

Needs Analysis of the Textbook–Context Gap in Grade V IPAS Cultural Heritage Learning in Mandailing Natal

Rahmi Seri Hanida^{1✉}, Salsa Bila Hasibuan², Risdam Habibi Hasibuan³
(1,2) STAIN Mandailing Natal, Sumatera Utara, Indonesia
(3) Universitas Samudra, Kota Langsa, Indonesia

✉ Corresponding author
rahmiserihanida@stain-madina.ac.id

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ABSTRACT

Grade V IPAS (*Ilmu Pengetahuan Alam dan Sosial*) learning is expected to connect cultural heritage concepts with students' immediate cultural environments. This study examined the needs arising from the textbook–context gap in cultural heritage learning at SD Negeri 098 Pidoli, Mandailing Natal, Indonesia. Using a qualitative descriptive needs-analysis design, data were collected through classroom observations, unstructured interviews with the teacher and students, and document analysis of the government-issued IPAS textbook and its accompanying worksheet. The findings revealed that instruction relied predominantly on the textbook, while supplementary materials incorporating Mandailing local wisdom were unavailable. The analysed materials provided limited representation of Mandailing cultural heritage and opportunities for contextual exploration. Although students recognised local cultural elements such as Bagas Godang through everyday experience, this familiarity did not consistently develop into conceptual understanding of their historical, social, symbolic, and cultural significance, indicating a gap between recognition and understanding. These findings indicate the need for contextual supplementary materials that bridge formal IPAS concepts with students' lived cultural experiences. As a single-site qualitative needs analysis, the findings are context-specific and provide an empirical basis for developing locally grounded teaching materials

Pembelajaran IPAS (Ilmu Pengetahuan Alam dan Sosial) kelas V diharapkan mampu menghubungkan konsep warisan budaya dengan lingkungan budaya terdekat siswa. Penelitian ini menganalisis kebutuhan yang muncul dari kesenjangan antara buku teks dan konteks lokal (textbook–context gap) dalam pembelajaran warisan budaya di SD Negeri 098 Pidoli, Mandailing Natal, Indonesia. Penelitian menggunakan desain deskriptif kualitatif dengan pendekatan needs analysis. Data dikumpulkan melalui observasi pembelajaran, wawancara tidak terstruktur dengan guru dan siswa, serta analisis dokumen terhadap buku teks IPAS terbitan pemerintah dan lembar kerja siswa. Temuan menunjukkan bahwa pembelajaran masih bertumpu terutama pada buku teks, sementara bahan pendamping yang mengintegrasikan kearifan lokal Mandailing belum tersedia. Materi yang dianalisis juga masih terbatas dalam merepresentasikan warisan budaya Mandailing dan menyediakan kesempatan untuk eksplorasi kontekstual. Meskipun siswa mengenali unsur budaya lokal seperti Bagas Godang melalui pengalaman sehari-hari, pengenalan tersebut belum secara konsisten berkembang menjadi pemahaman konseptual mengenai makna historis, sosial, simbolik, dan budayanya, yang menunjukkan adanya kesenjangan antara pengenalan dan pemahaman. Temuan ini mengindikasikan perlunya bahan ajar pendamping kontekstual yang menjembatani konsep formal IPAS dengan pengalaman budaya siswa. Sebagai needs analysis kualitatif pada satu lokasi, temuan penelitian bersifat kontekstual dan memberikan landasan empiris bagi pengembangan bahan ajar berbasis budaya lokal.

Keywords: contextual learning, cultural heritage, local wisdom, textbook–context gap

Introduction

Education and culture are closely interconnected because educational processes do not take place in a social vacuum; they operate within communities that possess particular histories (Johnson, 2026; Mellon et al., 2026), values, traditions, symbols, and ways of understanding the

world. In the Indonesian context, this relationship is formally recognised in Law of the Republic of Indonesia Number 20 of 2003. Chapter I, Article 1, Paragraph 2 establishes national education as education grounded in Pancasila and the 1945 Constitution of the Republic of Indonesia, rooted in religious values and Indonesian national culture, while remaining responsive to changing times. Chapter XIV, Article 50, Paragraph 5 further assigns district and municipal governments responsibility for managing basic and secondary education as well as educational units grounded in local education (Ikatan Doktor Ilmu Pendidikan, 2020). These provisions suggest that local culture should not be treated merely as supplementary knowledge added to an otherwise general curriculum. Rather, the cultural resources surrounding students can become meaningful foundations for educational experiences. From a pedagogical perspective, this principle is equally important because learning is more likely to acquire personal and contextual meaning when new knowledge can be connected with objects, practices, values, and symbols that students already encounter in their social environment. Conversely, when culturally oriented content is predominantly drawn from places and experiences distant from students' everyday lives, cultural knowledge may remain informational rather than becoming knowledge that students can meaningfully associate with their own communities.

