

# A Developing Model of Reading Innovation for Students Drawing Upon Tai Loei Local Wisdom

Naiyana Ajanatorn

Faculty of Humanities and Social Sciences, Loei Rajabhat University, Thailand

E-mail: naiyana.aja@lru.ac.th

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## Abstract

This research aimed to 1) investigate the reading problems of students in Loei Province, 2) explore culturally grounded approaches to developing a reading innovation based on Tai Loei local wisdom, 3) design and develop a culturally responsive reading innovation, and 4) evaluate students' satisfaction with the developed materials. A mixed-methods approach was employed in four sequential phases: (a) identifying reading issues through interviews with 15 key informants including administrators, educators, and cultural experts; (b) conducting focus group discussions to determine design guidelines for the innovation; (c) co-developing a bilingual picture book inspired by the Loei provincial motto; and (d) implementing and evaluating the innovation with 389 students across nine schools. The sample was selected using multi-stage stratified random sampling to ensure representation across educational areas and school sizes. The primary data collection instrument was a satisfaction questionnaire, validated by three experts and tested for reliability (Cronbach's  $\alpha = 0.89$ ). Quantitative data were analyzed using descriptive statistics, while qualitative data were thematically analyzed. The findings revealed four key barriers to reading: low motivation, digital distractions, foundational skill gaps, and inadequate support from families and schools. The developed reading innovation received high satisfaction scores across five dimensions: content, language use, illustration design, book format, and perceived educational value. Students particularly appreciated the integration of local wisdom and interactive features. This research demonstrates that embedding regional identity into literacy interventions enhances student engagement, strengthens cultural awareness, and supports long-term educational equity in diverse learning contexts.

**Keywords:** Tai Loei Local wisdom; Loei Province; Reading Innovation; Reading Problems

## Introduction

Reading is a dynamic and multifaceted skill that plays a crucial role in enhancing the quality of human life. It is not only fundamental to academic learning but also vital for cultivating critical thinking, emotional intelligence, and life-long personal growth. In the digital age, reading has transformed from a traditional literacy activity into an interactive process shaped by multimedia, cognitive engagement, and digital fluency (Johnson, 2019). These developments necessitate a reexamination of how reading is taught, experienced, and valued across diverse educational contexts. In summary, reading today demands innovation that bridges traditional literacy with evolving cognitive and technological paradigms.

Contemporary research emphasizes that reading is far from being a passive act of information intake; rather, it is a high-level cognitive process involving interpretation, reflection, and Meaning-making (Thitichayodom et al., 2018). It empowers individuals to connect prior knowledge with new ideas, interpret texts critically, and construct insights relevant to real-world challenges. Thus, reading practices must be examined systematically, particularly in light of modern educational demands and socio-cultural shifts. This underscores the need for context-sensitive interventions that foster reading engagement among diverse learners.

Despite national efforts to promote literacy, Thai students' reading proficiency continues to lag behind regional and global benchmarks. Several studies report contributing factors such as insufficient motivation, lack of culturally relevant content, and competition from digital entertainment media (Galgao, 2016; Rueangdam, 2021). These challenges reveal an urgent need to develop innovative reading materials that can both capture students' interest and support Meaningful literacy development. From this perspective, it becomes clear that a one-size-fits-all approach to reading pedagogy is no longer adequate.

One promising strategy lies in the integration of local wisdom—a term referring to community-based knowledge systems, beliefs, and practices shaped by generations of experience (Geertz, 1983; Pholsena & Banomyong, 2006). Local wisdom offers culturally grounded narratives that can bridge the gap between students' lived experiences and formal learning. When embedded into reading materials, such content may enhance students' cultural identity, emotional engagement, and motivation to read. In sum, utilizing local wisdom as a pedagogical resource can make reading more relevant, inclusive, and transformative.

