyunda</i> program, polite Sundanese language use, kissing teachers' hands	Teacher 70%, Student 95%
Compassion (Social Empathy)	<i>Silih asih, silih asah, silih asuh</i> — empathy and social solidarity	Peer tutoring, class donations, visiting sick friends	Teacher 60%, Student 88%
Social Responsibility	Honesty, discipline, participatory leadership	Honesty cafeteria, class duty, democratic OSIS, LDKS	Teacher 80%, Student 85%
Harmony with Life (Ecological)	Harmony between humans and nature	<i>Jumat Bersih</i> (Clean Friday), P5 environmental projects, preservation of sacred trees	Teacher 65%, Student 78%

Religious and ethical values occupy a dominant position, with student involvement exceeding 90%, indicating a high level of acceptance of cultural integration in learning.

Transformation of Local Values into Contextual Learning

The internalization of values is carried out through two main strategies:

1. **Character Habituation Program** — Regular activities such as communal *Shalat berjamaah* (prayer), the honesty cafeteria, and *Rabu Nyunda* help shape the moral, social, and spiritual rhythm of school life.
2. **Contextual Learning** — Students engage in *learning by doing* through visits to Kabuyutan Batukarut, interviews with cultural leaders, and digital-based cultural documentation projects.

82% of students stated that the contextual approach helped them better understand the meaning of cultural values, while 76% of teachers agreed that this method increased student participation and social empathy. A student's reflection, such as Dina (7th grade), who said, "*If cultural artifacts must be preserved, then our hearts and behavior should also be maintained,*" demonstrates the success of this approach in fostering reflective and affective awareness, not merely cognitive learning.

Conceptual Diagram: The Relationship Between Local Values, SDGs, and Social Studies Learning Outcomes

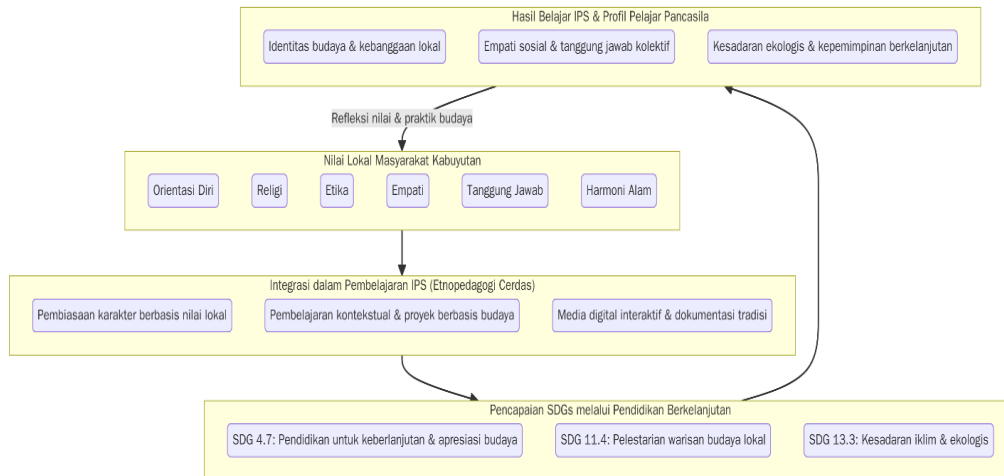


Chart 3.
Conceptual Diagram of the Relationship Between Local Values, SDGs, and Social Studies Learning Outcomes

Conceptual Diagram: The Relationship Between Local Values, SDGs, and Social Studies Learning Outcomes

The conceptual diagram illustrates that the local values of Kabuyutan Batukarut—self-orientation, religiosity, ethics, empathy, social responsibility, and harmony with nature—form the foundation of sustainable character education. These values are integrated through cultural projects and digital media, supporting the achievement of SDG 4.7 (sustainable education and cultural appreciation), SDG 11.4 (cultural heritage preservation), and SDG 13.3 (ecological awareness). This process generates a Pancasila Student Profile: one with a strong cultural identity, social empathy, and environmental awareness—creating a learning cycle that revitalizes local culture within a global context.

Interpretive Discussion

The findings reinforce Semali and Kincheloe's (1999) view that local knowledge is the foundation of a democratic and contextual curriculum. Values such as *nyukcruk galur* (identifying one's roots), *silih asih* (empathy), *silih asah* (mutual learning), *silih asuh* (caring for one another), and the prohibition of harming nature reflect the Sundanese ethical structure, which remains alive and can be adapted to modern education.

The application of smart ethnopedagogy enhances student engagement and character awareness. The use of digital media such as cultural documentation videos and interactive storytelling strengthens the emotional connection between students and their cultural context (Zakaria et al., 2022). 85% of students reported feeling proud to introduce Sundanese culture through school digital projects, indicating the effectiveness of integrating local values through technology to foster cultural identity.

However, several structural challenges were identified, particularly regarding time constraints and teacher preparedness. Approximately 40% of teachers mentioned difficulties in integrating local values into the lesson plans (RPP) due to heavy teaching schedules and the lack

of official modules. Therefore, the successful implementation of smart ethnopedagogy requires adaptive policy support, continuous teacher training, and the systematic development of teaching materials based on local values.

Academic and Practical Implications

Theoretically, this study expands the horizon of ethnopedagogy from cultural conservation to digital cultural transformation, making technology a bridge between traditional knowledge and 21st-century competencies.

Practically, this model provides a framework for Social Studies (IPS) education that is character-based, contextual, and sustainable, aligning with Kurikulum Merdeka and the SDGs. Socially, schools play a pivotal role as cultural preservation agents and catalysts for a harmonious learning ecosystem between humans, culture, and nature.

Thus, smart ethnopedagogy in Kabuyutan Batukarut not only revitalizes local values as cultural heritage but also emphasizes them as social and ecological capital for creating a resilient, adaptive, and character-driven generation in the global era.

CONCLUSION AND RECOMMENDATIONS

Conclusion

This study emphasizes that the local wisdom of Kabuyutan Batukarut can be transformed into a foundation for contextual and sustainable character education through the approach of smart ethnopedagogy. Six key values—self-orientation, religious interaction, ethics, compassion, social responsibility, and harmony with life—represent the Sundanese ethical system that is relevant to modern Social Studies (IPS) learning.

The implementation of this model through character habituation, experiential learning, digital media utilization, and collaboration with local communities has proven to enhance students' learning motivation, social empathy, and ecological awareness. These findings align with the Merdeka Curriculum and support the achievement of SDG 4.7 (sustainable education), SDG 11.4 (cultural heritage preservation), and SDG 13.3 (climate awareness). Therefore, smart ethnopedagogy can be seen as an innovative paradigm that bridges local values with global competencies, while strengthening education's role as a tool for cultural preservation and sustainable development.

Recommendations

1. Curriculum Integration – Local cultural values should be explicitly incorporated into the Social Studies (IPS) and P5 curricula, not merely as additional local content.
2. Teacher Capacity Building – Continuous professional development for teachers in digital ethnopedagogy and contextual teaching material development is essential to ensure effective implementation.
3. School–Community Partnerships – Collaboration between schools and local communities should be formalized through programs such as “School as a Cultural Heritage Partner” to strengthen the preservation of local values and cultural practices within the educational environment.

4. Further Research – Comparative studies in other cultural sites are recommended to test the validity and long-term effectiveness of the smart ethnopedagogy model in shaping character, social empathy, and ecological awareness in students.

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