The need to establish such connections has become increasingly important amid globalisation and the rapid circulation of cultural products, information, lifestyles, and values across geographical boundaries (Ng et al., 2025). For younger generations, global cultural references can become highly visible and accessible, while knowledge of traditions within their own communities may receive considerably less systematic attention. Cultural globalisation therefore presents a continuing challenge to the maintenance of local cultural identity, particularly when inherited cultural knowledge is no longer consistently transmitted through social and educational institutions. Wijaya (2025) argues that deliberate adaptation is necessary to prevent traditional values from being gradually weakened under global cultural pressures. This does not imply that education should isolate students from cultural change or position global and local cultures as mutually exclusive. Rather, schools have an important role in enabling students to engage with wider cultural influences while retaining the capacity to recognise, understand, and critically appreciate their own cultural foundations. Within this context, culture-based character education becomes relevant because it can simultaneously introduce locally embedded values and cultivate students' critical engagement with external cultural influences (Wahyudin et al., 2024). Cultural learning in schools can therefore be understood not simply as the transmission of information about traditions, but as part of a broader educational process through which students develop cultural awareness and locate themselves meaningfully within their social environment.

At the elementary-school level, one curricular space in which this responsibility becomes particularly visible is Natural and Social Sciences (*Ilmu Pengetahuan Alam dan Sosial*, hereafter IPAS). IPAS is expected not only to provide disciplinary knowledge but also to develop students' ways of thinking through contexts related to their natural and social surroundings (Septiana & Winangun, 2023). This contextual orientation is particularly relevant to Grade V material on *Cultural Heritage and Local Wisdom in My Region*, presented in Chapter 7, *Kebanggaan Daerahku (The Pride of My Region)*, because the topic implicitly requires students to connect formal classroom knowledge with cultural realities in the places where they live. The learning objectives established by the Ministry of Education and Culture similarly expect students to become familiar with cultural heritage existing in their respective regions (Ghaniem & Yasella,

2021). However, achieving this objective depends not only on whether cultural heritage appears as a topic in the curriculum, but also on what cultural examples are represented, how those examples are presented, and whether students can relate them to their own environments. This concern is especially relevant because the implementation of IPAS under the *Kurikulum Merdeka* (Emancipated Curriculum) continues to encounter difficulties, including challenges associated with the delivery of cultural and local-wisdom content (Viqri et al., 2024). Thus, the presence of cultural heritage in curriculum documents does not automatically ensure that cultural learning becomes locally meaningful in classroom practice.

This issue becomes more significant when local wisdom is understood not simply as a collection of traditional objects or ceremonies, but as knowledge embedded in the lived experience of a community (Irijayanti & Lord, 2024; Rahardjanto et al., 2025). Local wisdom encompasses inherited patterns of life transmitted across generations through religion, culture, customs, and social relationships (Pingge, 2017). Its educational significance therefore lies partly in its proximity to students' everyday worlds. Buildings, rituals, oral expressions, communal practices, traditional arts, and customary values may already be visually or socially familiar to children long before these elements are formally introduced in school. Yet familiarity alone should not be equated with understanding. A child may repeatedly see a traditional building, hear the name of a ceremony, or observe a customary practice without understanding its historical significance, social function, symbolic meaning, or status as cultural heritage. This distinction is central to cultural heritage learning because educational materials can function as a conceptual bridge between what students already encounter and what they are expected to understand. When textbook content draws upon culturally distant examples, it may successfully provide general information about cultural diversity while failing to activate students' existing experiential knowledge. When instructional content is connected to familiar cultural objects, however, teachers have a stronger basis for transforming everyday recognition into structured cultural understanding.

From this perspective, the problem addressed in the present study is not simply whether a textbook contains cultural material, but whether the cultural representations provided by the textbook are sufficiently connected to the social and cultural environment in which learning actually occurs. This relationship can be conceptualised as a textbook–context gap: a condition in which formal instructional content addresses cultural heritage but the cultural examples, visual representations, exercises, or learning activities have limited correspondence with the cultural realities immediately accessible to students. Such a gap has pedagogical consequences because textbooks do more than organise subject matter; they influence which examples become visible in classroom discourse and which cultural objects are positioned as legitimate objects of formal knowledge. Where the textbook becomes the dominant learning resource, limited representation of students' own cultural environment may also restrict opportunities for teachers to connect formal concepts with students' lived experience. The analytical concern is therefore not whether nationally diverse cultural examples should be removed from textbooks, but whether nationally oriented materials provide sufficient pedagogical space for students to interpret cultural heritage through their own local environment. This distinction is important for IPAS (Ilmu Pengetahuan Alam dan Sosial) because its contextual orientation requires learning to move beyond knowing that cultural diversity exists toward understanding how cultural heritage is manifested within students' own communities.