In this study, the researcher focused on the Tai Loei community, a culturally rich group located in Loei Province, Thailand. The province's official motto, which encapsulates the region's identity, traditions, and indigenous knowledge, serves as the foundation for developing a new reading innovation. Although the motto holds historical and social value, it has rarely been adapted for educational use. By drawing on personal familiarity with the local context and aligning with previous studies promoting culturally responsive reading instruction (Guthrie et al., 1997), this research proposed a novel integration of cultural heritage into reading pedagogy which was expected to cultivate students' appreciation for local values while enhancing their reading engagement. In essence, culture was not only a backdrop but a vehicle for educational transformation.

The primary objective of this study was to develop a reading innovation drawing upon Loei Province's motto to improve students' reading skills and cultural awareness. The research process included the design and development of culturally appropriate reading materials and the examination of their effects on student reading behaviors. By anchoring reading instruction in local wisdom and community identity, students were empowered to experience reading not merely as a skill but as a meaningful dialogue between tradition and innovation. This reinforces the value of reading as a lifelong habit that fosters both intellectual growth and cultural continuity.

## **Research Objectives**

1. To investigate the reading problems of students in Loei Province.
- 2 . To explore approaches for developing an innovation for improving reading skill of students drawing upon Tai Loei local wisdom.
3. To develop a reading innovation for students drawing upon Tai Loei local wisdom.
4. To examine students' satisfaction with the reading innovation.

## **Literature Review**

### **Definition and Importance of Reading**

Reading is a fundamental skill essential for knowledge acquisition, critical thinking, and socio-cultural development. It involves the decoding of symbols and the construction of meaning through active interaction between the reader and the text (Grabe & Stoller, 2019). Scholars such as Snow (2020), and Duke and Cartwright (2021) have emphasized that reading includes both

lower-order decoding and higher-order cognitive processes such as inference, evaluation, and integration of information.

More than a purely cognitive act, reading is a tool for personal and social empowerment. It facilitates academic achievement (Perfetti & Stafura, 2019), emotional development (Green et al., 2021), and civic engagement (OECD, 2020). In contexts like Loei Province, where traditional knowledge is embedded in everyday life, reading can serve not only to transmit information but also to preserve and revitalize local culture.

### Theories of Reading

To effectively develop reading innovations grounded in local identity, it is essential to understand how reading occurs. Theoretical models such as Bottom-Up (Gough, 1972) and Top-Down (Goodman, 1967) offer foundational insights, while Interactive Theory (Rumelhart, 1977; Stanovich, 1980) integrates both text-based and knowledge-based processing.

Schema Theory (Anderson & Pearson, 1984) is especially relevant when integrating local wisdom into reading materials. It posits that comprehension improves when readers activate pre-existing mental structures. This aligns with the study's goal of using familiar cultural contexts—such as Tai Loei traditions—to enhance engagement and meaning-making. Similarly, Sociocultural Theory (Vygotsky, 1978) underscores the social and cultural mediation of learning, reinforcing the value of embedding local identity into literacy development. These theories collectively underscore the value of developing reading materials that align with students' linguistic and cultural backgrounds, especially in diverse regions like Loei where traditional knowledge systems remain deeply embedded in daily life.

### Reading in the Thai and ASEAN Context

Despite significant national efforts, many Thai students continue to struggle with reading proficiency. Rueangdam (2021) identified key challenges such as low motivation, inadequate foundational skills, and the dominance of digital media over print literacy. Similar patterns are seen across Southeast Asia, where educational innovations increasingly incorporate cultural content to improve literacy outcomes.

In Southern Thailand, for example, the Patani Malay–Thai Bilingual/Multilingual Education Program uses local languages to enhance early grade reading and preserve cultural identity. In Cambodia and Laos, projects like Room to Read and Big Brother Mouse develop culturally relevant storybooks and promote community-based literacy, reflecting a regional trend toward culturally responsive education (Premsrirat, 2024).

In Northeastern Thailand, revitalization of the Tai Noi script, once common in the Isan region, demonstrates how local heritage can be linked with reading development. These examples support the idea that embedding cultural content into reading materials can foster not only linguistic development but also cultural appreciation, especially among students from minority or rural backgrounds.

