Reading Interests and Habits of Indigenous First-Generation College Students: A Phenomenological Study

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Abstract. The study aims to describe the reading interests and habits of IFGCS and explore the context that impacts them. The research methodology was a descriptive phenomenology study. Data was collected through observation and in-depth interviews. Five participants qualified for collecting the data. Thematic analysis was applied and identified six primary themes and sixteen associated sub-themes as the finding. The main themes included the internal and external factors affecting reading activities, the preferred and least preferred types of books, the internal and external barriers influencing reading, the limited literacy support in the school and community of Timorese students, and economic and cultural challenges in reading within families. The implications of this research suggest recommendations that can be used by students, lecturers, higher education institutions, families, schools, communities, and local governments as microsystems, mesosystems, ecosystems, and macrosystems to foster reading interests and habits.

Keywords: reading interests, reading habits, Indigenous first-generation college student, higher education, Timorese, descriptive phenomenology

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Introduction

Reading is a concept that is capable of improving the knowledge of individuals, communities, and citizens. However, data showed that reading interest and habits among the general population of Indonesia is low. The Central Bureau of Statistics reported that the average reading proficiency was 59.52 with a reading time of 4-5 hours per week and 4-5 books per quarter. Previous studies also reported that the reading engagement among students in Indonesia remained significantly low compared to global statistics (Badan Pusat Statistik, 2023). Furthermore, the 2019 PISA (Programme for International Student Assessment) report showed that the nation occupied 72nd position among 77 on the reading interest score. It was also observed that Indonesia ranked at the lowest level in reading comprehension among Southeast Asian countries and was only better than the Philippines (Hernawan & Damaianti, 2020). Out of the 78 nations analyzed, Indonesian students ranked 72nd by scoring 371 which was lower than the average of 487 required by the Organisation for Economic Co-operation and Development (OECD) among 15-year-old students (OECD, 2019).

Reading literacy is deficient nationally and this is mostly because of restricted access to relevant materials and lack of reading culture. Lack of access to important literature continues to pose a significant obstacle to improving literacy within the Indonesian society. This is primarily due to some barriers, including restricted availability of books, distribution disparities, as well as inadequate supplementary facilities and infrastructure. The disparities in book access are distinctly observable between urban and rural regions. The availability of bookshops, publishers, and well-resourced libraries facilitates access to books across diverse genres and educational tiers in metropolitan areas. Meanwhile, the quality and quantity of books are frequently severely restricted in rural areas and village libraries are not yet fully developed. There is also a deficit of reading literacy programs (Nasrullah & Asmarini, 2024). The data generally shows the challenges faced by students in disadvantaged, outermost, and frontier regions of Indonesia which are known as 3T, including Nusa Tenggara Timur (NTT). The students have struggled in developing interests and habits of reading. Nasution (2023) identified books as a reliable repository of

knowledge and showed that reading served as the solution to the issues of ignorance, indolence, and a shortage of creativity among learners. However, some students in 3T regions in Indonesia show a lack of interest and reading proficiency due to several factors, such as the complexity of the language used in publishing books and insufficient exposure to high-quality reading materials.

This study focuses on analyzing one of the rural and remote areas in Indonesia which is Nusa Tenggara Timur with a specific attention on the Timor tribe. The Village Development Index (VDI) often used by the Ministry of Villages to measure the development of disadvantaged regions and transmigration of Indonesia (i.e., Kemendes-PDTT) in each year showed NTT as part of the bottom three in 2020. Moreover, the lowest underdeveloped regency in NTT is south-central Timor which is also known as the Timor Tengah Selatan and part of the Timorese tribe. The six main areas covered by the tribe include Kupang city, regency of Kupang, South-Central Timor, North-Central Timor, Malaka, and Belu with 620 underdeveloped and remote villages (Direktorat Jenderal Pembangunan Desa dan Perdesaan, 2022).

The disparities observed in NTT pose a significant barrier to both regional and human resource development. The province has international border regions, which include sub-districts and regencies located geographically and demographically adjacent to Timor-Leste and Australia. These border regions, specifically those classified as 3T, often face challenges related to inadequate accessibility and diminished social well-being. The lack of fundamental resources and infrastructure due to the geographical characteristics of the region further increases the difficulties. In the educational context, the 3T regions face several challenges, including low literacy and completion rates for the highest educational levels, high dropout rates, insufficient educational facilities and infrastructure, as well as the scarcity of supporting high-quality books. These factors hinder the teaching and learning process and restrict access of students to reference materials (Kennedy et al., 2019).

The reading literacy of students in the university setting of Jakarta remains inadequate. The trend was observed from the fact that the students typically engaged in reading for only one to two hours each day with 38% identified to be indolent and 33% lacking motivation to read. Over the past two months, 43% read only one book while 61% spent more time on electronic devices. It was also observed that 3% visited the library and 70% used the space predominantly for learning and discussion purposes (Wijayanti, 2020). The findings showed the importance of reading in the learning process even for university students from the underdeveloped and rural areas, such as Indigenous

Timorese students who face constraints in access to necessary resources. Previous studies have broadly explored reading literacy among Indonesian university students but only a few have examined the unique intersection of indigeneity, first-generation status, and geographic isolation.

Andalita et al. (2022) differentiated reading interests from habits and culture. Reading interest was defined as the inherent capacity to engage in voluntary reading. Meanwhile, habits or love of reading refers to regular or recurrent engagement with materials and establishing a reading culture to ensure the behaviors become an essential part of life and lifestyle for an individual or a group. This study used the terms "reading routine" and "reading habit" interchangeably. Some studies were further identified on the reading interests and habits in Indonesia but there was limited focus on describing the concepts in relation to Indigenous Timorese students in higher institutions of education.

The focus of this study was to explore the experience of enthusiasm and passion for reading among Indigenous First-Generation College Students (IFGCS). Alyanada and Iskandar (2023) reported that several terms have been used for Indigenous Peoples in Indonesia, including Masyarakat Hukum Adat, Masyarakat Terasing, Komunitas Adat Terpencil, Masyarakat Lokal, Penduduk Asli, and Masyarakat Traditional. This study explicitly targeted Indigenous students who typically originated from and attend schools in villages and areas with limited learning resources. The rationale was based on the numerous obstacles faced by schools in rural areas (Ramayanti et al., 2024). Some of the challenges include poor literacy standards, a lack of interest in learning, insufficient awareness among students to pursue education, and inadequate facilities and infrastructure for reading and comprehension. The report from the teachers also showed that several students were unable to write, some could only write on a per-paragraph basis, and others were able to read but required the support of the teacher to understand the meaning and significance of the material.

