
ENGLISH READING NEEDS, CULTURAL IDENTITY, AND TECHNOLOGICAL READINESS: A NEED ANALYSIS AT AN INDONESIAN STATE UNIVERSITY

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Abstract

English reading proficiency is a fundamental requirement for university students in EFL contexts, yet reading instruction in Indonesian higher education often lacks alignment with students' academic needs, cultural identity, and technological realities. This study aimed to investigate students' needs in English reading instruction through a comprehensive needs analysis covering learning goals, current abilities, learning difficulties, perceptions of local wisdom integration, and technological readiness. A quantitative survey design was employed, involving 67 undergraduate students at a state university in South Sumatra. Data were collected through a structured needs analysis questionnaire and analysed descriptively using percentage distribution. The findings reveal that students perceive English reading as essential for future academic and professional purposes, with reading identified as the most relevant skill for anticipated language use. However, students report moderate current reading proficiency and significant vocabulary-related comprehension difficulties, indicating a clear gap between present ability and expected proficiency. The results further show strong student demand for English reading materials integrating South Sumatran local wisdom i.e., customs and arts, reflecting the importance of culturally responsive pedagogy in higher education EFL contexts. Additionally, while most students possess adequate digital devices, unstable internet connectivity and limited digital literacy present challenges for fully digital reading implementation. These findings suggest that effective English reading instruction in Indonesian universities should incorporate vocabulary-supported reading strategies, culturally contextualized materials, and technology-sensitive delivery. The study provides empirical evidence to support the development of needs-based and culturally responsive English reading curricula in higher education.

Keywords: culturally responsive pedagogy; EFL higher education; English reading instruction; local wisdom; needs analysis

Introduction

In the era of globalization and digital communication, English proficiency has become an essential competency for university students to access academic resources, engage in international collaboration, and enhance future employability. Among the four language skills, reading plays a particularly crucial role in higher education, as students are required to comprehend academic texts, research articles, and digital information predominantly presented in English (Dardjito et al., 2023; Grabe & Stoller, 2019; Nation, 2013). Consequently, effective English reading instruction at the tertiary level must be responsive not only to linguistic demands but also to learners' contextual, academic, and socio-cultural needs (Ahmed, 2021; Gallagher & Haan, 2018).

Needs analysis has long been recognized as a fundamental step in designing relevant and effective language curricula and instructional materials. By examining learners' target situation

needs, present proficiency, and learning deficiencies, educators can develop instruction that aligns with students' actual conditions and expectations (Hutchinson & Waters, 1987; Macalister & Nation, 2019). In EFL contexts such as Indonesia, where English is rarely used in daily communication, understanding students' specific learning needs becomes even more critical to ensure meaningful and motivating learning experiences (Amalia et al., 2024; Yulianawati et al., 2025).

In recent years, scholarly attention has increasingly focused on integrating cultural content and local wisdom into English language teaching. Culturally responsive pedagogy emphasizes connecting learning materials with students' cultural backgrounds to improve engagement, comprehension, and identity affirmation (Gay, 2018; Ladson-Billings, 1995; Matiso, 2024). In the Indonesian ELT context, incorporating local wisdom into English materials has been shown to strengthen learners' motivation and promote cultural preservation while developing language skills (Widodo, 2016). In reading materials, local wisdom may be operationalized through themes such as traditional values, social norms, environmental practices, and community life; topics including local folklore, historical sites, cultural festivals, traditional occupations, and indigenous knowledge; and genres such as folktales, legends, descriptive texts about local places, biographies of community figures, and procedural texts related to traditional practices. Particularly in reading instruction, texts reflecting learners' cultural familiarity can facilitate better background knowledge activation and reading comprehension (Marwa et al., 2021; Pathomchaiwat & Thongrin, 2025; Syafii et al., 2022).

Despite these developments, existing research on local wisdom-based English instruction in Indonesia has largely focused on primary and secondary education or on material development projects that do not systematically ground instructional design in comprehensive university-level needs analysis. For example, studies integrating local wisdom into higher education reading materials have reported improvements in students' analytical skills and cultural awareness; however, these studies have generally emphasized instructional effectiveness rather than conducting comprehensive needs analysis procedures, such as target situation analysis, present situation analysis, deficiency analysis, and learning needs analysis, which are essential for aligning instructional design with learners' actual reading demands (e.g., Hadianto et al., 2022; Lukman et al., 2025).

Furthermore, although recent curriculum reforms in Indonesian higher education increasingly advocate the integration of local knowledge to strengthen cultural identity and contextual relevance, implementation remains unbalanced due to limited pedagogical frameworks, insufficient institutional guidelines, and the lack of systematic models that connect students' academic reading requirements with their cultural identity and sociocultural reading preferences (e.g., Ramli et al., 2025; Ratri et al., 2025). Consequently, empirical evidence on aligning English reading instruction with both students' academic needs and their cultural identity remains limited, particularly through integrated university-level needs analysis that simultaneously maps students' current reading abilities, target academic demands, cultural familiarity, and reading preferences. This gap is further reflected in the scarcity of culturally grounded needs analysis studies at the university level, as existing research remains largely concentrated in vocational or secondary-level contexts rather than in university English reading programs (e.g., Sukun et al., 2026).

