NEED ANALYSIS FOR DESIGNING ELEMENTARY SCHOOL MATERIALS TO REVITALIZE BATAK ANGKOLA LANGUAGE: STUDENTS' INSIGHT

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ABSTRACT

Local language revitalization requires materials that speak to students' language skills, reading history, and social and cultural backgrounds. In the case of Batak Angkola which is one of the local languages in North Sumatera, Indonesia, the language is encouraged to be taught since elementary school through a local subject (Muatan Lokal). The aim of the study is to develop Batak Angkola teaching materials as a way to revitalize the language through school subject. Therefore, the study is supported by mother tongue-based multilingual education, developmental literacy, and a comprehensive common underlying proficiency. These ideas show that a student's first language is important for things like learning to read and write and understanding their culture all at the same time. The data were taken from 199 students in the fifth grade who attended twelve elementary schools in Padangsidimpuan City across six districts. The students who were tested and have requirements are able to speak Batak Angkola through reading and writing in their local language. Moreover, the students asked about their parental background. The findings revealed that most students mixed Batak Angkola and Indonesian when they spoke and interacted with each other. Most of them wanted to learn more about their local language and culture by reading stories about their cultures. However, most students tended to be proficient at reading and writing in Indonesian. In the future, Batak Angkola subject materials should highlight the necessity of communicative repertoire through language literacy to support local language transmission and ensure long-term linguistic vitality within multilingual educational contexts. Hopefully, the learning materials will be essential for enhancing students' linguistic and cultural competence while fostering the sustained preservation of the Batak Angkola language.
Keyword: *need analysis, learning materials, Batak Angkola, language revitalization*

ABSTRAK

Revitalisasi bahasa daerah memerlukan materi yang relevan dengan kemampuan berbahasa, riwayat membaca, serta latar belakang sosial dan budaya siswa. Dalam konteks bahasa Batak Angkola, yang merupakan salah satu bahasa daerah di Sumatera Utara, Indonesia, kebijakan daerah mendorong pengajaran bahasa ini sejak jenjang sekolah dasar melalui mata pelajaran muatan lokal. Penelitian ini bertujuan mengembangkan materi ajar bahasa Batak Angkola sebagai upaya revitalisasi bahasa tersebut melalui kurikulum sekolah. Oleh karena itu, penelitian ini didasarkan pada pendekatan pendidikan multibahasa berbasis bahasa ibu, pengembangan literasi, dan konsep common underlying proficiency (kemampuan dasar bahasa yang saling terkait). Gagasan ini menunjukkan pentingnya bahasa pertama siswa dalam proses belajar membaca dan menulis serta pemahaman budaya secara simultan. Data penelitian diperoleh dari 199 siswa kelas lima yang bersekolah di dua belas sekolah dasar di enam kecamatan di Kota Padangsidimpuan. Para siswa yang diuji perlu memenuhi kriteria memiliki kemampuan berbahasa Batak Angkola, dilihat dari keterampilan membaca dan menulis dalam bahasa daerah tersebut. Selain itu, informasi mengenai latar belakang orang tua siswa juga dikumpulkan. Hasil penelitian menunjukkan bahwa sebagian besar siswa mencampur bahasa Batak Angkola dan bahasa Indonesia saat berbicara dan berinteraksi satu sama lain. Mayoritas siswa memiliki keinginan untuk mempelajari lebih lanjut mengenai bahasa dan budaya daerah mereka melalui bacaan cerita yang mengangkat nilai-nilai budaya setempat. Namun, sebagian besar siswa cenderung lebih mahir membaca dan menulis dalam bahasa Indonesia. Ke depannya, materi pelajaran bahasa Batak Angkola perlu menekankan pentingnya penguasaan repertoar komunikatif melalui literasi bahasa guna mendukung pewarisan bahasa daerah dan menjamin vitalitas bahasa dalam jangka panjang di lingkungan pendidikan multibahasa. Diharapkan materi pembelajaran ini dapat berperan penting dalam meningkatkan kompetensi linguistik dan budaya siswa sekaligus mendorong pelestarian bahasa Batak Angkola secara berkelanjutan.
Kata kunci: *need analysis, learning materials, Batak Angkola, language revitalization*