FGCS is a severely underrepresented college population considered a vulnerable category within higher education. The group includes students born to parents who completed high school or lower education but have not pursued further formal education or obtained four-year college degrees. Approximately 33% of all college enrollment consists of FGCS who are the first in their families to pursue higher education. This group is recognized by scholars as part of the most rapidly growing student demographics which include approximately 34% of the freshman populations at undergraduate institutions. However, the elevated rates of attrition from higher education characterize the

students as a susceptible cohort (Canning et al., 2020; Chang et al., 2020; House et al., 2020). The frequent experience of stigmatization of FGCS due to the perceived lower intellectual aptitude leads to inquiries about the intellectual capabilities of the students. Moreover, studies showed frequent dearth of adequate knowledge, assistance, readiness, self-assurance, and financial means when the students were initiated into college education. Some literary studies characterized FGCS as "invisible" to the broader university community. A persistent obstacle identified is the absence of extensive familial support and comprehension. This is because financially disadvantaged FGCS experience psychological distress at some point throughout college due to the impression of betrayal and abandonment by families (Canning et al., 2020; House et al., 2020).

The findings from previous studies and statistics showed a significant lack of interest and habits in reading among college students. The problem was mostly identified in the 3T regions of NTT with a specific emphasis on the Timor tribe. An analysis of the observations and initial interviews conducted with three participants showed that Indigenous FGCS (IFGCS) in the Timor region faced a variety of challenges. The issues identified include inadequate reading facilities, a limited availability of textbooks for independent ownership, and a lack of family reading traditions from childhood. Therefore, the main purpose of this study is to describe the subjective perspectives and explore the lived experiences of IFGCS from the Timorese tribe in relation to reading interests and habits. The aim is to produce recommendations on the strategies to improve interests and habits based on the application of Bronfenbrenner's ecological systems theory. This is necessary because phenomenological studies have not been conducted to capture the lived experiences of IFGCS from the Timor tribe regarding reading habits and interests. The gap was addressed by exploring how ecological systems shaped the experiences of the students.

The benefit is to increase public awareness about the significance of fostering reading interests and habits among students in the 3T regions of NTT, particularly within the Timor tribe. More specifically, recommendations are offered on the actions to be implemented across different levels of ecological systems, including Indigenous students, lecturers, higher education institutions, families, schools, communities, and local governments which are categorized as microsystems, mesosystems, ecosystems, and macrosystems, respectively. The urgency and long-term implications of this study are to address issues of limited access to employment, lower academic performance, intergenerational illiteracy, as well as the erosion of local language and cultural

knowledge. Furthermore, the findings are expected to contribute significantly to Goal 4 of the Sustainable Development Goals and the Merdeka Belajar policy initiatives in Indonesian higher education aimed at enhancing the quality of education. This is important because the achievement of a quality education forms the foundation for sustainable development. Beyond improving quality of life, access to inclusive education can equip local communities with the necessary tools to develop innovative solutions to the most pressing challenges of the world (United Nations, 2022).

Methods

A descriptive phenomenological method was used in this study. Phenomenology is an academic discipline that investigates human life experiences and phenomena in the natural environment without deliberate intervention (Daflaini et al., 2023; Lesthari & Permana, 2022). The sampling method was purposive and the procedure required defining the study problem, objective, and question, determining the target participants, identifying relevant criteria for participant selection, developing a sampling frame, and selecting participants who satisfied the criteria. The data-gathering methods included observation, in-depth interviews, and documentation. At the initial stage, a literature review was conducted to comprehend the overview problem, context, and existing data about reading interests and habits in Indonesia in order to identify the gaps toward IFGCS.

The observation data were collected by observing each participant for 30–45 minutes in two meetings. The first step was to define the observation purpose based on the study objective and question. The second step was to decide the setting of observation in the campus area and house site with a focus on the reading behavior in the two settings as non-participant observers. The third step was to develop an observational form based on the main themes to observe which were reading habits and interests. The final step was the preparation of observational notes and analysis of the data.

Semi-structured interviews were conducted for a period of 30 to 60 minutes using audio recording and note-taking tools. This was achieved during three to five meetings with each participant and consideration for data saturation. The initial phase of the interviews required identifying and using the objectives to formulate questions. The subsequent phase was to establish rapport, use open-ended inquiries, apply follow-up probes and questions, and conclude the interview with a summary. The final phase was to transcribe the audio recording followed by reflection and analysis of the data.

Braun and Clarke (2019) developed the thematic analysis as a method to examine data with the purpose

Table 1

Overview of the characteristics of the participants

Subject / Information	Subject 1	Subject 2	Subject 3	Subject 4	Subject 5
Gender	Woman	Men	Woman	Men	Men
Age	20	23	20	18	22
Entry year	2022	2022	2022	2022	2022
Campus	State Religious College	State Religious College	State Religious College	Private Religious College	State Religious College
Parents' education	Father: elementary Mother: elementary	Father: Junior high school Mother: does not attend school	Father: Junior high school Mother: elementary	Father: Senior high school Mother: Senior high school	Father: Junior high school Mother: Junior high school
Parents' job	Father: farmer Mother: housewife	Father: farmer Mother: housewife	Father: farmer Mother: housewife	Father: farmer Mother: housewife	Father: farmer Mother: farmer

Table 2

Regional origin and school location

Subject	Regional Origin	Elementary school	Junior high school	Senior high school
Subject 1	Oinlasi (Timor Tengah Selatan)	SD Negeri Toinaimnuke	SMP Negeri 1 Amanatun Selatan	SMA Kristen Oinlasi
Subject 2	Mollo (Timor Tengah Selatan)	SD Negeri Amanuban	SMP Swasta Yapernam Kapan	SMA Kristen 2 Soe
Subject 3	Soe (Timor Tengah Selatan)	SD Inpres Besnam	SMP Kristen 1 Amanuban Timur	SMA Negeri 1 Amanuban Timur
Subject 4	Kolbano (Timor Tengah Selatan)	SD Gmit Sei 1	SMP Negeri Satap Nutunamat	SMA Negeri Banat
Subject 5	Amfoang (Kabupaten Timor Tengah Selatan)	SD Negeri Fatumetan	SMP Negeri 1 Amfoang Selatan	SMA Negeri 1 Amfoang Selatan

of detecting patterns and finding themes. The key steps included were familiarization with the data, coding, generation, review, definition, and naming themes, and writing the findings.