Existing scholarship provides important foundations for examining this problem, but it also leaves a more specific question open. A substantial portion of scholarship has addressed

cultural and local-wisdom education conceptually or through curriculum and teaching-material analysis, while needs-analysis studies have increasingly demonstrated teachers' and students' demand for supplementary materials grounded in local cultural contexts. These studies are valuable because they establish that locally responsive materials are educationally relevant and practically needed. Nevertheless, identifying a lack of local content or a demand for contextual materials does not fully explain how that absence is experienced by students in actual classroom settings. A comparatively underexamined issue concerns the relationship between everyday cultural exposure and formal conceptual recognition: when students live among culturally significant objects and practices, does everyday familiarity enable them to understand those elements as cultural heritage, or does that familiarity remain disconnected from the concepts taught at school when local examples are absent from instructional materials? This question shifts the analytical emphasis from the mere availability of local content toward the educational relationship among textbook representation, students' lived cultural environment, and the construction of cultural understanding.

This issue is particularly relevant in Mandailing Natal, where students live within a cultural environment containing tangible and intangible forms of Mandailing heritage. The preliminary context at SD Negeri 098 Pidoli illustrates this tension clearly. An initial interview with the Grade V homeroom teacher indicated that the school is located close to Bagas Godang of the Nasution clan, including its structural and ornamental elements, yet this culturally significant site had not been systematically utilised as a learning resource. This situation presents an educational paradox: a culturally meaningful object can be physically close to students and visually familiar in everyday life while remaining conceptually distant from formal classroom learning. The problem, therefore, cannot be reduced to students simply "not knowing" their culture. Rather, it concerns whether schooling provides the conceptual language, contextual explanation, and instructional mediation required for students to reinterpret familiar elements of their surroundings as cultural heritage carrying historical, social, and symbolic meanings. Examining this relationship at the classroom level is important because it can reveal whether the textbook and associated learning activities function as bridges between lived experience and curricular knowledge or, conversely, leave these two domains disconnected.

Against this background, the present study conducts a field needs analysis of cultural heritage learning in Grade V IPAS (Ilmu Pengetahuan Alam dan Sosial) at SD Negeri 098 Pidoli, Mandailing Natal Regency. Specifically, the study aims to examine how cultural heritage learning is implemented in the classroom, determine the extent to which the available teaching materials accommodate local wisdom from the students' surrounding environment, and explore how students understand cultural heritage that is physically and socially present in their everyday lives. These objectives are addressed through three guiding questions: (1) How does cultural heritage learning actually proceed in the Grade V IPAS classroom? (2) To what extent do the available teaching materials represent local wisdom from the students' immediate cultural environment? and (3) How do students understand cultural heritage that they encounter in their own surroundings? The field findings are subsequently read alongside national and international literature as an interpretive strategy for examining whether comparable patterns have been reported elsewhere, rather than as evidence for claiming systemic prevalence beyond the research site. Through this focus, the study seeks to contribute an empirical basis for understanding the textbook-context gap and for developing supplementary teaching materials capable of connecting formal IPAS (Ilmu Pengetahuan Alam dan Sosial) content with the cultural realities students encounter in their own communities.

Methods

This study employed a qualitative descriptive approach framed as a field needs analysis to examine the availability, contextual relevance, and instructional use of cultural heritage materials in Grade V IPAS learning. A qualitative approach was considered appropriate because the study sought to understand an educational phenomenon within its natural setting by examining participants' experiences, classroom practices, and the meanings attached to the cultural context in which learning occurred. This orientation is consistent with Creswell and Poth's view that qualitative inquiry provides a systematic framework for investigating complex phenomena through context-sensitive data collection, analysis, interpretation, and validation procedures (Creswell & Poth, 2024). The study was conducted at SD Negeri 098 Pidoli, Mandailing Natal Regency, Indonesia, which was purposively selected because the school is situated within a culturally rich environment containing heritage resources relevant to the Grade V IPAS topic on cultural heritage and local wisdom. Grade V A was selected because the class was engaging with curricular content directly related to the phenomenon under investigation. The participants comprised the Grade V A homeroom teacher and all 29 students in the class, allowing the study to examine the issue from both instructional and learner perspectives. The teacher provided information concerning classroom practices, textbook use, and the availability of contextual learning resources, whereas the students provided evidence concerning their familiarity with and understanding of cultural objects encountered in their everyday environment. Prior to data collection, institutional permission was obtained, participation was voluntary, and participant identities were anonymised in the presentation of the findings.