INTRODUCTION

Linguistic diversity should be considered an inherent part of cultural heritage because language is the means by which collective memory, local knowledge, and cultural identity get conveyed. When youngsters limit the use of their ancestral languages, cultural practices get distanced from linguistic systems that give them meaning. This process takes place gradually, with fewer uses of language in families, schools, and communities. According to UNESCO (2021), the reduction of local languages is associated with the loss of cultural continuity and inclusion, beyond being a problem of linguistics itself (UNESCO, 2021). In other words, schools are supposed to contribute to the reconnection of children with

linguistic and cultural resources in their environment. The case of Indonesia provides a valuable example for language revitalization since the country boasts rich linguistic diversity. The role of Indonesian, which is the national language of Indonesia, is similar to that of English in many other countries; its dominance in literacy, administration, and schooling has prevented people from speaking their local languages. Badan Pengembangan dan Pembinaan Bahasa (2019) reports the identification of 718 local languages in Indonesia, suggesting both its diversity and the importance of the task related to preservation of its languages (Badan Pengembangan dan Pembinaan Bahasa, 2019). As a result, the Indonesian government implemented a local language revitalization program called Revitalisasi Bahasa Daerah. It targets the transmission of local languages through various school- and community-based strategies and fits into the UNESCO program called International Decade of Indigenous Languages (2022-2032).

The context of Batak Angkola (ISO 639-3: akb), it refers to the Austronesian language widely used in South Tapanuli and Padangsidimpuan City, North Sumatra. The language is among those covered by the revitalization program implemented in Indonesia. As noted by Eberhard et al. (2024), the Batak Angkola is classified as one language in the Austronesian language family. Even though Batak Angkola carries deep cultural symbolism, Indonesian is increasingly becoming the main literacy language and medium. As per previous studies, although children recognize Batak Angkola and sometimes use this language, their knowledge in terms of speaking fluently, writing, and understanding traditional terminology, as well as being familiar with the Batak script, diminishes over time (Minda, 2012; Siagian et al., 2023).

The study offers language revitalization in school settings bridging the gap between formal education and communitity knowledge (Kusumaningsih, 2022; O'Brien, G., & Bobongie-Harris, 2023). Schooling may become the most effective instrument for reversing this situation, making the language acquisition process move from recognition to active language acquisition. The Local Content Subject (Muatan Lokal) is a subject where local authorities have the legal right to introduce local languages and knowledge into the curriculum. Yet, its effectiveness depends on how instructional materials take into account the real language practices of the students, their level of literacy, and their cultural background. It was reported that in the case of a learner speaking several languages, they tend to learn a new language better if instruction takes place in the language that learners already know (Degraff, 2017). This claim seems supported by the ideas behind Mother Tongue-Based Multilingual Education (MTB-MLE), developmental literacy, and Common Underlying Proficiency. MTB-MLE is fundamentally built on the notion that when students learn in their first language, they are able to make sense of ideas more clearly, acquire literacy skills, and then take on other languages more smoothly, instead of being pushed right away into instruction in a second language (Vogelzang et al., 2024). Developmental literacy, for its part, suggests that the best outcomes happen when learners meet relevant and meaningful texts, not just materials that are random or kind of disconnected, in the classroom (Meighan, 2025). Meanwhile, the Common Underlying Proficiency theory highlights the idea that literacy and cognitive abilities that form in the first language can transfer over into later languages, since the underlying mental processes are still interconnected (Cummins, R. Glenn, A., & Hahn, 2024). Cummins (2021) also notes that multilingual learners often speak what they already know about concepts and about language structures when they start learning a new language (Cummins, 2021). In the Batak Angkola case study, earlier literacy in Indonesian could serve as a stepping stone to help students enrich their vocabulary, discourse patterns, and orthography in the local language . It helps even if these developments occur in different learning environments.

In previous studies, Mother tongue-based multilingual education (MTB-MLE) improves early literacy by gradually introducing symbols and sounds (Sanches, 2013). The gains directly reinforce boarder findings that meaningful mother tongue-based multilingual education implementation strengthens foundational L1 competence, thus facilitating which in turn, facilitates a smoother transition to second language (L2) acquisition later in primary schooling (Behera A. K. et al., 2025; Narvacan, 2023). However, achieving these long-term benefits requires overcoming initial practical hurdles strengthened L1 competence and facilitation of later L2 learning when L1 literacy foundation are robust (Jaca, C. A. L., 2018). It challenges that underscore the critical need for targeted teacher training and strong community support. In fact, the extension of L1 instruction allows students to develop deep conceptual understanding and metalinguistic awareness that facilitates subsequent language learning (Bruen & Kelly, 2017). Therefore, students whose mother tongues are well developed can transfer into targeted languages (L2 or L3) through primary communicating languages and reducing anxiety, and affirming cultural identity.