The criteria used to select the participants include (1) being an active student on campus, (2) Indigenous First-Generation College student from the Timor tribe in the NTT region, (3) proficient in the Timorese Indigenous language, and (4) willing to participate in interviews and observations. The others include (5) completion of education at a school located in the 3T region, (6) being aged ≥ 18 years old, and (7) possessing the characteristics of FGCS which include being the first in the family to pursue higher education and having middle to low income. The criteria led to the selection of five participants, including two female and three male second-semester students from public and private religious institutions. A repetition of themes and insights was observed after interviewing the selected participants without producing any new information. The trend showed data saturation was achieved and this led to the inference that the five participants were adequate to answer the study question.

Study permission was obtained from the study and community service institution after the feasibility of the proposal was assessed (No: 4177/Ikn.01/05/2023). Moreover, the five participants provided signed consent forms after being informed of the rights and the voluntary nature of participation. All the data collected were also anonymized to ensure the confidentiality of the participants.

Results and Discussion
Results
The comprehensive description of each participant as well as the findings of the observations and interviews conducted are presented in Tables 1 and 2. The most important data of IFGCS was associated with family backgrounds which included the educational level and jobs of the parents, showing the status as low-income. Only the parents of one student had a senior high school education while the others only attended junior high and elementary schools and some did not have formal education. The majority of the parents also work as farmers or spend time on domestic tasks and activities. The information in Table 2 showed that the elementary to high school attended by the students were included in villages classified as the 3T regions of NTT. The regions are comprised of several indigenous Timorese individuals.

The initial step of developing codes to define and develop themes requires reviewing interview transcripts multiple times and identifying pertinent parts by applying descriptive labels. The second step was code refinement by reviewing and revising the
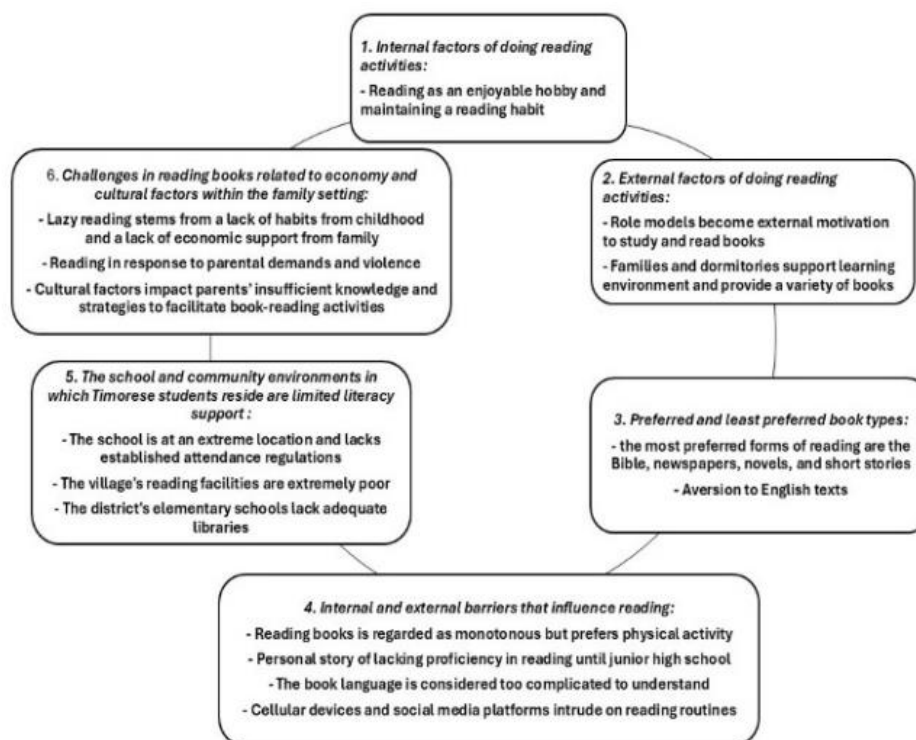
Figure 1. Main themes and sub-themes identified

codes and themes, verifying consistency, and ensuring relevance, interconnectedness, and were in line with the study questions. The third step was code validation through the application of triangulation with observational data. From the interviews, five main themes and fifteen sub-themes were found, comprehensively discussed in this section, and summarized in Figure 1. The first theme "internal and external factors supporting reading activities" has three sub-themes. The second theme focuses on the most and least preferred book types with two sub-themes. The third theme "internal and external barriers influence reading" is comprised of four sub-themes. The fourth theme "the school and community environments in which Timorese students reside are hostile to reading" has two sub-themes. The fifth theme is the challenges in reading books generated within the family setting and has four sub-themes.

Theme 1: Internal factors supporting reading activities

Sub-theme 1: Reading as an enjoyable hobby and maintaining a reading habit

Three participants, including ES, CN, and MA, developed interest in reading and found the activity as a hobby. For example, ES has a hobby and a fairly high interest in reading because she is an introverted personality, does not talk often, prefers to be at home, and reads books rather than engaging in outdoor activities. During elementary school, this participant developed interest in reading through daily devotional and religious books, such as Dry Land from the synod chairman in addition to other books acquired from the church. As she grows older, ES reads novels for one hour from 8 p.m. to 9 p.m. but not every day and also devotes time to college-related tasks such as the completion of assignments. This process requires reading the assigned material and working diligently on the task. ES has a busy schedule but continues to pursue the reading hobby. Furthermore, CN expressed a preference for reading by studying two books in a day. This is because reading assists the participant in understanding and learning new words. Another participant, MA, also expressed a preference for reading activities such as storybooks.