This study addresses these gaps by conducting a comprehensive needs analysis of English reading instruction among undergraduate students at a state university in South Sumatra. The study examines students' academic reading demands, current reading abilities, learning deficiencies, cultural identity-related needs, and technological readiness to support the design of culturally responsive English reading instruction. Accordingly, this study aims to investigate undergraduate students' needs in English academic reading to inform the development of contextually relevant

reading materials in Indonesian higher education. To achieve this aim, the study addresses the following research questions:

1. What are undergraduate students' target academic reading needs?
2. What are students' present levels of English reading proficiency?
3. What learning deficiencies exist between students' current abilities and target academic reading demands?
4. What are students' perceptions of integrating South Sumatran local wisdom into English reading materials?
5. What are students' levels of technological readiness for engaging with digital reading resources?

By systematically examining these five dimensions, this study provides data-driven insights to support the development of English reading materials that align with students' academic literacy demands, cultural identity, and technological learning contexts in Indonesian higher education. The novelty of this study lies in its integrated examination of five underexplored dimensions that directly address the limitations identified in prior research. First, this study applies a comprehensive university-level needs analysis framework that systematically combines target situation analysis, present situation analysis, and deficiency analysis to identify students' academic reading requirements and learning gaps, responding to the limited use of multidimensional needs analysis in previous university-level studies (Hutchinson & Waters, 1987). Second, it incorporates students' cultural identity needs, particularly their perceptions and preferences regarding the integration of South Sumatran local wisdom into English reading instruction, addressing the lack of systematic models linking academic reading demands with cultural identity considerations in higher education contexts (Gay, 2018; Widodo, 2016). Third, this study examines technological readiness as a contextual factor influencing engagement with digital reading materials, responding to the uneven implementation of culturally responsive instruction caused by limited pedagogical and technological alignment. Rather than merely proposing culturally enriched reading materials, this study provides empirically grounded insights into how academic reading needs, cultural identity, and technological readiness interact to inform the design of culturally responsive English reading instruction at the university level, thereby addressing the scarcity of comprehensive, data-driven needs analysis studies in Indonesian higher education.

The findings are expected to contribute theoretically to needs-based and culturally responsive ELT literature and practically to curriculum designers, material developers, and English lecturers seeking to align reading instruction with students' academic demands and cultural identity in Indonesian higher education (Mambu, 2022; Poedjiastutie & Oliver, 2017).

Literature Review

English reading in EFL higher education contexts

Reading is widely recognized as a foundational skill for academic success in higher education, particularly in EFL contexts where English functions as the primary medium for accessing scholarly knowledge (Grabe & Stoller, 2019). University students are expected to engage with complex academic texts, research articles, and digital resources, making reading proficiency a crucial determinant of academic achievement (Macalister & Nation, 2019). Nevertheless, EFL learners frequently encounter difficulties in reading comprehension due to limited vocabulary knowledge, unfamiliar text structures, and insufficient background knowledge (Allehyani, 2025; Kamal, 2019; Ngan & Chi, 2023). These challenges are more pronounced in contexts where exposure to English outside the classroom is minimal, such as Indonesia. Consequently, effective reading instruction in higher education requires systematic planning that accounts for learners'

academic demands, proficiency levels, and reading difficulties (Dardjito et al., 2023; Nurkamto et al., 2021). Macalister and Nation (2019) emphasize that curriculum design for reading instruction must be grounded in empirical understanding of learners' needs to ensure relevance and effectiveness. Therefore, conducting a comprehensive needs analysis is essential not only to describe students' reading challenges but also to generate actionable data that can guide the design of reading instruction aligned with students' actual academic and professional requirements. Without such alignment, reading courses risk becoming disconnected from students' real academic demands and long-term learning goals.

Needs analysis as a framework for reading curriculum design

Needs analysis has long been recognized as a cornerstone of language curriculum and material development. Hutchinson and Waters (1987) conceptualized needs analysis as consisting of Target Situation Analysis (TSA), Present Situation Analysis (PSA), and Deficiency Analysis (DA), which collectively provide a comprehensive understanding of learners' goals, current abilities, and learning gaps. Brown (2016) further conceptualizes needs analysis as an evidence-based process that informs syllabus development, instructional planning, and material design.

Recent studies have reinforced the continued relevance of needs analysis in modern ELT contexts. For example, Yulianawati et al. (2025) reported that systematic needs analysis significantly improved the alignment between instructional materials and students' academic reading requirements. Similarly, Kurniaman et al. (2025) demonstrated that integrating students' learning preferences and academic expectations into reading course design led to improved engagement and reading comprehension outcomes. These studies confirm the methodological value of needs analysis as an empirical foundation for curriculum development.