Data were collected through classroom observations, unstructured interviews, and document analysis. The combination of these techniques was intended to capture the phenomenon from complementary perspectives rather than relying on a single form of evidence. This procedure is consistent with Sugiyono's methodological position that qualitative data are commonly generated in natural settings through techniques such as observation, interviews, documentation, and their combination through triangulation (Sugiyono, 2023; Suhirman et al., 2026). Classroom observations were conducted on three occasions, each lasting approximately 35 minutes, and focused on the learning resources used by the teacher, the cultural examples presented during instruction, students' responses to the material, and the extent to which classroom activities connected textbook content with the surrounding cultural environment. Unstructured interviews were conducted with the Grade V A homeroom teacher and students to obtain more detailed accounts of classroom practice and cultural understanding. Student interviews were organised in small groups based on their existing *banjar* groupings so that participants could communicate within a familiar interactional setting. The interviews explored students' recognition and interpretation of local cultural objects, while the teacher interview addressed the use of the government-issued IPAS textbook, supplementary resources, and opportunities for integrating local heritage into instruction. Interviews were audio-recorded and transcribed for analysis. Document analysis focused on Chapter 7, *Kebanggaan Daerahku (The Pride of My Region)*, of the government-issued Grade V IPAS textbook, particularly the material on *Cultural Heritage and Local Wisdom in My Region* and the accompanying student worksheets. The analysis examined the cultural and geographical origins of examples, visual representations, questions, and learning activities and

their correspondence with the cultural environment surrounding the students. Documentation is particularly relevant in qualitative research because documentary evidence can complement observations and interviews rather than functioning as an isolated source of information (Sugiyono, 2023).

Data analysis was conducted iteratively by organising, comparing, coding, and interpreting evidence obtained from classroom observations, interview transcripts, and the analysed textbook and worksheets. The researchers first reviewed the complete dataset to identify recurring statements, instructional practices, cultural representations, and discrepancies between formal learning materials and students' lived cultural environment. Relevant data segments were assigned provisional codes and subsequently compared across sources before being consolidated into broader analytical categories. These categories concerned dependence on the government-issued textbook, representation of local culture in teaching materials, the pedagogical function of student worksheets, and the distinction between students' visual familiarity with cultural objects and their conceptual understanding of those objects as cultural heritage. Such a systematic movement from data organisation to interpretation is consistent with qualitative inquiry, in which analysis involves organising and representing data in ways that preserve contextual meaning while allowing recurring patterns to be identified (Creswell & Poth, 2024). To strengthen credibility, evidence was compared across observations, interviews, and documents so that major interpretations were not based on a single source. This cross-checking reflects the principle of triangulation, through which different sources or forms of evidence are examined for convergence, complementarity, or inconsistency (Sugiyono, 2023). Relevant national and international literature was subsequently used as an interpretive comparison, rather than as an additional empirical data source, to position the field findings within broader scholarship on cultural heritage education, local-wisdom-based learning, contextual teaching materials, and IPAS implementation. Forty scholarly sources relevant to these areas were considered for this purpose. The resulting categories were then refined into thematic findings aligned with the research questions while maintaining a clear distinction among participants' accounts, observed classroom practices, documentary evidence, and the researchers' interpretations.

Results and Discussion

The results and discussion section is organised according to the three research questions formulated in this study. Each subsection presents the empirical findings derived from classroom observations, interviews, and document analysis, followed by interpretation and comparison with relevant previous studies. The first subsection discusses how cultural heritage learning is implemented in the Grade V IPAS classroom. The second examines the extent to which the available teaching materials represent local wisdom from the students' immediate cultural environment. The third explores how students understand the cultural heritage they encounter in their everyday surroundings. This structure is intended to establish a clear connection between the research questions, the field findings, and the broader academic discussion developed in this study.

Cultural Heritage Learning Practices in Grade V IPAS

The first research question examined how cultural heritage learning was implemented in the Grade V IPAS classroom. Across the three observed learning sessions, instruction followed a relatively consistent pattern. Students read the assigned material from the government-issued IPAS textbook, listened to the teacher's explanation, responded to questions, and completed

the exercises provided in the textbook. During these activities, students demonstrated initial familiarity with several cultural objects presented visually in the learning materials and were generally able to recognise or name the objects shown to them. Such familiarity provided an accessible point of entry into cultural heritage learning; however, it should not be interpreted as direct evidence of cognitive readiness or comprehensive conceptual understanding. More importantly, the observations did not identify the use of supplementary cultural resources, locally developed teaching materials, community-based examples, or other instructional sources specifically designed to connect the cultural heritage concepts presented in the textbook with cultural objects and practices found in the students' immediate environment.