…"menurut saya membaca itu hobby saya. kalau sekarang saya punya jam membaca buku itu dari jam 8 malam setelah makan malam sampe jam 9 , lalu sisa kerja tugas mengantuk baru tidur." (ES)

…"I think reading is my hobby. Right now I have reading hours from 8pm after dinner until 9pm, then the rest of the time I work on assignments, get sleepy and go to bed." (ES)

Theme 2: External factors of doing reading activities
Sub-theme 1: Role models become external motivation to study and read books

The results of the interviews with three subjects, whose initials are ES, MA, and CN, indicate that they have an

inspiring figure (role model) who motivates them to be more motivated in education and supports their interest in reading books. According to the subject, ES finds motivation in studying and attending school because she idolizes an extended family member who is a pastor and writer. Subject MA also said that he was able to read books because he was lent and supported by his cousin, because economically the family could not support her to buy books. Furthermore, subject CN argued that his interest in reading stems from a supportive and motivating family environment. The subject finds motivation to read when he observes his older siblings who have successfully completed college. His siblings motivated CN by sharing their experiences from the beginning of their college journey to their timely graduation, which they achieved through their diligent reading of books.

…"Dalam hal studi dan kelulusan, kami belajar dari beberapa saudara paling tua yang sudah lulus kuliah, saya pikir mereka bisa lulus dengan cepat karena memiliki kebiasaan membaca." (CN)

…"In terms of studies and graduation, we can learn from older siblings who have graduated, I think they have experience to graduate quickly because of reading habit." (CN)

Sub-theme 2: Families and dormitories support learning environment and provide a variety of books
Based on the results of the conducted interviews, we found that ES, the subject, has a supportive family who has encouraged him to learn and read books from a young age. She resides in two different residences, each of which supports her learning and book-reading habits. From elementary to high school, the subject lived in her native village of Timor, and at the time of college she moved to live in a provincial city to study. In the city, ES enjoys excellent reading facilities and a conducive learning environment, which includes a dedicated study room at home stocked with numerous books for daily study sessions.

When ES was still a child and lived in the village, her parents paid attention to how she managed her time and study habits. ES's parents supported her learning activities by consistently accompanying her every night while the mother was weaving traditional cloth. While in the village, Subject ES received support in the form of free books bought by her aunt, who lived in the city (extended family). Then, when studying in the city, the subject could get books by going to the office of his guardian's parents, because his guardian was a writer and had a large collection of books. Subject MA, who had grown accustomed to reading due to the strict hours of the school dormitory she had lived in since junior high and high school, faced a different situation.

Dormitory members must adhere to a schedule that includes specific hours for studying, sleeping, and eating. This results in a lack of relaxation and free time for the subjects. Due to the need to adhere to a schedule and the anxiety of receiving a reprimand from the dorm mother, students experience pressure when studying and reading.

…"Jadi saya tinggal asrama; karena disitu aturannya sangat ketat, diatur tentang jam belajar dan semua aktivitas. Jam untuk belajar dan membaca juga sangat ketat. Kamu tidak akan bisa tidur terlambat. Karena nanti ibu asrama akan marah jika tidak belajar dan membaca." (MA)

…"So I live in a dormitory; that's why it is strictly guarded, it regulates study hours and all activities. Hours for studying and reading are tightened; you can't sleep late. Later, the dormitory mother will get angry if you don't study and read like that." (MA)

Theme 3: Preferred and least preferred book types
Sub-theme 1: the most preferred forms of reading are the Bible, newspapers, novels, and short stories
Based on the interviews we conducted with the six participants, each exhibits their own favorite reading interests. While some individuals may lack a strong inclination towards reading, they have specific preferences for certain genres of literature, including the Bible, newspapers, novels, and short tales. The initials ES and MA denote subjects who enjoy reading novels. According to ES, she finds pleasure in reading books because of the diversity of their plots, which elicit feelings of fear, alertness, and curiosity. Emergent readers may also become engrossed in novels' narratives and emotions. MA enjoys reading novels because of their captivating narratives. Furthermore, subject CN enjoys reading the Bible out of curiosity about God's word, and he frequently reads newspapers to stay informed about current events. DB enjoys reading short stories due to their brevity, conciseness, and fascinating style.

Based on observations, the lack of various book references may primarily arise from limited access to quality books in rural areas of Timor. Additionally, considering the context and characteristics of the participants outlined in tables 1 and 2, the low economic status of their families and the limited education levels of their parents hindered their ability to provide a diverse range of quality reading resources at home and in schools.

…"Saya suka baca koran, dan kadang-kadang alkitab juga." (CN)

…"I like newspapers for reading, and sometimes the Bible too." (CN)

...” Kalau cerpen cepat dan tidak terlalu berputar-putar bahasanya.” (DB)

…"Short stories are quick and not too wordy." (DB)

Sub-theme 2: Aversion to English texts

According to interviews conducted with six participants, three attendees expressed hatred for reading novels written in English. The participants, denoted by the initials ES, MA, and OM, each have distinct reasons for their aversion to reading anything written in English. Because of her limited language understanding, Subject ES dislikes books written entirely in English. However, she can still read books containing only a few English words. From elementary to high school, subject MA has shown a complete lack of enthusiasm for learning English, resulting in a diminished interest in English literature. The subject's rationale is that acquiring proficiency in English is arduous and conceptually challenging. Furthermore, the OM student harbored a strong aversion towards books written in English due to his lack of comprehension of the language. Furthermore, there is a subject named CN who has a strong aversion to books that emit unpleasant odors because they can potentially harm him. For example, the subject prefers to read lecture books that can provide them with additional insight rather than obscenity books. The final subject, identified by the initials DB, displays a complete aversion for all books, especially those containing short stories. Hence, when the patient engages with literature other than short tale books, he will immediately experience a sense of boredom.

Based on observations and context, participants' difficulties with English texts may stem from a lack of access to English books and cultural influences within families and schools that do not prioritize speaking and reading in English. Additionally, economic and cultural factors may hinder students from developing an interest in reading English books.

.....”Saya tidak terlalu suka dan tertarik dengan bahasa inggris, karena dari SD sampai SMA tuh memang tidak suka dan minat.” (MA)

…"I really don't like and have no interest in English from elementary school to junior high school." (MA)

Theme 4: Internal and external barriers that influence reading

Sub-theme 1: Reading books is regarded as monotonous but prefers physical activity

The interview findings identify one participant, DB, who expresses a lack of interest in reading due to its perceived monotony. The subject engages in reading exercises for around 10–15 minutes. He stated that prolonged reading was tedious, so he preferred just brief readings. Upon receiving an assignment to read from his lecturer or teacher, he acknowledged that he had read, but he did so for a cursory review. Reading quickly helps him understand the content better than reading slowly. According to DB, the book's words do not appear to lead directly to the reading's purpose. Reading for more than 15 minutes causes him to feel bored. The subject exhibits a diminished concern for the intricate narrative and the wide range of words included inside the book. The basic idea that he seeks to comprehend, notwithstanding his limited understanding of certain sections, is the important aspect of reading. Topic Physical activities, such as playing volleyball, capture DB's greater interest than reading. Even if it is relevant to volleyball, he is interested in reading online about the theory of volleyball passing.