However, critical examination of recent literature reveals that many university-level reading courses continue to rely on standardized textbooks that are not grounded in context-specific needs assessments (Dardjito et al., 2023). Furthermore, several studies employ partial needs analysis approaches focusing only on learning difficulties or preferences without integrating all major components of TSA, PSA, and DA. This fragmented application limits the ability of educators to generate comprehensive instructional frameworks. Therefore, there remains a need for holistic needs analysis models that systematically integrate multiple dimensions of learner needs within specific educational contexts.

Cultural identity and local wisdom in English Reading instruction

Culturally responsive pedagogy emphasizes connecting learning materials to students' cultural backgrounds to enhance engagement, comprehension, and identity affirmation (Gay, 2018; Ladson-Billings, 1995). In reading instruction, cultural familiarity plays a crucial role in activating schema-earners' prior knowledge structures-which significantly influences comprehension processes (Carrell & Eisterhold, 1983). When reading materials reflect familiar cultural experiences, students are more likely to construct meaning effectively, interpret implicit information, and retain vocabulary knowledge (Grabe & Stoller, 2019).

Recent studies (2023–2026) show increasing interest in integrating local cultural content into English learning materials. For example, Pathomchaiwat and Thongrin (2025) found that culturally contextualized texts improved comprehension and engagement, while Ratri et al. (2025) reported increased motivation and cultural identity awareness through local narratives. In Indonesia, Widodo's culturally responsive ELT framework continues to guide research on integrating local wisdom into English instruction.

Local wisdom refers to indigenous knowledge, traditions, values, and practices embedded in communities. Integrating local wisdom into curriculum content supports cultural preservation and contextualized learning. Previous studies indicate that local wisdom-based materials enhance student engagement and learning relevance (Setyowati & Widodo, 2019; Suryani & Sutrisno, 2020).

However, two key limitations remain. Most studies on local wisdom integration focus on primary and secondary education rather than higher education. In addition, many material development studies introduce cultural content without first examining students' perceptions of its relevance to their academic reading needs (Fahriany & Wahyunengsih, 2025). As a result, empirical evidence linking cultural identity preferences with systematic reading needs analysis at the university level remains limited, highlighting the need for integrated research in this area.

Technological readiness and digital reading environments

The rapid expansion of digital technologies has transformed reading practices in higher education, with students increasingly accessing academic materials through online journals, learning management systems, and interactive reading tools (Godwin-Jones, 2018). While digital reading environments offer flexibility and accessibility, they also introduce challenges related to technological infrastructure, digital literacy, and learning strategies. Recent studies show that technological readiness significantly influences digital reading effectiveness. For instance, Kurniaman et al. (2025) found that access to stable internet and digital devices strongly predicted students' engagement with digital reading materials, while Dardjito et al. (2023) reported that unstable internet connectivity and limited device availability hindered digital reading implementation in Indonesian universities.

Emerging research also indicates that digital reading requires distinct cognitive strategies, including navigation skills, selective reading, and multimodal comprehension (Allehyani, 2025). Despite these developments, technological readiness is rarely incorporated as a systematic component of reading needs analysis frameworks, with most studies treating digital access as a contextual factor rather than an instructional design element. This limitation highlights the need for comprehensive needs analysis models that explicitly integrate technological readiness as a core dimension.

Intersection of learner needs, cultural identity, and technology in reading instruction

Recent theoretical developments conceptualize effective reading instruction as a multidimensional process shaped by the interaction of learner needs, cultural identity, and technological context. Rather than treating these constructs separately, contemporary ELT research emphasizes that their intersection creates meaningful learning experiences that enhance comprehension and engagement. Empirical studies conducted between 2023 and 2026 increasingly support this perspective. For example, Pathomchaiwat and Thongrin (2025) demonstrated that digital reading materials incorporating culturally familiar content improved both engagement and comprehension among EFL learners, while Yulianawati et al. (2025) highlighted the effectiveness of culturally contextualized digital materials in promoting meaningful learning experiences.

Conceptually, learner needs analysis identifies learners' academic goals, proficiency levels, and learning challenges, cultural identity contributes contextual relevance that strengthens engagement and comprehension, and technological readiness determines the feasibility of implementing digital reading environments. When these three dimensions interact, they create an instructional ecosystem in which reading materials become linguistically appropriate, culturally meaningful, and technologically accessible. This multidimensional relationship provides a

theoretical basis for designing reading instruction that reflects the complexity of contemporary EFL learning environments.