### **Culturally Responsive Literacy Interventions**

Culturally responsive literacy integrates students' cultural backgrounds into instructional design. This pedagogical stance—rooted in Sociocultural Theory (Vygotsky, 1978)—has shown to enhance learner motivation, comprehension, and identity formation. For example, interventions using local narratives, languages, and multimedia have been particularly effective in rural or indigenous communities (Kann, 2012).

In the context of Loei, drawing upon the province's official motto and unique traditions such as the Phi Ta Khon festival not only promotes reading skills but also instills a sense of pride and belonging. Embedding Tai Loei local wisdom into reading innovations supports dual goals: improving literacy while preserving cultural identity.

### **Ethnic Groups in Loei Province**

Loei Province is distinguished by its ethnic diversity and rich cultural traditions. The Tai Loei, the largest indigenous group in the province, trace their ancestry to Luang Prabang and are known for their peaceful nature and strong attachment to their homeland. Other significant groups include the Tai Dam, who migrated from Xieng Khouang, Laos, and have preserved their heritage through cultural villages and traditional housing models, and the Tai Phuan, who settled in Chiang Khan District during the reign of King Rama V and continue to practice distinctive rituals such as Boon Boerk Baan to honor household guardian spirits.

These communities collectively contribute to Loei's vibrant cultural identity. Traditional festivals such as Phi Ta Khon, Phi Khon Nam, and Phi Bung Tao are not only celebrated for their spiritual significance but also function as cultural repositories that express local values, environmental relationships, and creative traditions. These festivals utilize recycled materials for mask-making and involve community storytelling, all of which can be adapted into rich reading content for students (Ajanatorn, 2025).

By embedding such cultural expressions into reading innovations, educators can foster both literacy and cultural continuity. Students learn not only to read but also to appreciate their heritage, strengthening their sense of identity and belonging. This study's reading innovation,

drawing upon Loei's provincial motto, effectively transforms such local wisdom into engaging educational content, thereby reinforcing the dual goals of literacy advancement and cultural preservation.

## Conceptual Framework

This research employed a mixed-methods approach and was conducted in Loei Province. The researcher defines the research conceptual framework drawing upon the concept/theory of reading. The details are as follows.