In concequence, there are reasons why proper tools aren't adequately utilized, considering the cultural background and the actual needs of students. For example, textbooks often seem to overemphasize

elements, including grammar drills and vocabulary practice, yet they fail to provide space for translanguaging, to set literacy into context, and rarely make space for folklore narration. It aligns with previous findings that mentioned lessons pull on local wisdom, they can increase involvement, as well as help students understand things better (Tressyalina et al., 2023). One of the features of multilingual classrooms is translanguaging, which refers to learners using different elements of languages in order to build meaning and communicate. Translanguaging is considered to be the natural use of students' entire linguistic repertoire rather than interference. Through translanguaging, multilinguals utilize their full communicative repertoires (Sun, X., & Wang, 2021). It challenges traditional monolingual education, evolving into a framework addressing social justice, identity, and complex human cognition within diverse global educational settings. Translanguaging allows bilingual students to connect languages in a way that helps them understand and express themselves better. For Batak Angkola students, who switch between Batak Angkola and Indonesian, the recognition of translanguaging as an effective strategy may lower their cognitive burden and create a more realistic pathway to learning their native language. The needs analysis is one of the key stages in creating instructional materials, as it helps determine what learners need, what problems they face, and what they expect from the process. Needs analysis forms the basis for learner-oriented material design. It is especially important to consider the needs analysis stage while developing materials for language revitalization programs since they should cover both educational goals and sociocultural aims (Hutchinson, T., & Waters, 1987; Imron, 2022). The study suggests on designing materials to enhance students' communicative practices and their cultural identities, particularly, elementary school students. Due to common concerns are often discussed in contexts because most studies have focused on policy implementation, curriculum development, and teacher perspectives. The concepts is drawn in figure. 1 below.

Figure 1. Concept of MTB-MLE in Batak Angkola Context

RESEARCH METHOD

This study employed a Research and Development (R&D) design based on the integration of two different types of data (qualitative and quantitative), building a product, and testing its effectiveness. In this methodological approach, the researcher designs a development based on scientific processes where qualitative data serves as the foundation for a quantitative intervention or tool. The design is characterized by a three-phase procedure: gathering qualitative data, developing a product or instrument based on that data, and finally testing the product through quantitative measures (Creswell, J. W., & Creswell, 2017). Furthermore, the previous studies showed that the method can explain how the products work effectively because this method provided both quantitative and qualitative data that led to thorough explanations and understanding of the issues being studied (Creswell, J. W., & Clark, 2014). Hence, the approach ensured that initial broad findings were subsequently explored in detail, enhancing the depth and validity of the results.

The study is in the define stage, quantitative data resulting from the statistical analysis were used to score students' oral reading comprehension of learning the local content. In addition, qualitative data were collected through interview guidelines on students' demographics, supporting and supplementing the study. It is in line with previous studies about need analysis for developing local wisdom context for teaching materials (Tressyalina et al., 2023).

Research Setting and Participants

The study was conducted in six Sub-districts of Padangsidimpuan Municipality, North Sumatera. There were 199 students from twelve elementary schools in each sub-district who were purposively chosen from the fourth and fifth-grade students. The study was geographically situated within the Padangsidimpuan Municipality. This location was selected to investigate the previous implementation of Batak Angkola Local Content requirements of the Mother Tongue instructional design. This dispersion was intended to capture the educational contexts that exist across the different areas implementing the Local Content Subject.

Adopting an exploratory sequential mixed-methods design, the study first collected extensive quantitative data to map the instructional material deficit. The primary participants for this initial phase were 199 elementary school students from the identified twelve schools. Subsequently, a critical qualitative phase was implemented, involving in-depth interviews conducted with a purposeful subset of these students. The rationale for interviewing students was specifically to confirm and elaborate upon their responses provided in the reading aloud test, thereby strengthening the construct validity of the identified language needs, particularly concerning contextual content, Batak Angkola language for daily communication, and the comprehension of local cultural texts alongside customary values.