Research gap and justification of the present study

Despite growing recognition of the importance of learner needs, cultural identity, and technological readiness in reading instruction, several unresolved issues remain in the existing literature. Many previous studies have examined these dimensions separately, resulting in fragmented understandings of how they collectively influence English reading instruction. Integrated frameworks that simultaneously address academic reading needs, cultural identity preferences, and technological readiness remain limited, particularly in Indonesian higher education contexts. Although needs analysis is widely recognized as essential in language curriculum design, relatively few studies have applied comprehensive frameworks integrating Target Situation Analysis (TSA), Present Situation Analysis (PSA), and Deficiency Analysis (DA) to English reading instruction at the university level. Many existing studies rely on partial analyses that do not fully capture the complexity of learners' academic reading requirements.

In addition, while culturally responsive pedagogy and local wisdom integration have gained increasing attention in English Language Teaching (ELT) research, empirical studies linking students' cultural identity preferences with systematic reading needs analysis remain limited. Most prior research focuses on developing culturally based materials or measuring engagement outcomes without first identifying learners' cultural preferences through structured needs assessment. Furthermore, technological readiness is rarely incorporated as a core component of reading needs analysis models. In many cases, technological factors are treated as external conditions rather than as integral variables influencing instructional planning and material design.

Addressing these gaps, the present study introduces a holistic conceptual framework that conceptualizes English reading instruction as an intersection of learner needs, cultural identity, and technological readiness. By systematically integrating target situation analysis, present situation analysis, deficiency analysis, perceptions of local wisdom integration, and technological readiness into a unified needs analysis model, this study offers a novel and contextually grounded approach to designing culturally responsive and technologically feasible reading instruction in Indonesian higher education. The novelty of this study lies in its integrative methodological design, which combines traditionally separate constructs into a single empirical framework, thereby extending previous research and contributing both theoretical insights and practical guidance for developing context-sensitive and culturally relevant English reading curricula in higher education settings.

Methodology

Research design and approach of the study

This study adopted a quantitative descriptive research design grounded in a needs analysis framework to investigate the alignment between English reading instruction, students' learning needs, and cultural identity. The study was guided by Hutchinson and Waters' (1987) model of needs analysis, which comprises Target Situation Analysis (TSA), Present Situation Analysis (PSA), and Deficiency Analysis (DA). To address the cultural dimension of language learning, elements of culturally responsive pedagogy were incorporated to explore students' perceptions of integrating local wisdom into English reading materials (Gay, 2018). In addition, a technological readiness component was included to capture contextual factors influencing digital learning environments. A descriptive quantitative survey was considered appropriate for this study because the primary objective was to obtain a broad, systematic profile of students' academic reading needs, cultural

identity preferences, and technological readiness across a relatively large population. Using structured survey items allowed the collection of standardized responses that could be quantified to identify dominant trends, priority needs, and common challenges, which are central outcomes in needs analysis research. Although cultural identity needs and technological readiness can involve complex contextual factors, this study focuses on measurable aspects such as students' levels of agreement, perceived relevance of local wisdom content, access to technological resources, and preferences for digital reading tools, making them suitable for quantitative measurement. The integration of these dimensions enabled a comprehensive examination of linguistic, cultural, and technological factors shaping English reading instruction in higher education.

The research framework therefore consisted of five analytical domains: (1) Target Situation Analysis to identify students' purposes for learning English and expected reading competencies; (2) Present Situation Analysis to assess students' current reading proficiency and academic reading confidence; (3) Deficiency Analysis to determine difficulties encountered in reading English texts and preferred learning inputs; (4) Cultural Identity Needs to explore students' perceptions of the importance and relevance of incorporating South Sumatran local wisdom into English reading materials; and (5) Technological Readiness to identify availability of learning devices, internet conditions, and digital learning constraints. This framework provided an empirical basis for understanding how reading instruction could be aligned with students' academic demands and cultural identity.

Research site and participants

The participants were 67 undergraduate students enrolled in compulsory English courses at a state university in South Sumatra, Indonesia. The respondents represented students from different semesters, offering a broad view of English reading needs across academic levels. Both male and female students participated voluntarily in the study. Convenience sampling was employed, as the participants were accessible and actively attending English classes during the data collection period. Prior to participation, students were informed about the purpose of the study and assured that their responses would remain anonymous and be used solely for academic research. More about the respondents can be seen in Table 1 below.

Table 1. *Participants' data*

Study Program	Gender		Semester		
	Male	Female	1	3	5
Indonesian Language and Literature	7	60	24	39	4

Data collection and analysis

Data were collected using a structured questionnaire developed based on established needs analysis instruments (Hutchinson & Waters, 1987; Brown, 2016) and previous studies on culturally responsive English instruction (Gay, 2018; Widodo, 2016). The questionnaire comprised closed-ended items organized into five sections corresponding to the research framework: (1) Target Situation Analysis, (2) Present Situation Analysis, (3) Deficiency Analysis, (4) Cultural Identity and Local Wisdom, and (5) Technological Readiness. The items elicited students' perceptions of learning purposes, expected proficiency levels, reading difficulties, preferred reading topics and inputs, attitudes toward integrating local wisdom in reading materials, and access to digital learning facilities.