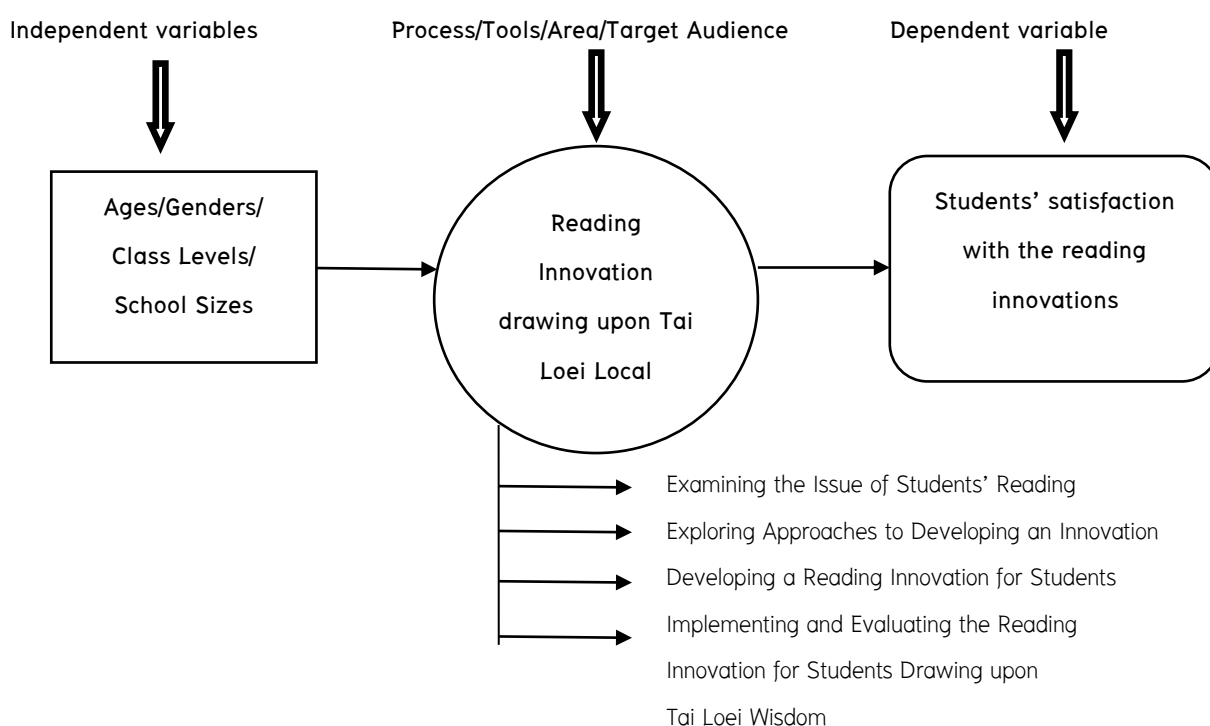


Figure 1 Conceptual Framework

## Research Methodology

This research employed a mixed-methods approach, integrating both qualitative and quantitative data collection techniques to ensure triangulation and strengthen the reliability of the findings. The study was conducted in Loei Province and followed four sequential stages, as described below.

### 1) Examining the Issue of Students' Reading

This stage involved an in-depth investigation of students reading issues through semi-structured interviews with 15 key informants, including provincial and district-level administrators,

the provincial cultural officer, educational personnel, scholars, and local intellectuals. The data were analyzed using descriptive analysis.

## 2 ) Exploring Approaches to Developing an Innovation for Enhancing Students' Reading Skills Drawing upon Tai Loei local wisdom

In this stage, a focus group discussion was conducted with the same 15 key informants from Stage 1 to collaboratively explore strategies for integrating Tai Loei local wisdom into reading instruction. Topics included suitable themes, language use, and culturally relevant narratives. The discussion aimed to co-construct culturally embedded reading approaches. Data were audio-recorded and transcribed, followed by thematic analysis to synthesize key recommendations.

## 3) Developing a Reading Innovation for Students Drawing upon Tai Loei local wisdom

A participatory design workshop was organized with 20 stakeholders, including representatives from educational administration, local scholars, cultural officers, and curriculum specialists. The workshop utilized design thinking processes to co-develop the reading innovation prototype. Activities included the selection of texts rooted in local wisdom, storyboard development, and feedback cycles. This stage applied a qualitative approach, emphasizing collaboration and iterative refinement of materials. Draft innovations were piloted informally within the group to ensure cultural sensitivity and age appropriateness.

## 4 ) Implementing and Evaluating the Reading Innovation for Students Drawing upon Tai Loei local wisdom

The reading innovation was preliminarily piloted with 30 students from Ban Kang Pla School, Chaiyaphruek Subdistrict, Mueang District, Loei Province. These students were not part of the main study sample. Feedback from this trial informed final adjustments to the innovation. The final implementation and evaluation involved a quantitative experimental process. A sample of 389 students was selected using multi-stage stratified random sampling from three educational service areas (Loei Educational Service Areas 1, 2, and 3). Within each area, three schools were selected (one large, one medium, and one small), totaling nine schools. Students ranged from upper primary to lower secondary levels.

The primary data collection instrument was a satisfaction questionnaire, developed to assess students' experiences and perceptions of the reading innovation. The questionnaire consisted of Likert-scale items covering content relevance, engagement, clarity, and cultural connection. To ensure measurement quality, content validity was established through expert review by three specialists in education, curriculum development, and local culture. Reliability was

tested through a pilot study with 30 students outside the main sample, yielding a Cronbach's alpha coefficient of 0.89, indicating high internal consistency. Descriptive statistics—including frequency, percentage, Mean, and standard deviation—were used to analyze the survey data.