..."Saya sering merasa bosan Ketika sedang membaca. Membaca hanya penting ketika cukup bisa memahami sedikit saja bagiannya." (DB)

…"I frequently feel bored while reading. Reading is only important if you understand a little." (DB)

Sub-theme 2: Personal story of lacking proficiency in reading until junior high school

An interview with the individual known as DB revealed that one intriguing aspect of their experience was their inability to read up to the junior high school level. During the interview, he admitted to lacking proficiency in reading from elementary school until the start of junior high school grade 2. Moreover, he mentioned that he acquired proficient reading skills during his third year of junior high school. We can attribute the individual's lack of reading fluency to his unfamiliarity with family learning and his insufficient time for independent study.

He acknowledged that during his time in primary school, he and other of his peers lacked reading proficiency. The educational institution where the subject attends also lacks amenities that facilitate children's reading, such as books. The teacher is the sole person who owns and holds textbooks. The primary school students, who lack textbooks, receive loans to acquire them. This interview has led us to the conclusion that the subject's inability to read fluently, despite his attendance at school, is a consequence of the absence of book facilities for students.

....”Saya bisa lancar membaca ketika masuk SMP kelas 2. Pendapat saya kurang lancar membaca itu karena saya yang kurang belajar.”(DB)

…"I read fluently in junior high school grade 2. In my opinion, I read less fluently because I didn't study enough." (DB)

Sub-theme 3: The book language is considered too complicated to understand

The interview with DB revealed that the subject preferred reading notes over the entire book. This is because the subject's written notes are much easier to understand than the language in the book. The subject admitted to facing difficulties in understanding the language in the textbook. Although he lacks an understanding of certain words in the text, he remains unbothered and eagerly seeks clarification from friends and lecturers who have superior knowledge. His friends and lecturers, however, occasionally mock the subject. This is a desirable trait to preserve, as he displays courage in acquiring knowledge about unfamiliar subjects despite receiving negative societal reactions.

…."kalo dari buku saya jarang bisa pahami, kalau dari catatan sendiri saya lebih mampu pahami. Ketika saya lihat Bahasa talalu banyak, saya susah untuk pahami."(DB)

…"If it's from the book, I rarely understand it, if it's from my own notes, I understand it better. I see too much language and words, so it's harder for me to understand." (DB)

Sub-theme 4: Cellular devices and social media platforms intrude on reading routines

Analysis of the interviews revealed that cellphones significantly restrict individuals' ability to engage in reading activities. Three individuals argue that cellphones contribute to their general lack of motivation to read. The presence of programs and social media on cellphones can lead to laziness towards reading. Social media content captivates the audience more effectively than academic reading. Subject DB finds engaging in social media to be an enjoyable activity, setting it apart from traditional book reading. Furthermore, Subject ES noted that the amount of time dedicated to reading books started to diminish due to the distractions caused by social media activities, namely TikTok and Facebook. Then, CN clarified that although they may read books approximately four times a week, they engage with social media on a daily basis.

…"kalo saya suka main HP khususnya scroll TikTok itu buat saya tidak merasa bosan, di TikTok biasa liat dan baca quotes pendek begitu."(DB)

…"I like to play cellphones, especially scrolling TikTok; it makes me more interesting; on TikTok I usually see and read short quotes like that." (DB)

Theme 5: The school and community environments in which Timorese students reside are limited literacy support

Sub-theme 1: The school is at an extreme location and lacks established attendance regulations

Among the 5 individuals interviewed, one subject is inclined to laziness in attending school and studying, primarily attributed to the lengthy distance and geographical position between their house and school. Subject DB said that the distance between his residence and junior high school is a considerable 10 km, and the insufficient availability of public modes of transportation in his village poses significant challenges for the subject to commute to school. Despite owning a private motorcycle, he must still wake up at 3 am to prepare for school. The poor quality of the route and the lack of pavement on the road contribute to his laziness in transporting himself to junior high school. After conducting an interview and investigating the issue, we discovered that the school's absence of strict regulations led to his indolence in daily attendance throughout junior high school. Meanwhile, once the subject started attending high school, despite the school being located far away, the subject became more disciplined due to the enforced and rigorous regulations of senior high school. The established regulations mandate that parents will receive a summons if a pupil misses school three times.

…"SMP tempatnya terlalu jauh. Orangtua saya punya motor tapi saya tidak bisa pakai setiap harinya, jadi saya terlalu malas untuk bangun jam 3 subuh dan siap-siap pergi ke sekolah." (DB)

…"The junior high school is too far away. My parents have a motorcycle but I can't use it every day, so I'm too lazy to get up at 3 am and get ready for school." (DB)

Sub-theme 2: The village's reading facilities are extremely poor

The interview findings indicate that the town where subject ES resides still lacks adequate reading amenities, such as bookstores. Previously, the subject would typically acquire books from the city through her family. Furthermore, the village where subject ES resides lacks a village library. Despite the village's limited amenities, the subject still benefits from the ample reading resources provided by family support. Furthermore, the subject village of CN lacks sufficient public amenities, such as a public library accessible to all rural villages without any restrictions. However, there is a tiny bookstore in CN's village. This arrangement is highly beneficial for CN, as he continues to access books via his school's library. The village where subject DB lived had a library, but it was only established in 2023, when he was studying in the city and not residing in the town. Additionally, the community lacks a publication store.

....."kalau masih di desa oinlasi saya suka pesan buku dari kakak, dari tante begitu yang tinggal di kota. Di oinlasi hanya ada perpustakaan sekolah saja." (ES)

…"When I was in oinlasi village, I often ordered books from my siblings and aunt who lived in the city. In oinlasi there is only the school library." (ES)

..."perpustakaan desa tidak ada." (CN)

…"There is no village library." (CN)

Sub-theme 3: The district's elementary schools lack adequate libraries

After conducting interviews with five participants, the collected data revealed that one participant, identified by their initials as DB, reported a deficiency in reading resources in primary schools. They acquire knowledge by diligently recording information elucidated by the instructor, who has the advantage of accessing reference materials. Insufficient access to reading resources at DB's disposal results in a diminished desire for reading and a lack of long-term and consistent book-reading habits since childhood. Additional subjects (CN, MA, and OM) also said their school has a library, although teachers seldom allow pupils to access and explore books. Excessive student access to the library raises concerns about potential damage to the library's books and facilities.