The questionnaire was administered online using Google Forms to facilitate efficient distribution and response collection. The online format allowed students to complete the questionnaire at their convenience while ensuring automatic data recording. Prior to administration, the instrument was reviewed by two experts in English language teaching to establish content validity, clarity of wording, and relevance of items to the research objectives. Based on the experts' validation results, item number 11, originally categorized under Deficiency Analysis (*Wants and Needs*), was recommended to be moved to the Present Situation Analysis (PSA) section under *Students' English Proficiency*, and the revised questionnaire was subsequently pilot-tested with 15 participants outside the main sample to ensure its comprehensibility and response consistency.

The collected data were analysed using descriptive statistical procedures. Responses were tabulated and converted into percentage scores to identify dominant trends in students' needs, learning conditions, and perceptions. Data from the Target Situation Analysis were examined to determine students' primary purposes for learning English reading and their expected proficiency levels. Present Situation Analysis data were used to identify students' self-assessed reading competence and confidence in academic reading tasks. Deficiency Analysis responses were analysed to reveal common reading difficulties, preferred reading topics, and desired instructional inputs. Cultural identity data were examined to identify students' perceptions of the importance of integrating South Sumatran local wisdom into English reading materials, as well as the types of cultural content they preferred. Technological readiness data were analysed to determine students' access to digital devices, internet stability, and technological barriers that may affect digital reading instruction. All items were single-choice questions, except those assessing technological readiness, which used multiple-choice formats.

The results of these analyses were then interpreted to generate pedagogical implications for aligning English reading instruction with students' needs and cultural identity. Findings were presented in tables and charts to enhance clarity and support discussion.

Ethical considerations

Ethical principles were observed throughout the study. Participation was voluntary, and students provided informed consent before completing the questionnaire. No identifying personal information was collected, and responses were recorded anonymously. All data were stored securely and used exclusively for research purposes.

Findings

This section presents the results of the needs analysis questionnaire administered to undergraduate students at a state university in South Sumatra. A total of 67 students participated in the survey. The findings are organized according to the analytical framework: Target Situation Analysis, Present Situation Analysis, Deficiency Analysis, Cultural Identity Needs, and Technological Readiness.

Target situation analysis

Students were asked about their reasons for learning English, expected learning outcomes, anticipated future use of English, and expected proficiency levels. The results indicate that students primarily view English reading as essential for academic and professional purposes.

Table 2. *Students' reasons for learning English*

Reasons for Learning English	Percentage (%)
Supporting future career	50.0
Continuing further study	28.8
Graduation requirement	16.7
Communication with others	4.5

Table 2 shows that students' most frequently reported reason for learning English was supporting future career, selected by 50.0% of students. This was followed by continuing further study, reported by 28.8% of respondents. A smaller proportion of students (16.7%) indicated graduation requirement as their reason for learning English, while communication with others was reported by only 4.5% of students, making it the least frequently selected reason.

Table 3. *Expected outcomes of English courses*

Expected Outcome	Percentage (%)
Mastering vocabulary related to future field	71.2
Improving spoken interaction skills	18.2
Improving written interaction skills	9.1
Mastering grammar	1.5

Table 3 further supports this finding, as 71.2% of students expect English courses to help them master vocabulary related to their future field. This overwhelming percentage highlights vocabulary acquisition as the central expectation. In contrast, grammar mastery (1.5%) received the lowest expectation, indicating that students prioritize functional language use over formal linguistic accuracy.

Table 4. *Anticipated future use of English*

Future Use of English	Percentage (%)
Reading English texts for academic/professional purposes	40.9
Written communication	34.8
Oral communication	22.7
Online interaction	1.6

In Table 4, students reported that their anticipated future use of English is mainly for reading academic or professional texts (40.9%), followed by written communication (34.8%) and oral communication (22.7%). Only a small proportion of students (1.6%) selected online interaction as their anticipated future use of English.

Table 5. *Expected English proficiency level*

Expected English Proficiency Level	Percentage (%)
Beginner	15.2
Intermediate	48.2
Advanced	30.3
Other	6.0

Table 5 indicates that nearly half of the students (48.2%) expect to achieve an intermediate proficiency level, while 30.3% aim for advanced proficiency. Only 15.2% expect to remain at beginner level. This shows that students possess relatively high expectations for their English

competence, which may influence their demand for more challenging and meaningful learning materials.

Taken together, the Target Situation Analysis demonstrates that students expect English instruction to prepare them for academic reading and career-related communication, with vocabulary mastery as the primary learning focus.

Deficiency analysis: reading preferences and difficulties

Students were asked about preferred reading topics, desired reading input formats, and difficulties encountered in reading English texts.

Table 6. *Preferred reading topics*

Topic	Percentage (%)
Local culture / local wisdom	46.2
Education / school	32.3
Current issues	12.3
Daily life	9.2

As shown in Table 6, 46.2% of students selected reading topics related to local culture or local wisdom as their preferred topic, followed by education (32.3%). Other topics, including current issues (12.3%) and daily life (9.2%), were selected less frequently. This distribution indicates that local culture or local wisdom was the most frequently preferred reading topic among the participants.