This study adhered to ethical research standards. Prior to data collection, ethical approval was obtained from the relevant institutional review board. Informed consent was secured from all participants, including parental or guardian consent for minors. Participants were assured of the confidentiality and voluntary nature of their involvement. All data were anonymized and stored securely to protect participant privacy.

## Research Results

### Investigate the reading problems of students in Loei Province

The findings revealed that reading difficulties among students constitute a critical issue that significantly affects educational development and the future quality of life of the population. This study aimed to analyze the causes of reading problems among Thai students, based on interviews with nine key informants. The collected data were analyzed and synthesized to identify key issues and propose potential solutions. Based on the interviews, the causes of reading difficulties among students were found to stem from four major factors:

#### Lack of Motivation and Interest in Reading

Several participants noted that some young people are disinterested in reading due to unengaging content or a lack of motivation, which in turn negatively affects their educational development and related skills (Informants 2 and 4).

“Some students may not be interested in reading because of the boring content or the absence of motivational factors. This affects their educational development and other skills.”

“Some students lack reading experience or sufficient learning support. Disinterest in reading may result from uninteresting materials or a lack of encouragement from families or schools, causing them to overlook the importance of reading, which ultimately affects the educational system.”

In addition, it was found that modern children tend to have shorter attention spans and are less inclined to read books (Informant 3).

“The reading problems among students stem from shorter attention spans and reduced interest in books among the younger generation.”



### **The Influence of Technology and Digital Media**

Mobile phones and social media were identified as significant distractions that divert students' attention away from reading, thereby reducing the time they spend developing reading skills (Informants 5 and 7).

“Students tend to read less or very little. It can be observed that they spend too much of their free time on mobile phones, leading to a lack of reading practice and resulting in poor reading fluency.”

“The decline in reading among students today may be due to their preference for mobile phones and the influx of social media into their daily lives.”

### **Fundamental Issues in Reading and Basic Education**

Reading and literacy challenges at the primary and secondary education levels remain significant barriers to further learning and personal development (Informant 1).

“Reading difficulties are a major concern, as there are more distractions than incentives to read. This affects national education levels, impairs reading and writing skills at both primary and secondary levels, and ultimately lowers the quality of life. It also leads some to drop out of the Thai education system.”

Some students face reading fluency issues, which hinder their ability to analyze and synthesize information from texts (Informant 6).

“Students reading problems include reading inefficiency and a lack of fluency. These issues limit learning, as well as their ability to accurately analyze and synthesize information from reading, resulting in lower-quality educational outcomes.”

### **Lack of Support from Families and Schools**

Some children lack reading experiences or adequate encouragement from their families and schools, which leads to an undervaluation of reading (Informant 4).

“Students lacking reading experience or sufficient learning support may become disinterested in reading due to dull content or insufficient motivation from families or schools, leading to a disregard for the importance of reading and ultimately affecting the education system.”

### **Explore approaches for developing an innovation for improving reading skill of students drawing upon Tai Loei local wisdom**

The findings revealed that the development of reading innovation for students should be grounded in the context of Tai Loei local wisdom, as reflected in the provincial motto of Loei:

“The land of sea mountains, the coldest place in Siam, beautiful flowers in three seasons, the land of virtuous monks, and a place of cleanliness and stability.” This motto represented the unique identity of the province and could serve as a foundation for designing reading materials and activities that aligned with the local way of life and captured the interest of young readers. Based on interviews with nine key informants, the proposed guidelines for developing reading innovations were categorized into four main aspects:

#### **Support from relevant organizations**

The informants agreed that the promotion of reading should not be limited to the formal education system alone, but should involve cooperation from government agencies, private sectors, and local communities. For instance, extracurricular reading materials should be produced in line with the local context and the interests of students, thus expanding access to diverse and quality learning resources.

#### **Development of age-appropriate and relevant reading content**

The reading materials needed to be designed with engaging, up-to-date, and relatable content. This included presenting stories that were connected to Tai Loei local wisdom, local lifestyles, or community history in a way that was easy to understand, enjoyable, and inspiring for young readers.