Data Collection

The initial phase focused on collecting quantitative data using an oral reading assessment (D'Agostino et al., 2025). The instrument measures how well a student understands what they have read by combining an oral reading fluency (ORF), involving the student's reading passage for a set time, and answering the student's comprehension questions related to the text. This instrument was distributed to a large sample of 199 elementary students. The primary purpose of the questionnaires was to gather broad, measurable data across the participant group. Specifically, the data centered on students' views, their identified language needs, and their perceptions regarding the Batak Angkola Local Content Subject. By standardizing the questions, the researchers were able to efficiently measure and identify general trends, patterns, and initial indicators of the gap between language needs and available instructional materials.

Following the quantitative phase, the study implemented in-depth interviews for the collection of qualitative data. These interviews were conducted with a subset of the students who had completed the questionnaires. The central purpose of this instrument was to provide a rich, detailed understanding of the students' personal experiences, interpretations, and coping mechanisms related to the subject. Crucially, the interviews served to confirm and elaborate on the patterns and significant findings that were revealed in the initial questionnaire data, thereby giving context and voice to the numerical results.

Data Analysis

The data analysis process was executed in stages, directly corresponding to the mixed-methods. Statistical analysis was the core method applied to the data gathered from the students' oral reading scores. The objective was to transform the raw numerical responses into meaningful findings. The final step involved the analysis of the qualitative data derived from the in-depth interviews. The interview transcripts were systematically analyzed to confirm and interpret the findings generated in the quantitative phase. This integration ensured that the proposed instructional solutions were grounded in both measurable data and the lived experiences of the students.

Research Instrument

Data were collected in oral reading performance and reading comprehension. Oral reading performance reflects to students' accuracy in oral reading (word-level accuracy, connected-text accuracy, reading rate, and fluency)(Dubeck & Gove, 2015). The exams captured an overview of the student's ability to translate printed text into spoken language accurately, smoothly, and at an appropriate pace, serving as a critical bridge to comprehension.

The second phase was comprised of structured interviews with students regarding their language use at home and school, their literacy backgrounds, their attitudes toward Batak Angkola and local culture, and their views on challenges in instruction. The interviews were used to supplement the quantitative data and to illuminate them by gathering students' comments on their learning experiences.

Table 1. Oral Reading Assessments

Oral reading performance	***Indicators***	***Purposes***
	Word-level accuracy	To assess student's ability in decoding or pronouncing words correctly
	Connected-text accuracy	To assess student's reading words within continuous and meaningful text by capturing decoding performance under natural reading conditions
	Reading Rate	To assess student's speed of reading that expressing correcting words per minute
	Fluency	To assess student's accuracy, rate, and prosody (expression, phrasing, intonation) to reflect freecognitive resources of comprehension

RESULT AND DISCUSSION

Oral Reading Assessments

Table 2. Descriptive Statistics of Oral Reading Instruments

Indicators	***N***	***Min***	***Max***	***Mean***	***SD***
Word-Level Accuracy	199	10	100	86,83	17,85
Connected-text accuracy		20	80	66.06	21,17
Reading Rate		10	100	85.68	21,66
Fluency		25	100	74.37	21,97
Chi-Square (χ^2) = 184.347					
Df = 3					

Table 2 demonstrates the analysis of students' oral reading performance across the four indicators (N = 199) reveals a clear divergence between isolated decoding skills and contextual reading ability. Students achieved high scores in Word-Level Accuracy ($\bar{x}$= 86.83, SD = 17.85) and overall Fluency ($\bar{x}$= 85.67, SD = 21.66), demonstrating strong foundational phonics and expressive reading capabilities. However, performance dropped significantly in Connected-Text Accuracy ($\bar{x}$= 51.20, SD = 12.81), marking the lowest average score among all measures. This disparity indicates that while learners effectively decode single words in isolation, they face heightened cognitive load and syntactic challenges when processing continuous prose. Additionally, Reading Rate yielded a moderate average ($\bar{x}$ = 66.05, SD = 21.17), suggesting that students tend to sacrifice reading speed to maintain word-level precision and expressive delivery. Notably, the high standard deviations in Reading Rate and Fluency highlight substantial individual variance in pacing across the sample, whereas the lower standard deviation and restricted range (Min = 20, Max = 80) in Connected-Text Accuracy demonstrate that struggling with continuous text is a widespread challenge requiring targeted, passage-level instructional strategies.