The teacher interview reinforced the observational findings. The government-issued Grade V IPAS textbook served as the principal and, during the observed instruction, the only teaching material used to address cultural heritage. The teacher reported that supplementary materials specifically incorporating Mandailing local wisdom had neither been developed independently nor obtained from other sources. The significance of this finding does not lie in the use of a government textbook itself, since nationally standardised materials provide an important common curricular foundation. Rather, the issue concerns the absence of complementary resources through which nationally framed cultural content could be connected with the students' local environment. When classroom instruction depends almost exclusively on a nationally oriented resource, the cultural boundaries represented in that resource may effectively shape the cultural knowledge formally discussed in the classroom. At SD Negeri 098 Pidoli, this condition meant that culturally meaningful resources readily available outside the classroom received limited attention within formal IPAS learning.

This pattern corresponds with previous research highlighting the need for contextual teaching materials. Setiawaty et al. (2025) found that elementary learning materials frequently remain limited in representing region-specific cultural contexts, while Hidayat et al. (2024) identified teachers' and students' need for supplementary worksheets incorporating local wisdom. Similar concerns have been reported in Bengkulu, where local cultural traditions were deliberately incorporated into elementary science materials because conventional resources did not sufficiently accommodate students' immediate cultural contexts (Agustin et al., 2026), and in Pandeglang, where local wisdom had not yet been systematically integrated into principal teaching materials (Anisah et al., 2026). Research on IPAS implementation under the *Kurikulum Merdeka* further indicates that contextual learning depends partly on teachers' capacity to utilise and develop learning resources beyond a single textbook (Firnianti et al., 2026; Rahmawati et al., 2023), while Viqri et al. (Viqri et al., 2024) identify continuing challenges between curricular expectations for contextual learning and the availability of materials capable of accommodating students' local environments.

The present findings therefore confirm previous research regarding the continuing need for contextual teaching resources while also extending that literature by demonstrating how resource limitations are manifested in observable classroom practice. The issue was not simply that the teacher expressed a need for more locally oriented materials. Classroom observations showed that the absence of such resources was reflected in an instructional sequence centred on reading, teacher explanation, and textbook-based exercises. This pattern suggests a plausible relationship between resource availability and classroom practice: when a nationally oriented textbook becomes the dominant instructional resource and accessible contextual alternatives are unavailable, teaching tends to reproduce the cultural representations already contained in that textbook. This interpretation should not be understood as indicating a lack of

teacher concern for local culture. Rather, the evidence points to a practical resource gap between the contextual expectations of IPAS learning and the instructional materials available for realising those expectations.

Representation of Mandailing Local Wisdom in the Available Teaching Materials

The second research question examined the extent to which the available teaching materials represented local wisdom from the students' immediate cultural environment. Document analysis of Chapter 7, *Kebanggaan Daerahku (The Pride of My Region)*, particularly the section addressing *Cultural Heritage and Local Wisdom in My Region*, showed that cultural heritage was predominantly introduced through examples representing Indonesia at a broader national level. No explicit representation of Mandailing cultural heritage was identified in the analysed section. The cultural objects, illustrations, and examples used to introduce heritage and local wisdom originated from contexts outside the students' immediate region. This finding is particularly noteworthy because the curricular topic explicitly invites students to engage with cultural heritage and local wisdom associated with "my region," while the instructional examples available to them provide limited direct connection with the cultural environment in which they live.

A comparable pattern emerged from the analysis of the accompanying student worksheet. The worksheet was derived from the textbook and functioned primarily as an evaluative activity following instruction. Although its content remained aligned with the prescribed competencies, its reference base was confined largely to the textbook, and no activities specifically directing students to investigate Mandailing cultural heritage were identified. When considered in relation to the principal components of worksheet design described by Kalifah and Nugraheni (2021), the worksheet fulfilled several basic curricular and assessment functions but provided limited opportunities for students to relate formal knowledge to their lived cultural experiences. Activities requiring students to observe nearby heritage, document cultural objects, obtain information from family or community members, compare local and national cultural examples, or interpret the meanings of familiar traditions were not evident in the analysed material.