#### **Creation of reading-related innovations and activities**

Informants suggested organizing various engaging activities to encourage a love for reading, such as reading competitions, book clubs, or events that used books as central learning tools. These activities were expected to align with the local way of life and cultural context, allowing students to feel a closer connection to the content and recognize the value of reading in everyday life.

#### **Development of modern reading innovations**

Informants also emphasized the need to develop digital reading media or apply modern technology in promoting reading. This could include e-books, reading applications, audio-assisted texts, or creative video content aimed at attracting students who lived in an era where technology played a significant role in daily life.

The study concluded that the development of reading innovation for students should be deeply rooted in the local wisdom that reflected the community's identity. It should also be supported systematically by all sectors, including the creation of appealing content, the implementation of diverse reading activities, and the application of technology to develop modern

learning tools. These efforts would contribute to fostering reading habits among students and sustainably enhancing their literacy and quality of life.

### **Develop a reading innovation for students drawing upon Tai Loei local wisdom.**

The results showed that the developed reading innovation for youth drawing upon Tai Loei local wisdom was a reading promotion book derived from the province's cultural identity, specifically inspired by Loei's official motto: "The city of sea of mountains, the coldest place in Siam, the land of flowers in three seasons, the dwelling of noble monks, and a place of cleanliness." The content was presented through rhymed verses, accompanied by English translations and illustrated with colorable drawings.

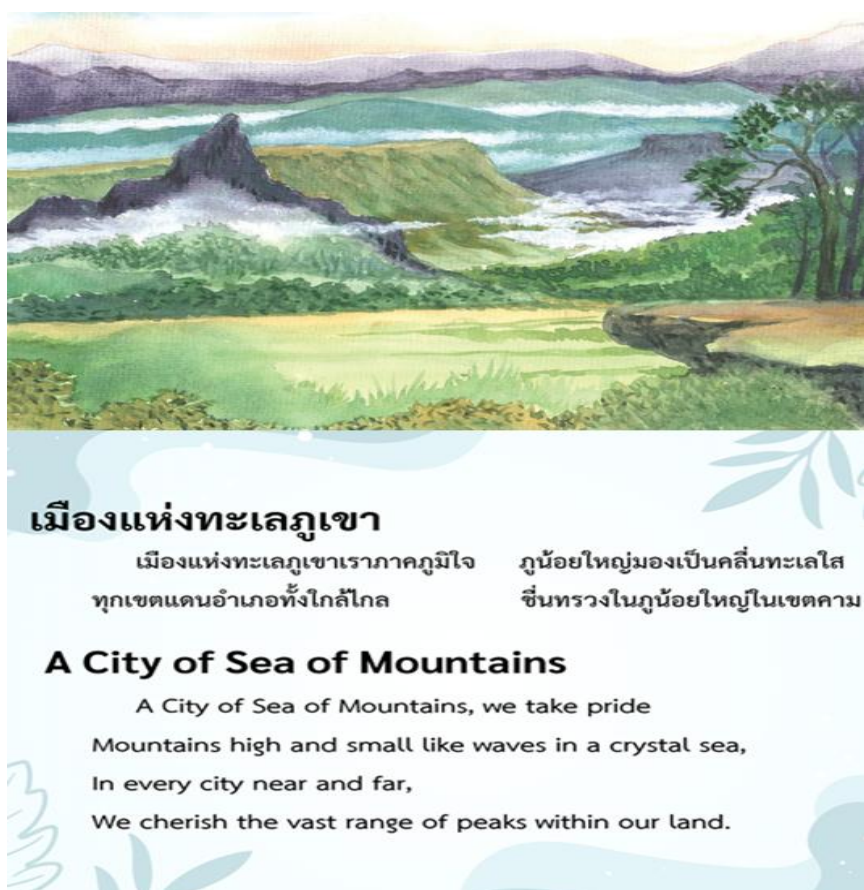


Figure 2 shows an example of a reading innovation for students drawing upon Tai Loei Local Wisdom.