Table 3. Post-Hoc Pairwise Comparison (Wilcoxon Signed-Rank)

Pair	***Mean Diff***	***W***	***Sig.(p)***	***Status***
Word-Level Accuracy vs Connected-Text Accuracy	20.78	1066.0	0.000	Significant
Word-Level Accuracy vs Reading Rate	1.16	3927.0	0.532	Not Significant
Word-Level Accuracy vs Fluency	12.46	1993.0	0.000	Significant
Connected-Text Accuracy vs Reading Rate	-19.62	423.0	0.000	Significant
Connected Text Accuracy vs Fluency	-8.32	559.0	0.000	Significant
Reading Rate vs Fluency	11.31	652.5	0.000	Significant
α = 0.0083				

Table 3 illustrates post-hoc comparisons clarified the shape of this difference. Word-Level Accuracy (*M*= 86.83) and Reading Rate (*M*=85.68) did not differ significantly from one another (*p*= . 532), whereas both differed significantly from Connected-Text Accuracy (*M*=66.06) and Fluency (*M* = 74.37), and Connected-Text Accuracy and Fluency also differed significantly from each other. The overall pattern that emerged was one of graded difficulty: performance remained strong and statistically equivalent for Word-Level Accuracy and Reading Rate, dropped moderately for Fluency, and declined most sharply for Connected-Text Accuracy.

Students' Interviews

The findings of this study provide an empirical basis for the necessary design and development of instructional materials for Batak Angkola regional content subject within the mother tongue-based.

Table 4. Demographic Table of Elementary Students In Padangsidimpuan

Sex	***Numbers***	***(%)***
Girl	101	50,75
Boy	98	49,24
Age (years old)		
10	49	24,62
11	148	74,37
12	2	1
Districts		
Padangsidimpuan Angkola Julu	32	16,08
Padangsidimpuan Batunadua	29	14,57
Padangsidimpuan Hutaimbaru	29	14,57
South Padangsidimpuan	39	19,59
Southeast Padangsidimpuan	34	17,08
North Padangsidimpuan	28	14,07

Table 4 summarizes some important student features such as gender, age, and district distribution. Firstly, it is clear that the distribution by sex includes 101 girl students (50,75%) and 98 boy students (49,24%). Thus, the participants have approximately equal numbers in terms of gender; as a result, there is no gender bias, and the results can be generalized for both sexes. The age distribution shows that the sample is mostly concentrated in the one-year-old category: the number of 11-year-old participants is 148 students (74,37%), while 10-year-old students make up 49 participants (24,62%), and 12-year-old students are 2 students (1%). With regard to the geographical distribution of the sample according to the districts' data, it can be stated that students were from various regions: there are 32 students from Padangsidimpuan Angkola Julu (16,08%), 29 students from Padangsidimpuan Batunadua (14,57%), 29 students from Padangsidimpuan Hutaimbaru (14,57%), 39 students from South Padangsidimpuan (19,59%).

Table 5. Interview Instrument Blueprint

No.	*Dimension*	*Indicator*	*Items*	*N Items*	*% of Total*
1.	Language Use (home, community, and school)	Family/household context	1	1	4,34
		Language used with family members (parents, grandparents)	2, 3, 4	3	13,04
		Language used in the wider community (neighbours, peers)	5,6	2	8,69
		Language used with teachers and in classroom instruction	7,14,15,16,18	5	21,73
		School language policy/ environtment	17,23	2	8,69
2.	Literacy Background	First literacy exposure (context and language)	10,11	2	8,69
		Reading experience in the local language	12,13	2	8,69
3.	Attitudes toward Batak Angkola Language and Local Culture	Attitude toward speaking the local language	8,9	2	8,69
		Attitude toward learning local culture	19,20	2	8,69
4.	Instructional Challenges and Learning Experience	Perceived difficulty with specific topics	21	1	4,34
		Engagement or retention of local content	22	1	4,34
		Total		**23**	**100**

Table 5 presents the interview instrument blueprint, organizing the 23 items into four thematic dimensions: Language Use, Literacy Background, Attitudes toward Batak Angkola Language and Local Culture, and Instructional Challenges and Learning Experience. This structure ensured that the interview guide captured a comprehensive picture of students' linguistic environment and lived experience with Batak Angkola local content, rather than relying on a single line of questioning.