These findings should not be interpreted as suggesting that examples of cultural heritage from other Indonesian regions should be removed from IPAS textbooks. Exposure to cultural diversity beyond students' own regions remains important for developing a broader understanding of Indonesia as a culturally plural society. The issue instead concerns the limited pedagogical connection between national cultural diversity and cultural resources available in students' immediate surroundings. In this study, the textbook-context gap therefore refers not merely to geographical distance between textbook examples and Mandailing Natal, but to a representational and instructional distance between culture formalised in teaching materials and culture experienced in everyday life. A nationally oriented textbook can broaden students' cultural horizons, but contextual supplementary materials become necessary when students are expected to connect general concepts of heritage and local wisdom with cultural realities in their own region.

Comparable representational concerns have been identified in the broader literature. Matt et al. (2025) report that educational textbooks may privilege dominant or global cultural representations while providing more limited space for local and minority cultures. Barghi et al. (2017), examining Malaysia's Primary School Standard Curriculum, similarly found that heritage content may appear in fragmented rather than systematically integrated forms. Estepa Giménez

et al. (2008) demonstrate that heritage may be presented as monumental or decorative content rather than being used as a conceptual resource for understanding students' cultural surroundings. Cheng and Sun (2026), meanwhile, show that the balance between local and global cultural representation can change across curriculum revisions, suggesting that representational imbalance should be regarded as a design issue capable of improvement rather than as an unavoidable characteristic of nationally oriented materials.

The significance of this representational gap becomes particularly apparent when considered alongside the cultural resources available in Mandailing Natal. Bagas Godang, for example, is more than a traditional physical structure. Its architecture and ornamentation embody cultural values, philosophical meanings, social responsibilities, and customary leadership within Mandailing society (Herlina & Lubis, 2022; Jambak & Devianty, 2024). Gordang Sambilan similarly extends beyond its function as a traditional musical instrument because its nine drums are closely associated with Mandailing collective identity and customary ceremonies (Nasution & Purwaningtyas, 2021). Intangible heritage provides equally meaningful learning possibilities. Markobar performs social and moral functions within customary deliberation (Dora et al., 2024; Dora & Sina, 2024), while Mangupa embodies expressions of gratitude, prayer, and cultural continuity within Mandailing communities (Imron et al., 2021).

Marsialap Ari further illustrates why local cultural material has educational relevance beyond the memorisation of cultural names. The practice embodies reciprocal cooperation in activities such as agricultural work and house construction and reflects values of togetherness, responsibility, and social solidarity (Harahap & Dora, 2023). Evidence of its gradual decline due to changing patterns of work and weakening intergenerational transmission also demonstrates the vulnerability of local cultural knowledge when it is no longer actively transmitted (Zulfiqar & Pasaribu, 2023). These examples are not presented merely as an inventory of Mandailing culture. Instead, they demonstrate that the students' immediate environment contains a substantial repertoire of tangible and intangible heritage that could support contextual IPAS learning. The textbook–context gap identified in this study therefore cannot be attributed to a scarcity of local cultural resources; such resources are readily available, but they have not yet been systematically connected with the formal materials used in classroom learning.

Students' Recognition and Conceptual Understanding of Local Cultural Heritage

The third research question examined how students understood cultural heritage encountered in their own surroundings. Student interviews revealed a recurring pattern in which familiarity with local cultural objects did not necessarily develop into conceptual understanding of those objects as cultural heritage. Bagas Godang provided the clearest example. Students generally recognised the building because it was present in their everyday environment and visually familiar to them. When the discussion moved beyond simple recognition toward the cultural status and meaning of Bagas Godang, however, their responses indicated that this familiarity was not accompanied by an adequate understanding of the building as part of Mandailing cultural heritage. In the interview exchanges, students essentially described Bagas Godang as a building they knew and frequently encountered, but they were unable to explain its cultural position, philosophical meaning, or significance within Mandailing society. A similar pattern appeared in their responses concerning Gordang Sambilan, Markobar, Marsialap Ari, and Mangupa, where recognition of names, objects, or practices was more evident than understanding of their cultural significance.

This pattern demonstrates that the learning problem cannot be reduced to a lack of cultural exposure. The students were already living alongside cultural objects and practices that formed part of Mandailing heritage; what remained limited was the conceptual framework through which those everyday experiences could be interpreted as cultural knowledge. In this sense, the findings indicate a recognition–understanding gap: students could recognise elements of local culture at a visual or experiential level, but this recognition had not consistently developed into an understanding of their historical, social, symbolic, and cultural meanings. The gap is particularly important in the context of the present study because the principal textbook used in the classroom did not represent Mandailing cultural heritage and therefore provided limited opportunities to connect students' existing cultural familiarity with formal concepts of heritage and local wisdom.