Table 7. *Preferred reading input*

Preferred Input	Percentage (%)
Texts with vocabulary list	57.6
Texts related to future field of work	24.2
Authentic daily-life texts	13.6
Printed texts with additional materials	4.6

Table 7 reveals that 57.6% of students prefer reading texts accompanied by a vocabulary list. This preference indicates that students are aware of their limited vocabulary knowledge and require lexical support to facilitate comprehension. Only a small percentage (4.6%) prefer traditional printed texts with additional materials, showing a shift toward more supportive and guided reading formats.

Table 8. *Reading difficulties*

Reading Difficulty	Percentage (%)
Understanding specific vocabulary	62.1
Identifying main ideas	18.2
Sequencing events	9.1
Understanding detailed information	7.6
Drawing conclusions	3.0

Regarding reading challenges, Table 8 shows that 62.1% of students reported difficulty understanding specific vocabulary, representing the most frequently selected reading difficulty. Other reported difficulties included identifying main ideas (18.2%), sequencing events (9.1%),

understanding detailed information (7.6%), and drawing conclusions (3.0%). These results show that vocabulary-related difficulty was reported more frequently than other types of reading challenges among the participants. Overall, the findings in this section show that students most frequently selected culturally familiar topics and vocabulary-supported texts as preferred reading inputs, while vocabulary understanding was reported as the most common reading difficulty. These patterns correspond with earlier results indicating students' expectations for vocabulary development identified in the Target Situation Analysis.

Present situation analysis

Students self-assessed their current English proficiency and reading ability.

Table 9. *Self-Assessed English proficiency*

Proficiency Level	Percentage (%)
Beginner	22.7
Intermediate	74.2
Advanced	3.1

Table 9 indicates that 74.2% of students consider themselves at an intermediate English level, while only 3.1% perceive themselves as advanced learners.

Table 10. *Self-Assessed reading ability*

Reading Ability	Percentage (%)
Very good	7.6
Good	18.2
Adequate	40.9
Poor	33.3

Table 10 shows the distribution of students' self-assessed reading ability. Most students rated their reading ability as adequate (40.9%), whereas a considerable proportion reported poor ability (33.3%). In comparison, fewer students rated their reading ability as good (18.2%), and only a small proportion (7.6%) considered their reading ability very good.

Cultural identity and local wisdom needs

Students were asked about the importance of integrating local wisdom into English reading materials and preferred cultural aspects.

Table 11. *Importance of integrating local wisdom into reading materials*

Response	Percentage (%)
Very important	59.1
Important	37.9
Not important	3.0
Very unimportant	0

Table 11 shows that most students perceived the integration of local wisdom into reading materials as important. A total of 59.1% of students rated it as very important, followed by 37.9% who rated

it as important. In contrast, only 3.0% of students considered it not important, and no students (0%) selected very unimportant, indicating minimal negative responses.

Table 12. *Preferred aspects of South Sumatran local wisdom*

Cultural Aspect	Percentage (%)
Traditional customs	30.8
Arts	21.5
Traditional food	16.9
Traditional tools	13.8
Traditional clothing	13.8
Folktales	3.2

Table 12 presents students' preferred aspects of South Sumatran local wisdom to be integrated into reading materials. The most preferred cultural aspect was traditional customs, selected by 30.8% of students. This was followed by arts (21.5%) and traditional food (16.9%). Traditional tools and traditional clothing were selected by an equal proportion of students (13.8% each). In contrast, folktales were the least preferred aspect, reported by only 3.2% of students.

Technological readiness

Students were asked about device ownership, internet conditions, and technological barriers.

Table 13. *Device ownership*

Device Ownership	Percentage (%)
Smartphone & Laptop	50.7
Smartphone only	31.4
Laptop only	16.4
No adequate device	1.5

Table 13 shows that most respondents own both a smartphone and a laptop (50.7%), indicating that dual-device access is the norm for about half of the group. A sizable portion relies only on smartphones (31.4%), suggesting mobile-first access is common and likely important for digital services or communication. Fewer respondents use only laptops (16.4%), showing that laptops alone are less typical than smartphones alone. Very few people lack an adequate device (1.5%), which means overall device access is high, with minimal digital exclusion. In short, the data suggests strong overall device availability, with smartphones playing a central role - either alone or alongside laptops.

Table 14. *Internet conditions on campus*

Internet Condition	Percentage (%)
Adequate	66.7
Slow	21.2
Unstable	16.7
Very fast	10.6

Table 14 show that most respondents report having adequate internet on campus (66.7%), suggesting that the general connectivity meets basic needs for a majority of users. However, a notable proportion experience issues - 21.2% describe their connection as slow and 16.7% as unstable - indicating that reliability

and speed are still concerns for a significant minority. Only a small group (10.6%) report very fast internet, showing that high-quality connectivity is not widely experienced.