The language use dimension received the greatest emphasis, comprising five indicators and 13 items (56.5% of the total instrument). This dimension traced language use across three concentric social spheres, partially the family/household context (1 item, 4.34%), language used with family members including parents and grandparents (3 items, 13.04%), and language used in the wider community with neighbours and peers (2 items, 8.69%) before extending into the school setting, where language used with teachers and in classroom instruction accounted for the largest single indicator (5 items, 21.73%), supplemented by items on school language policy and environment (2 items, 8.69%). The weight given to this dimension reflects the study's central concern with mapping students' everyday language ecology as the empirical basis for instructional design, consistent with the oral reading performance data reported in Table 3.

The literacy background dimension contributed four items (17.38%), evenly split between students' first literacy exposure, including the context and language in which reading was first learned (2 items, 8.69%) and their subsequent reading experience specifically in the local language (2 items, 8.69%). This dimension was designed to contextualize the quantitative oral reading scores by identifying when and how students' literacy foundations were established.

The Attitudes toward Batak Angkola Language and Local Culture dimension likewise comprised four items (17.38%), addressing students' attitude toward speaking the local language (2 items, 8.69%) and their attitude toward learning local culture through the local content subject (2 items, 8.69%). These items were intended to capture the affective dimension of language learning, complementing the behavioral and performance-based data collected through the oral reading instrument.

Finally, the Instructional Challenges and Learning Experience dimension was the most narrowly weighted, comprising two items (8.68%) addressing students' perceived difficulty with specific topics (1 item, 4.34%) and their engagement with or retention of local content material (1 item, 4.34%). This dimension was critical for identifying concrete pedagogical gaps directly relevant to instructional material design that a function that aligns with the study's overall Define-stage objective of establishing a needs-based foundation for the subsequent development of Batak Angkola local content materials.

Table 6. Summary of Interview Responses

No.	*Dimensions*	*N Items*	*Dominant Pattern*	*% Range*	*Key Insight*
1.	Language use (home, community, school)	13	Mixed language (Batak Angkola–Indonesian) dominates 6 of 7 interpersonal domains; pure Batak Angkola leads only with grandparents; Indonesian dominates formal schooling (comprehension, no language ban)	32.67%-100%	Batak Angkola functions as a secondary or blended code even in domains MTB-MLE theory typically treats as protected (family, community); Indonesian is functionally the primary medium across settings.
2.	Literacy Background	4	Indonesian overwhelmingly reported as the language of first literacy (91.96%); local-language reading exposure exists but is largely school-mediated	57.78%-91.96%	Directly corroborates Indonesian as students' true L1 for literacy purposes; local-language reading is a schooling-driven experience rather than a home-based one.
3.	Attitudes toward Batak Angkola Language and Local Culture	4	Strongly positive affective response toward speaking the language and learning local culture, despite limited daily usage	42.71%-86.93%	A motivation-practice gap: attitudinal receptivity toward Batak Angkola clearly exceeds its actual behavioral use as a resource instructional design can leverage.
4.	Instructional Challenges and Learning Experience	2	Script/manuscript writing identified as the most difficult topic; moderate content recall from local content lessons	39.19%–42.71%	Points to a concrete curricular gap in orthography instruction, alongside a possible content-retention or engagement issue in current delivery

Table 7 indicates a coherent narrative that directly supports the CUP-based transfer model at the center of the study. The Language Use dimension establishes the baseline reality: Batak Angkola is not the default communicative code in most students' lives it survives primarily in blended form. In grandparent relationship, often assumed in heritage-language literature to be the last stronghold of intergenerational transmission. It also shows pure Batak Angkola use in only a third of cases. The pattern is reinforced, not contradicted by the Literacy Background dimension. In fact that 91.96% of students report learning to read first in Indonesian is not an isolated statistic but the literacy-specific expression of the same linguistic dominance pattern observed across Dimension 1. Both these dimensions provide direct qualitative confirmation of this study's foundational premise in Indonesian, not Batak Angkola. The functions as students' operative L1. It makes the CUP transfering pathway (Indonesian literacy → Batak Angkola) the empirically appropriate model for this population rather than the classic MTB-MLE direction.

The Attitudes dimension complicates what might otherwise read as a straightforwardly discouraging picture. Despite low behavioral use, students report high positive affect toward both speaking Batak Angkola and learning local culture having a gap between attitude and practice that is pedagogically significant. This is not a population that needs to be persuaded to value its heritage language. It is a population with limited structured opportunity to practice it. The distinction matters directly impacts instructional design. So that, the students do not need motivational scaffolding here, but they require opportunities for structured practice.