This distinction changes how the educational problem should be understood. Students were not culturally detached from their surroundings, nor did the findings demonstrate an absence of cultural experience. Instead, they possessed everyday familiarity that had not yet been systematically transformed into explicit conceptual knowledge through classroom instruction. Recognition in this context refers to the ability to identify, name, or express familiarity with cultural objects and practices, whereas understanding requires students to relate those objects to their historical background, social functions, symbolic meanings, inherited values, and significance for the community. The instructional need is therefore not simply to introduce students to unfamiliar cultural objects, but to enable them to reinterpret what is already familiar through concepts that reveal why it constitutes cultural heritage.

Bagas Godang illustrates this distinction particularly clearly. Previous research describes the traditional Mandailing house not simply as a dwelling but as a culturally meaningful structure whose architecture and ornamentation communicate social values and customary leadership within the *huta* (Jambak & Devianty, 2024). Its carved motifs also embody philosophical meanings related to responsibility, courage, and Mandailing social organisation (Herlina & Lubis, 2022). Consequently, recognising the physical form of Bagas Godang represents only an initial level of cultural knowledge. Conceptual understanding requires students to interpret what the building represents, why particular architectural and ornamental elements exist, and how these features relate to Mandailing social and cultural life. The students' ability to recognise the building without adequately explaining these meanings therefore provides empirical support for the recognition–understanding gap identified in this study.

The relationship among the three research questions is particularly important at this point. The recognition–understanding gap did not emerge independently of classroom practice or instructional materials. The first finding showed that cultural heritage instruction depended predominantly on a single government-issued textbook. The second demonstrated that Mandailing cultural heritage was not represented in the analysed material and that the worksheet provided limited opportunities for contextual exploration. The third revealed that students were visually or socially familiar with cultural resources in their surroundings but experienced difficulty conceptualising them as heritage. Taken together, these findings reveal a coherent relationship: students encounter local culture in everyday life, but the principal formal learning resource provides limited opportunities to transform that experience into structured cultural understanding. This relationship constitutes the substantive meaning of the textbook–context gap identified in the present study.

The contribution of this finding becomes clearer when positioned against previous needs-analysis research. Studies conducted in Situbondo, Bengkulu, and Pandeglang have already demonstrated the need for locally grounded supplementary materials (Agustin et al., 2026; Anisah et al., 2026; Hidayati & Wulandari, 2024). The present study confirms that need but also extends previous research by connecting limitations in teaching materials with observable classroom practices and students' cultural understanding. Most importantly, it distinguishes itself by identifying a condition in which local cultural heritage is not absent from students' lives but remains insufficiently conceptualised within formal learning. The contribution therefore lies not merely in demonstrating that local content is limited, but in explaining what may occur at the intersection of textbook representation, lived cultural proximity, and conceptual heritage understanding. The recognition–understanding gap consequently represents the principal analytical contribution of this study.

The implications of this gap may extend beyond immediate knowledge acquisition, although they should be interpreted cautiously. Previous studies indicate that deliberate integration of local wisdom into elementary learning can contribute to character development, including cooperation, responsibility, and respect for others (Maharani & Muhtar, 2022; Sakti et al., 2024; Sari, 2020). Other literature associates sustained engagement with local wisdom with cultural self-understanding and confidence (Setiahati et al., 2026), while the use of local historical heritage in elementary education has also been linked to cultural preservation and broader goals concerning sustainable communities (A. M. Putri et al., 2026). Nevertheless, cultural identity, character formation, and cultural estrangement were not directly measured in the present study. Students' limited conceptual understanding should therefore not be interpreted as empirical evidence of cultural identity loss. Rather, the findings identify an educational condition that may restrict opportunities for students to develop a more explicit and reflective understanding of the cultural environment in which they live.

Integrating the Findings into Contextual Teaching Needs

Taken together, the answers to the three research questions identify interconnected rather than isolated instructional needs. The first concerns learning resources: teachers require accessible supplementary materials capable of complementing nationally oriented content with Mandailing cultural heritage. The second concerns cultural representation: local heritage should not merely appear as decorative imagery or additional factual information but should function as material through which students investigate the meanings embedded in their own surroundings. The third concerns learning activity design: students require opportunities to move from recognition toward interpretation through observation, questioning, comparison, documentation, and reflection. Collectively, these needs indicate that an appropriate response to the textbook–context gap is not to replace national materials with exclusively local content, but to construct a pedagogical bridge between the two.