Table 15. *Technological barriers*

Barrier	Percentage (%)
Difficulty understanding multimedia instructions	44.4
Slow internet connection	42.9
Limited internet quota	19.0
Inadequate devices	14.3

The most frequently reported barrier, as seen from Table 15, is difficulty understanding multimedia instructions (44.4%), indicating that many users struggle with how content is presented rather than just access itself. This is closely followed by slow internet connection (42.9%), showing that connectivity issues remain a major obstacle to effective use. Other barriers are less common but still notable, including limited internet quota (19.0%) and inadequate devices (14.3%).

Overall summary of results

The findings of this study indicate that students learn English primarily for academic and career purposes, with vocabulary mastery and reading comprehension identified as their main learning expectations. The results also show that students prefer reading materials related to local wisdom, highlighting their interest in culturally relevant content. However, vocabulary limitation emerges as the major difficulty in reading comprehension. Furthermore, students strongly support the integration of local culture into English reading materials, suggesting a positive attitude toward contextualized learning resources.

In terms of learning readiness, students demonstrate adequate technological preparedness for digital learning, although unstable internet connectivity remains a significant challenge. Overall, these findings provide a strong foundation for developing local-wisdom-based English reading materials with vocabulary support and a user-friendly digital design.

Discussion

This study investigated students' needs in English reading instruction by examining target situation requirements, present reading proficiency, deficiency areas, cultural identity preferences, and technological readiness. The findings provide empirical evidence that English reading instruction in the investigated Indonesian university context requires systematic redesign to better align with students' academic goals, linguistic challenges, and cultural expectations. What is new in this study is the integrated examination of academic, linguistic, cultural, and technological dimensions within a single need analysis framework at the university level. While previous research has often examined these factors separately, the present findings demonstrate how these dimensions intersect in shaping students' reading needs, thereby extending earlier needs analysis models that primarily emphasized linguistic or academic factors alone.

English reading as an academic and professional necessity

The results show that students primarily learn English for career advancement and future academic pursuits, and they anticipate using English mainly for reading academic and professional texts. This finding confirms that reading remains the most essential skill in higher education EFL contexts, as widely reported in previous research (Grabe & Stoller, 2019; Nation, 2013). The strong

instrumental motivation observed also aligns with Hutchinson & Waters' (1987) target situation analysis framework, where learners' perceived future language use becomes the foundation for curriculum planning. Consequently, reading courses that fail to address these future academic and workplace needs risk being misaligned with students' expectations, as cautioned by Macalister and Nation (2019).

However, the present findings extend previous research by revealing that students' instrumental motivation is accompanied by highly specific expectations for vocabulary development related to their future professional fields. While earlier studies have recognized vocabulary as important for reading comprehension (Nation, 2013), fewer needs-analysis studies have documented such a strong emphasis on discipline-relevant lexical knowledge at the planning stage. This suggests a shift from general English reading instruction toward more targeted academic literacy preparation. This contextualizes previous findings by showing that instrumental motivation is not merely general but increasingly specialized, reflecting evolving expectations of university learners in professionalized academic environments.

Vocabulary as the central reading barrier

A major finding of this study is that vocabulary difficulty constitutes the most significant obstacle to reading comprehension. More than half of the students requested reading texts accompanied by vocabulary lists, and vocabulary understanding was reported as the primary reading challenge. This finding corroborates established evidence that limited lexical knowledge is a fundamental constraint in EFL reading comprehension (Alderson, 2000; Alshehri & Zhang, 2022; Nation, 2013; Teng & Cui, 2025). It also reinforces recent higher education EFL studies reporting vocabulary as a persistent barrier to academic reading success. Therefore, reading materials that integrate explicit vocabulary support, glossaries, or pre-reading lexical activities appear essential in this context.

Furthermore, the discrepancy between students' expected proficiency levels and their current self-assessed reading ability reveals a clear deficiency gap. This gap corresponds to Hutchinson and Waters' (1987) deficiency analysis component, emphasizing the importance of designing instruction that bridges current competence and target proficiency. Without addressing this gap, reading courses may not effectively prepare students for the academic literacy demands of university study. Notably, this finding partially diverges from assumptions in some prior studies suggesting that intermediate-level learners generally possess adequate reading competence (Nurkamto et al., 2021). Instead, the present results indicate that intermediate proficiency labels may mask unresolved comprehension difficulties, particularly in vocabulary depth.

Cultural identity and local wisdom integration

One of the most distinctive findings of this study is the strong student preference for integrating local wisdom and South Sumatran cultural content into English reading materials. Based on the questionnaire results, almost all respondents rated cultural integration as important or very important, and local culture was identified as the most preferred reading topic among the options provided. These results provide direct evidence of learners' preferences regarding reading content in English instruction. Previous Indonesian studies on local wisdom integration have largely focused on primary or secondary education (Setyowati & Widodo, 2019; Suryani & Sutrisno, 2020), whereas the present study contributes additional empirical evidence by demonstrating that university students also express strong preferences for culturally contextualized reading materials. This represents a notable extension of previous work by confirming that cultural

integration remains relevant beyond school-level education and continues to be valued at the tertiary level.