..."di SD tidak ada perpustakaan. Hanya guru yg pegang buku cetak dan buku pelajaran." (DB)

…"There is no library in elementary school, only teachers who hold printed and textbooks." (DB)

Theme 6: Challenges in reading books related to economy and cultural factors within the family setting
Sub-theme 1: Lazy reading stems from a lack of habits from childhood and a lack of economic support from family

Based on the interview findings, we identified individuals with the initials DB and OM who tended to have a diminished interest in reading and reading habits. The challenges faced by DB stem from his relatives. Barriers arising from the family include parents who instruct the individual to study without advocating for mandatory reading, as well as the subject's familial setting, which may be considered inadequate in terms of educational opportunities. Among his six siblings, DB stands out as the youngest and the sole recipient of a higher level of education, specifically a college degree. All of the subject's siblings and parents have completed their education up to the junior high school level. The parents are farmers who prioritize time management in order to earn a living. Consequently, DB's family environment does not prioritize studying and reading books. Subject OM also faced a comparable problem, given that her parents had graduated from junior high school and were working as farmers. The income of farmers in Timor context is frequently perceived as insufficient and insecure to fulfill all of their children's needs, including educational support for learning. This financial challenge is a key characteristic of first-generation college students (FGCS). Parents tend to prioritize other responsibilities over study time and purchase books for their children. Only during his high school years did the individual have the opportunity to borrow books for personal use. Consequently, during college, he had limited ability to engage with books consistently and encountered challenges when confronted with projects that mostly involved extensive reading.

…"Orangtua saya tidak pernah membelikan buku. Saya pinjam buku dari sekolah dan teman. Biasanya ibu dan ayah tidak pernah cek saya belajar atau tidak." (OM)

…"My parents never buy books for me, I borrow books at school and from friends. Usually my mom and dad never check on my learning." (OM)

Sub-theme 2: Reading in response to parental demands and violence

According to our interviews, one participant, referred to as subject MA, engages in reading motivated by parental expectations and violence. Since childhood, MA has engaged in reading at her parents' insistence. The subject acknowledged that failing to comply with her parents' instructions to read would result in severe physical abuse from her parents (such as pinching and hitting a specific area of the body). From an early age, she has had rigorous education in acquiring knowledge and engaging with literature. Despite experiencing violence, the individual viewed it as a source of inspiration and drive. Although MA's parents did not complete high school (they graduated from elementary and junior high school), they managed to finance MA's college education. From a young age, MA's parents have encouraged their children to acquire knowledge and engage in reading to enhance their prospects. In this instance, the reading culture developed within the participant's family is founded on reading activities that are viewed as demands and coercion stemming from parental guidance.

....."iya, saya sering mengalami begitu. Makanya kalau tidak belajar, nanti saya kena pukul dari orangtua." (MA)

…"Yes, I often experience that if I don't study, I will get a spanking from my parents." (MA)

Sub-theme 3: Cultural factors impact parents' insufficient knowledge and strategies to facilitate book-reading activities

Our interview findings revealed that two participants, OM and DB, did not receive adequate support from their families regarding book facilitation. The individual identified by the initials OM showed a lack of enthusiasm for reading literature. Furthermore, he only enjoys reading when the school assigns a specific task, such as summarizing a book. Ultimately, the subject kept the book at home for personal reading. Moreover, DB parents attempted to assist him with money to purchase books, but he refrained from using the funds for books. Instead, he allocated them for other expenses, such as food purchases.

One factor contributing to the limited knowledge and support from parents in fostering reading habits is the cultural context in rural areas of Timor, where there tends to be less prioritization of reading literacy.

...."*Tidak ada, saya hanya bawa pulang ke rumah buku pelajaran dari sekolah untuk dipakai belajar.*" *(OM)*

…"No, I only borrow and bring home textbooks from school to study." (OM)

Sub-theme 4: The Bible and newspapers as primary sources of reading for parents

This thematic analysis was derived from interviews conducted with subjects MA, DB, and CN. According to the interview findings, MA acknowledged that her parents created a learning environment by engaging in literacy activities such as reading the Bible and newspapers. Similarly, CN's parents, who live in rural areas, rarely read. Instead, they prioritize reading the Bible, a compulsory practice in every Christian family. Economic factors, employment opportunities, and the educational levels of parents affect the limitations on reading resources.

…"*Ayah yang suka, biasa baca Koran berita-berita dan alkitab juga.*" *(MA)*

…"Father who likes, usually reads newspapers, and the Bible." (MA)

Discussion

The analysis was conducted using social-ecological and neo-ecological theories derived and adapted from Bronfenbrenner's ecological systems. This is possible because both social-ecological and neo-ecological theories are adapted from Bronfenbrenner's ecological systems. The primary distinction between the two is that social-ecological theory emphasizes the interaction of social and environmental factors on human behavior, cognition, emotions, and development. Meanwhile, neo-ecological theory concentrates on the effects of

technology and virtual environments on human behavior and development. Both were selected due to their connection to the five primary themes and sub-themes identified which include internal and external supporting factors as well as barriers. The themes collectively reflect the main focus of both theories. The other items identified include the impact of technology such as gadgets and social media which further establishes the association with neo-ecological theory. This is in line with the five distinct systems observed in Bronfenbrenner's theory to be influencing individuals which include the microsystems, mesosystems, ecosystems, macrosystems, and chronosystems (Crawford, 2020; Navarro & Tudge, 2023; Stanley & Kuo, 2022).

The microsystem is the first aspect of the theory identified and refers to a group of individuals interacting with each other on a regular basis. This includes face-to-face communication with family members or other individuals residing in the same household. Microsystems also include any individual outside the household who maintains regular and constant contact. This can be in the form of educational institutions such as schools or childcare centers for children. The microsystems are also in the form of the workplace, local community, or social gatherings for adults (Crawford, 2020; Stanley & Kuo, 2022).