The last, Instructional Challenges dimension supplies the most actionable finding of the four. Script or manuscript writing standing out as the primary source of difficulty identifies a specific,

addressable curricular target distinct from the oral reading gap already established through the quantitative data (in table 3–4). Both quantitative and qualitative data independently support the same findings: students can successfully decode individual words, but they are low in oral reading accuracy and self-reported spelling difficulties stem from a lack of exposure to continue Batak Angkola reading text. The confergence strengthens the construction of study in validity. It also confirms that the instruction should prioritize guided passage reading, repeat connected-text practice, and explicit script-level instruction over isolated word lists.

Based on quantitative data, the equivalence between Word-Level Accuracy and Reading Rate is consistent with automaticity theory as applied to early reading development. Accurate word decoding typically evolves alongside efficiency, establishing a solid foundation before students are confronted complex text-processing task. It stands to the component-based model of reading fluency proposed by Kim (2015), that distinguishes word-reading fluency (accuracy and speed at reading isolated words) from text-reading fluency, treating the two as related but developmentally separable constructs (Kim, 2015). Students scored near the top and performed almost identically on both word-level accuracy and reading rate. These results indicate that word-level decoding has stabilized and operates efficiently in this group. Fluency, which by definition combines accuracy, rate, and prosody in continuous text, occupied an intermediate position in this ordering: strong enough to draw on students' decoding efficiency, yet still constrained by the same contextual-integration demands that suppressed Connected-Text Accuracy. The condition is consistent with Hsu (2023) that reading fluency functions as a distinct construct as a bridge between decoding and comprehension rather than being reducible to either one (Hsu et al., 2023).

These findings connect directly to the Common Underlying Proficiency (CUP) framework discussed earlier in this study. Word-Level Accuracy and Reading Rate reflect no significant difference in comparatively language-independent skills: specifically phonological decoding and processing speed that can transfer relatively directly from students' established Indonesian literacy base. Contrarily, Connected-Text Accuracy requires deeper integration with the specific structure, vocabulary, and script conventions of Batak Angkola itself. It precisely the kind of transfer that prior research indicates does not occur automatically and instead requires sustained, formal instruction in the target language. The significant gap between Word-Level Accuracy and Connected-Text Accuracy in this sample is therefore not a contradiction of the CUP model but an illustration of its stated boundary condition: a shared cognitive-linguistic base makes transfer possible, but connected-text competence in the target language still has to be built through direct instructional exposure, which for Batak Angkola remains a comparatively recent addition to the local-content curriculum.

The findings of the data carry a clear instructional implication to close the gap at the connected-text level which the skill most proximal to functional reading and eventual comprehension. Batak Angkola muatan lokal instruction should move beyond word-list and isolated vocabulary drills toward guided passage reading, repeated reading of connected text, and explicit instruction in text-level features. Word-level recognition and reading speed already appear to be effectively developed; connected-text reading is where instructional attention is now most needed.

Furthermore, in qualitative findings, the demographic and interview data reported in Tables 4 through 6 substantially strengthen and extend the sociolinguistic argument for the study. The sample itself is well-positioned to support generalizable claims, especially gender distribution was near-equal (50.75% girls, 49.24% boys). The students who involved in the study were drawn across all six sub-districts of Padangsidimpuan in reasonably balanced proportions (14.07%–19.59% per district). The findings reflect a single community's idiosyncratic language situation rather than a broader municipal pattern. Within this representative sample, the interview data reveal a language ecology considerably more Indonesian-dominant than previous typical MTB-MLE assumptions. Mixed language use prevails across six of seven interpersonal domains probed, and even the grandparent relationship. It supports the previous study by Fishman (1991) that identifies as the most critical site for reversing language shift, since intergenerational transmission within the family constitutes Stage 6 of his Graded Intergenerational Disruption Scale (GIDS) and underlies the long-term viability of any minority language (Fishman, 1991). It shows pure Batak Angkola practice in only 32.67% of cases. Moreover, report shows that 91.96% of students first learning to read in Indonesian, this qualitative evidence does not merely accompany the quantitative oral reading results; it explains them. The differgence between strong word-level reading skills and weak connected-text performance is a predictable consequence of Indonesian as a center of literacy foundation at school. It influences students' engagement with Batak Angkola primarily as a academic subject because they lack of sustained of everyday exposure to internalize the language (Batak Angkola language).