These findings may be interpreted in light of culturally responsive pedagogy proposed by Gay (2018) and Ladson-Billings (1995), who argue that instruction connected to learners' cultural identity can make learning more meaningful; however, the present study did not directly measure learning meaningfulness, motivation, or cultural identity outcomes. From a reading comprehension perspective, the observed preference for culturally familiar content may also be explained through schema theory introduced by Carrell and Eisterhold (1983), which suggests that familiar cultural knowledge can facilitate meaning construction, although comprehension outcomes were not assessed in this study and therefore should be treated as hypotheses for future investigation. Similarly, the findings are consistent with the argument of Widodo (2016) that local wisdom-based ELT materials may support language learning and cultural identity maintenance; nevertheless, the current study provides evidence only of students' expressed preferences, and future research is needed to empirically test whether culturally contextualized materials improve motivation, cultural awareness, or comprehension outcomes through experimental or longitudinal designs.

Technological readiness and digital reading feasibility

The findings further indicate that most students possess adequate digital devices, yet they experience unstable or slow internet connectivity and difficulties understanding multimedia-based instruction. This result echoes concerns raised by Kessler and Hubbard (2017) and Godwin-Jones (2018) regarding the infrastructural and digital literacy challenges of implementing technology-enhanced language learning in developing contexts. Similarly, Yunus et al. (2021) reported that Indonesian university students often face internet limitations that hinder effective digital reading engagement.

These results imply that while digital reading materials are feasible, they must be designed with low-bandwidth accessibility and simple user interfaces to ensure equitable access. Therefore, needs analysis of technological readiness, as recommended in recent ELT curriculum design research, is crucial for realistic instructional planning.

Pedagogical implications and research contribution

Synthesizing these findings, the study confirms that effective English reading instruction in Indonesian higher education should integrate three key dimensions: (1) needs-based vocabulary-supported reading design, (2) culturally responsive local wisdom content, and (3) technology-sensitive digital delivery. This holistic intersection of learner needs, cultural identity, and technological context responds directly to the research gaps identified in the literature, where previous studies have rarely combined comprehensive needs analysis with cultural and digital considerations in university-level EFL reading instruction.

Therefore, the study contributes a context-specific empirical reference for developing English reading materials that are academically relevant, culturally meaningful, and technologically feasible. This contribution may be particularly relevant for Indonesian higher education institutions seeking to internationalize curricula while preserving local cultural identity.

Limitations and future research

Despite its contributions, this study has several limitations that should be considered when interpreting the findings. First, the study was conducted in a single study program in a state-owned

university, which may limit the generalizability of the results to other higher education settings with different student characteristics, institutional resources, or technological infrastructures. This limitation most directly affects the extent to which the identified reading needs, cultural identity preferences, and technological readiness patterns can represent broader university populations. Second, the study relied on self-reported questionnaire data, which may be influenced by response bias or students' subjective perceptions, potentially affecting the accuracy of conclusions regarding their actual reading proficiency and learning difficulties.

To address these limitations, future research should involve study programs from multi-institutional samples across diverse regions, incorporate objective reading proficiency measures such as standardized or performance-based academic reading assessments, and implement classroom-based pilot interventions to test the practical application of culturally responsive reading materials. In addition, experimental or quasi-experimental studies evaluating the effectiveness of local wisdom-based digital reading modules on students' reading comprehension, engagement, and cultural awareness are recommended to provide stronger empirical validation of the proposed instructional framework.

Conclusion and Recommendations

This study highlights the importance of aligning English reading instruction in higher education with students' academic goals, learning challenges, cultural identity, and technological conditions. The findings suggest that reading instruction should not only address students' academic reading needs but also provide strong vocabulary support to help bridge the gap between students' current abilities and their expected proficiency. These insights reinforce the idea that reading instruction must be carefully designed based on real learner needs rather than relying on generalized materials.

The study also emphasizes the value of integrating local wisdom into English reading materials. Students' strong preference for culturally familiar content indicates that cultural relevance can make reading materials more meaningful and engaging. At the same time, the findings show that digital reading is feasible but must be implemented carefully, considering limitations such as unstable internet access and varying levels of technological skills. This suggests that effective reading instruction should balance innovation with practical accessibility.

Overall, this study contributes a holistic understanding of English reading instruction as a combination of learner needs, cultural relevance, and technological readiness. These findings provide useful guidance for curriculum designers and educators in developing reading materials that are academically relevant, culturally meaningful, and technologically practical. More broadly, the study supports the idea that English learning in higher education can promote both academic success and cultural preservation when instruction is designed in response to students' real learning contexts.

Disclosure statement

No potential conflict of interest was reported by the authors

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