The analysis of the data from the interviews showed that some of the themes identified were microsystems such as internal motivation, the impact of both nuclear and extended family, the boarding school, and the educational institution. For example, the microsystems that fostered reading interest and passion for ES, MA, and CN were the nuclear family in the form of siblings and parents, extended family through cousins and aunts who fulfilled roles as pastors and authors, as well as school dormitories. DB and OM did not have a strong inclination towards reading but derived pleasure from the process due to less supportive microsystem environment. The limited educational attainment and unsupportive economics in the family limited the ability to acquire reading skills and purchase relevant materials. From an educational standpoint, the absence of a library at the elementary school and the significant distance to the junior high school deter students from attending the institution. The importance of fluent reading skills is also often ignored at both levels of education up to the second grade.

The neo-ecological theory posits that there are virtual microsystems characterized by activity patterns, social roles, and interpersonal relationships navigated by individuals on specific digital platforms in the 20th

Table 3
Recommendations based on Bronfenbrenner's ecological systems

Ecological system	Collaborators	Actions
Microsystems dfa	• Family (nuclear and extended) • Local community • Boarding school • Educational institutions (schools and universities)	• Family-based reading routines • Setting reading spots and the library to provide access for diverse reading materials and preferences • Initiate inclusive reading programs
Virtual microsystems	• Combination of microsystem with digital platforms	• Apply social media to read online resources
Mesosystems	• The relationship between the family and other nearby contexts, including the school, the dormitory, and the scholarship foundation	• Regularly and frequently implement the activities of microsystems sustainably
Ecosystems	• Collaboration between the government, educational institutions, non-governmental organizations, psychologists, education activists, scholars, IFGCS, and communities	• Develop and explore studies, interventions, and policies to support IFGSC who are experiencing family economic difficulties and have a low level of education • Provide and explore studies, interventions, and policies to support schools and villages in the rural 3T regions of Indonesia
Macrosystems	• Collaboration between family, local communities, government, educational institutions, non-governmental organizations, psychologists, education activists, scholars, IFGCS, and communities	• Develop and explore studies, interventions, and policies to address inequalities among marginalized groups and the lack of reading resources • Develop and explore studies, interventions, and policies to address cultural issues and parenting styles that do not support reading interests and habits
Chronosystems (integrate the notion of the digital era into the ecological system of human evolution)	• All collaborators from microsystems, mesosystems, ecosystems, and macrosystems	• Improve digital technology skills, online learning engagement, and digital literacy • Access online reading resources and engage in online learning

century. These microsystems possess distinct relational and symbolic attributes that either facilitate or hinder the inclusion in immediate processes within the environment (Navarro & Tudge, 2023). The phenomenon was observed in the belief of five participants that the regular and extensive use of devices and everyday engagement with social media tended to disrupt habits and reading practices obtained since childhood. This is because individuals currently allocate less time for daily or weekly extensive book reading. Moreover, the educational system in the present digital era is shifting towards fostering technology skills, online learning engagement, and digital literacy in higher education students. The trend is observed from the fact that participants are accessing online resources and learning activities on campuses.

Students from families with stronger educational backgrounds and early reading exposure such as ES and MA consistently reported more sustained reading habits even when transitioning into digital environments. Meanwhile, those without the background struggled to maintain engagement. An example was DB who found printed books with lengthy stories and explanations tedious but experienced greater pleasure in reading concise information on social media.

The mesosystem is the second aspect of the theory identified through the analysis conducted in this study.

ES, CN, and MA vividly showed the relationship between the family and other nearby contexts, including the school, the dormitory, and the scholarship foundation that fostered reading desire and excitement. The mesosystem observed in the case of ES was the strong ties between family, school, and dormitory which acted as a buffering force against the broader economic and structural limitations of the ecosystem. Meanwhile, DB and OM did not have the necessary assistance from families to develop reading habits. The elementary schools also failed to provide the libraries needed to motivate reading habits and interests. The situation limited the capacity of the participants to achieve fluency in reading up to the second grade of junior high school. The trend showed that DB and OM lacked the enthusiasm and inclination to read books after transitioning into college due to unsupportive interactions within the mesosystem. According to Burohman (Nita & Naini, 2021), reading is a productive practice driven by strong motivation or desire which is sustained consistently and culturally in an individual to comprehend the material being read. The development of reading habits is not instantaneous but rather gradual over an extended period. This shows that the regularity of reading significantly facilitates the establishment of habits. The trend leads to the definition of the reading habits as a cognitive ability enabling an individual to comprehend a material. It is also considered an aspect of reading skill.

The ecosystem is the third aspect of Bronfenbrenner's ecological theory which covers parental health, family income and education, as well as school quality directly or indirectly influencing the learning and development of an individual (Crawford, 2020; Stanley & Kuo, 2022). This study showed a clear impact of the ecology on DB and OM considering the fact that their parents and siblings only had a junior high school education background. The situation limited the knowledge and ability to motivate the reading habits of the children. The school also did not have adequate quality as observed in the absence of a library, restricted visiting hours, children left unsupervised when absent for days, and a remote location which necessitated walking. Meanwhile, ES has a sizable family with a commendable standard of education, including brothers and cousins who have completed undergraduate studies and exhibit diligence to graduate on time. This is in addition to an extended family which includes a pastor and a writer.

The macrosystem is the fourth aspect of the theory and is observed to be relevant to the findings. This is related to the inequalities among marginalized groups and the lack of resources to facilitate reading. All the participants originated from the Timorese tribe, completed elementary to high school education in the 3T village, and relocated to the provincial metropolis

for temporary residence after entering college. The village library was constructed in 2023 after the students had left for college. The school library also lacked equitable distribution and sufficiency to ensure regular visits by students for reading purposes. Furthermore, there was no well-stocked bookstore, as well as limited quantity and range of books. Only a restricted range of reading materials such as Bibles and newspapers were available to the parents and this influenced the reading interests and habits of the children.

All the participants were from low-income households because the majority of the parents were employed as farmers and homemakers. DB and OM specifically reported that their parents spent most time earning a living and lacked sufficient time to provide the support needed to achieve learning and reading endeavors. Therefore, both exhibited less enthusiasm and inclination towards reading compared to the other participants. Some parents and extended family members also have limited financial capacity to purchase books. This shows that the economic status of the family can influence the availability of different books for reading. The trend was observed in the findings that the parents of all the participants were often restricted to the Bible and newspapers. The situation reflected in the participants by showing interests in similar genres of books such as the Bible, newspapers, novels, and short tales. Moreover, DB and OM were only able to read the textbooks and notebooks of their classmates during the class.