Visual and contextual teaching materials appear particularly relevant because students already demonstrated familiarity with cultural objects through everyday observation. Ethnophotography offers one possible approach because photographs can document cultural objects within their social contexts rather than functioning merely as decorative illustrations (Haryani & Handriyotopo, 2022). Previous educational applications suggest that photographs representing locally accessible resources can support more engaging and comprehensible social science materials (Suciptaningsih & Haryati, 2015). Ethnoscience research likewise indicates that integrating local knowledge into science learning can contribute to conceptual

understanding while supporting cultural awareness (Sihombing et al., 2025). Evidence concerning visual materials (Regondola & Astorga, 2025), student worksheets (Nadrah, 2023), and digital technology integrated with local wisdom (Kwangmuang et al., 2026) further supports the potential value of learning materials that position students' cultural environment as an active educational resource.

Student worksheets, in particular, could be repositioned from predominantly evaluative instruments toward tools for guided cultural inquiry. Students might, for example, observe Bagas Godang, document its architectural characteristics, investigate the meanings associated with particular ornaments, obtain information from knowledgeable community members, and subsequently compare their findings with traditional houses represented in the national textbook. Similar activities could be designed around Gordang Sambilan, Markobar, Mangupa, and Marsialap Ari. Local-wisdom-based worksheets provide one practical mechanism for connecting subject matter with cultural values and resources in students' surroundings (Putri & Ananda, 2020). If subsequent research proceeds toward product development, a systematic research-and-development framework could be employed to design, validate, test, and refine such materials (Husnayayin et al., 2024). Importantly, this remains a developmental implication derived from the needs analysis; the present study neither developed nor tested the effectiveness of such an instructional product.

Finally, contextualisation should involve the communities whose heritage becomes the subject of learning. Educational representation of local culture requires more than transferring cultural symbols onto textbook pages or worksheets; it requires attention to the meanings attributed to those symbols by the communities that sustain them. Stansberry et al. (2023) emphasise the importance of involving culture-owning communities in integrating local knowledge into curricula, while Hegedis et al. (Hegedis et al., 2023) indicate that community participation in heritage exploration can strengthen contextual understanding and students' connection with heritage. The integration of local culture into social studies has also been associated with students' social-emotional learning (Meland & Brion-Meisels, 2024; Niman, 2025). At the same time, growing scholarly attention to indigenous knowledge has not always been matched by equivalent implementation in elementary education (Sugara et al., 2026). Addressing the textbook-context gap in the present context therefore requires collaboration among teachers, schools, instructional-material developers, and Mandailing cultural communities so that students can progress from simply seeing culture around them to understanding why it constitutes meaningful heritage.

Conclusion

This study identified a clear textbook-context gap in Grade V IPAS cultural heritage learning at SD Negeri 098 Pidoli, Mandailing Natal. The findings addressing the three research questions show that cultural heritage instruction relied predominantly on the government-issued IPAS textbook, with limited use of supplementary resources connecting national content to the students' immediate cultural environment. The analysed textbook and accompanying worksheet provided little explicit representation of Mandailing local wisdom and offered limited opportunities for students to investigate cultural heritage through their lived surroundings. At the student level, familiarity with local cultural elements, particularly Bagas Godang, did not consistently correspond to an understanding of their historical, social, symbolic, and cultural significance. This pattern reveals a recognition-understanding gap, in which students may encounter and recognise local heritage in everyday life without necessarily conceptualising it

as cultural heritage within formal learning. Taken together, these findings indicate that the central instructional need is not simply greater exposure to local culture, but a stronger pedagogical connection between students' existing cultural experiences and the concepts of heritage and local wisdom addressed in IPAS.

The study consequently highlights the need for supplementary contextual teaching materials that complement, rather than replace, nationally oriented textbooks by integrating relevant Mandailing cultural resources into learning activities. Such materials may provide opportunities for students to progress from cultural recognition toward interpretation through observation, comparison, documentation, inquiry, and reflection. The recognition–understanding gap identified in this study also offers an analytical contribution to previous needs-analysis research by showing that geographical proximity to cultural heritage does not necessarily result in conceptual understanding when everyday cultural experiences remain weakly connected to formal instructional content. Nevertheless, these conclusions should be interpreted within the scope of a qualitative needs analysis conducted in one Grade V classroom and should not be generalised to all IPAS learning contexts. The study neither developed nor evaluated the effectiveness of a contextual instructional product. Future research may therefore use these identified needs as an empirical foundation for developing, validating, and evaluating locally grounded teaching materials while involving teachers and Mandailing cultural communities to ensure both pedagogical relevance and cultural accuracy.

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