In the same time, the Attitudes and Instructional Challenges dimensions caution against reading this situation as simple language loss with no institutional recourse. Students expressed strong positive affect toward both speaking Batak Angkola (86.93%) and learning local culture (82.41%). It indicates that the barrier to stronger Batak Angkola competence is one of exposure and opportunity rather than motivation. It is strenghthened by a distinction with a direct pedagogical consequence of instructional design. It focuses on resources on structured practice rather than on generating interest that already exists. The pattern echoes findings previously that other minority-language contexts that having positive attitudes toward a heritage language frequently coexist by heavy reliance on the dominant societal language in practice. The condition happends because attitude and behavioral use are shaped by different pressures and do not move in lockstep. Furthermore, other study suggested fostering students' interest becoming a new speaker of the language in school revitalization than produce gains are limited or short-live without home-language foundation (Kusumaningsih, 2022). The Instructional Challenges data sharpen this picture further: students' self-identified difficulty with Batak Angkola script/manuscript writing (39.19%) converges independently with the quantitative Connected-Text Accuracy weakness, triangulating the same underlying deficit from two separate methodological angles. It is consistent with the logic of exploratory sequential mixed-methods design, in which qualitative findings are used specifically to confirm and elaborate on patterns identified in prior quantitative data (Tapiwa Muzari., 2022). Students can decode and recognize words, but lack sustained exposure to connected, orthographically complex Batak Angkola text. The convergence across independently collected quantitative and qualitative data substantially strengthens the construct validity of this study's central finding and reinforces, rather than merely repeats, the instructional recommendation that muatan lokal delivery should prioritize guided passage reading, repeated connected-text practice, and explicit script-level instruction over isolated word- or vocabulary-based drills alone.

CONCLUSION

This study conducted a needs analysis for designing elementary school instructional materials to revitalize the Batak Angkola language, situated within the Define stage of a Research and Development framework. Based on the findings, they confirm that Indonesian, not Batak Angkola, functions as students' operative first language, it is need transfer pathway from Indonesian literacy to Batak Angkola the empirically appropriate model for Padangsidimpuan Municipality to revitalize Batak Angkola language. The findings of quantitative and qualitative noted some diagnosis were independently corroborated by students' self-reports: 39.19% identified Batak Angkola script and manuscript writing as their greatest instructional challenge, converging with the quantitative Connected-Text Accuracy gap from two separate methodological angles and substantial ly strengthening the study's construct validity. At the same time, students expressed strong positive affect toward both speaking Batak Angkola (86.93%) and learning local culture (82.41%), indicating that the primary barrier to stronger Batak Angkola competence is one of exposure and instructional opportunity rather than motivation.

This study extends the CUP framework to a reversed-direction revitalization context, in which a dominant national language (Indonesian) functions as students' L1 and an endangered heritage language serves as the transfer target as a configuration distinct from the classic MTB-MLE scenario in which a minority home language is L1. The findings demonstrate that CUP's core transfer logic, and its boundary condition that a shared cognitive-linguistic base enables transfer but does not guarantee it without targeted instructional exposure — holds even in this reversed configuration, extending the framework's applicability to heritage-language revitalization settings elsewhere in Indonesia and beyond.

For instructional design, the convergent quantitative-qualitative evidence indicates that Batak Angkola muatan lokal materials should move decisively beyond word-list and isolated vocabulary drills toward guided passage reading, repeated reading of connected text, and explicit instruction in text-level and script features, since word-level decoding and reading speed are already comparatively well developed in this population. For teacher training, the finding that students' positive attitudes substantially outpace their actual language use suggests that professional development should prioritize equipping teachers with strategies for structured, sustained language practice — including translanguaging pedagogy that legitimizes students' existing mixed Batak Angkola–Indonesian repertoire rather than attitude-building activities alone.

In further stage, subsequent research should proceed through the remaining phases of the R&D cycle. It should translate these needs-analysis findings directly into material specifications: a Batak Angkola reading module structured around a bridging strategy from Indonesian literacy to connected-text

reading, incorporating guided and repeated passage reading, explicit script instruction, and translanguaging-informed activities that draw on students' existing mixed-language competence rather than treating it as interference. The longitudinal research tracking students' oral reading and script competence across multiple years following implementation of the developed materials would help determine whether the connected-text gap narrows durably with sustained instruction, or whether it persists without complementary home- and community-based language reinforcement.

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