The previous study by Solihin et al. (2020) and the 2018 Education Support Statistics showed that 80.83% of students read school textbooks more frequently compared to 50.97% for knowledge books. The frequency of library visits was also relatively low at approximately 13.02%. Moreover, the reading interest survey conducted in Bulungan and Malinau districts, North Kalimantan, showed that the enthusiasm of children for reading was not in line with the quantity of materials available at home and in school. Chairunnisa (2018) also reported a consistent and trustworthy relationship between reading literacy and comprehension. This was observed from the trend that higher levels of literacy corresponded to better levels of reading comprehension and vice versa.

The low reading literacy among IFGCS from the 3T regions has a significant impact on the quality and competence of human resources (HR). Solihin et al. (2020) showed the importance of prioritizing an improvement in HR quality for the development process of a nation. However, the competitiveness index of Indonesia has not improved as observed in the drop from 45th to 50th in 2018 based on the Global Competitiveness Report 2019. Another important point is that the productivity and outcomes from the

education field have a significant impact on the long-term competitiveness of a nation. The trend is possible because competent graduates who are perceived to possess the necessary skills have a better possibility of adapting to continuous changes. Solihin et al. (2020) showed that library usage across Indonesia was generally low but the findings of this study showed a more structural issue in Timor because several villages lacked libraries entirely, thereby pushing students toward functional illiteracy and disengagement.

The next macrosystem was the focus on the contribution of the Timorese culture to the development of book-reading habits. The phenomenon was evident in the authoritarian parenting methods in the form of physical and verbal aggression applied to MA with the aim of facilitating learning and reading. The demanding cultural norms of the Timorese tribe contribute to the phenomenon. For example, a previous study on the mainland of West Timor Island showed that parents used authoritarian parenting styles. Fathers tended to exhibit violent behavior by administering physical punishment. Children often experience disappointment, sadness, and anger but comply with parental instructions (Nitti & Thoomaszen, 2018; Tea et al., 2016; Thoomaszen, 2017).

The chronosystem is the fifth aspect of the theory and integrates the notion of time into the ecological system of humans. This is related to the fact that the digital industrial revolution of the 20th century differentiates the current generation from the preceding period (Crawford, 2020; Navarro & Tudge, 2023; Stanley & Kuo, 2022). All the participants were born in the 2000s and considered members of Generation Z with extensive exposure to the digital realm and technology. The students exhibit an intensified interest in the diverse interactions on several digital platforms and social media. This is observed in the multiple accounts diligently maintained on each social media, including Facebook, Instagram, and TikTok with daily consistent and extensive engagement. The participants believed that the reliance on digital platforms consistently had a detrimental impact on the development of reading habits.

The responses of the participant were in line with the findings of Wardani et al. (2023) that Generation Z with the age range of 11 to 26 years old were continuously vulnerable to the impact of digital media. Insufficient digital literacy among Generation Z can lead to a range of hazards in digital media, including cyberbullying, dissemination of false information, doxing, trolling, and propagation of hate speech. This shows the need for the comprehension of digital well-being in the current era by emphasizing the importance of the four fundamental principles of digital literacy in using technology. The principles include digital skills, digital culture, digital ethics, and digital safety.

The OECD and European Commission have established an artificial intelligence (AI) literacy framework to outline the knowledge, skills, and attitudes needed to prepare students for critical thinking, creativity, and ethical awareness of AI while promoting innovative applications. This is necessary because AI is capable of performing several tasks but creativity and social-emotional skills are indispensable. The facilitation of effective and ethical comprehension requires the evaluation and utilization of AI tools and systems to cultivate a comprehensive set of skills and attitudes among all students. In an AI-driven, technologically advanced world, students need to be prepared for both academic success and informed engagement (OECD, 2025).

The limitations and challenges in promoting interest in reading and developing reading habits can be overcome by developing several preventive programs to be implemented by the parents as the closest microsystem. These programs include setting a positive example by reading daily, offering a wide range of engaging books at home, reading together, sharing book contents, engaging in discussions, inviting children to the library, and practicing democratic parenting (Inten et al., 2023; Sari & Rukiyah, 2021). The priority for intervention and prevention for IFGCS is to focus on internal barriers affecting the mindset regarding reading interests and habits. This shows the need for higher education institutions to foster collaboration among lecturers, educational psychologists, and reading literacy advocates in order to significantly influence the perspectives of IFGCS on reading.

The issues identified can be addressed in future studies by designing action or quasi-experiments aimed at exploring the implementation of different preventive and intervention programs. Moreover, the limitation of this study was the adoption of descriptive phenomenology where inferences were primarily based on the narrative of ES. Future studies can use other qualitative methods such as interpretative phenomenology to mitigate the limitation. There is also a need for a survey to determine the prevalence of the issues identified in this study among Indigenous First-Generation College Students in NTT and generally in Indonesia.

Conclusion

In conclusion, this study showed that all five Indigenous First-Generation College Students interviewed were functionally literate but the reading interests and consistency of habits varied significantly. ES showed a strong interest in reading due to the combination of family motivation and role models within a supportive microsystem and mesosystem. CN and MA exhibited moderate interest by benefiting from

some environmental support but not across all ecological levels. Meanwhile, DB and OM had low reading engagement due to limited support across microsystem, mesosystem, and broader ecological conditions.

The analysis conducted based on Bronfenbrenner's theory further showed that the immediate environments with a specific attention to the microsystems in the form of family, school, and peers, as well as mesosystems through school–home interactions had the most critical role in shaping reading interests and habits of the students. Macrosystemic and chronosystemic factors such as cultural norms and digital distractions also had a significant but indirect influence.

The findings led to the recommendation of coordinated efforts across all ecological levels to support early reading development among Indigenous students, specifically those in 3T (disadvantaged, outermost, and frontier) regions. Stakeholders such as families, educators, local governments, religious leaders, universities, and community organizations should also implement context-sensitive interventions. This could be in the form of family-based reading routines, access to diverse reading materials, and inclusive reading programs. The collaborative efforts were considered important to reducing educational disparities and enhancing the long-term academic readiness and human capital of marginalized student populations.

Acknowledgments

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