### **Examine students' satisfaction with the reading innovation**

The results revealed that after the implementation of the reading innovation development model for students drawing upon Tai Loei local wisdom at Ban Kang Pla School, located in Mueang Subdistrict, Mueang District, Loei Province, the researcher evaluated the satisfaction of the target

groups from three educational service areas, namely: Loei Primary Educational Service Area Office 1 (PEAO Loei 1), Loei Primary Educational Service Area Office 2 (PEAO Loei 2), and Loei Primary Educational Service Area Office 3 (PEAO Loei 3)

A multi-stage random sampling technique was used to select schools of various sizes—small, medium, and large—resulting in a total of 9 schools. These students were considered appropriate participants because they resided in the local area and had prior experiences related to Tai Loei local wisdom.

The evaluation was conducted using a satisfaction questionnaire on the developed reading innovation model, and a total of 389 students participated in this assessment.

**Table 1** presents the overall level of students' satisfaction with the children's book.

Aspects	$\bar{X}$	S.D.	Meaning
Content characteristics	4.38	0.54	High
Language use	4.43	0.50	High
Illustrative design	4.48	0.55	High
Book format/design for children	4.45	0.47	High
Perceived value and benefits of Reading	4.49	0.48	High
<b>Total</b>	<b>4.45</b>	<b>0.43</b>	<b>High</b>

From Table 1, it was found that students' overall satisfaction with the children's book was at a high level ( $\bar{X} = 4.45$ ,  $SD = 0.43$ ). When considering each aspect, the highest Mean score was in the area of perceived value and benefits gained from reading the children's book ( $\bar{X} = 4.49$ ,  $SD = 0.48$ ), followed by the illustrative design (Mean = 4.48,  $SD = 0.55$ ). The aspect with the lowest Mean score was the content quality ( $\bar{X} = 4.38$ ,  $SD = 0.54$ ).

**Table 2** presents the level of students' satisfaction regarding the content characteristics.

Content Characteristics	$\bar{X}$	S.D.	Meaning
1. The content promotes reading skills.	4.41	0.75	High
2. The content is appropriate in length for the readers' age.	4.36	0.76	High
3. The content is easy to read and understand.	4.43	0.75	High
4. The content provides insights into Tai Loei local wisdom.	4.53	0.74	Highest
5. The content can be applied to daily life.	4.16	0.86	High
<b>Total</b>	<b>4.38</b>	<b>0.54</b>	<b>High</b>

According to Table 2, the students' overall satisfaction with the children's book in terms of content characteristics was at a high level ( $\bar{X} = 4.38$ ,  $SD = 0.54$ ). When considering each item, the highest Mean score was found in the item "The content provided insights into Tai Loei local wisdom" ( $\bar{X} = 4.53$ ,  $SD = 0.74$ ), followed by "The content was easy to read and understand" ( $\bar{X} = 4.43$ ,  $SD = 0.75$ ). The item with the lowest Mean score was "The content could be applied to daily life" (Mean = 4.16,  $SD = 0.86$ ).

**Table 3** presents the level of students' satisfaction regarding the language use.

Language Use	$\bar{X}$	S.D.	Meaning
1. The language is clear and easy to understand.	4.33	0.76	High
2. The language is appropriate and suitable for the reader's age.	4.48	0.76	High
3. The language is polite and free from vulgarity.	4.63	0.74	Highest
4. The language and illustrations are consistent with each other.	4.46	0.74	High
5. The language engages the reader and sparks interest to follow along.	4.26	0.80	High
<b>Total</b>	<b>4.43</b>	<b>0.50</b>	<b>High</b>

As shown in Table 3, students expressed a high level of satisfaction with the language use in the children's book ( $\bar{X} = 4.43$ ,  $SD = 0.50$ ). The highest Mean score was found in "The language used was polite and not vulgar" ( $\bar{X} = 4.63$ ,  $SD = 0.74$ ), followed by "The language used was appropriate and accurate for the target age group" ( $\bar{X} = 4.48$ ,  $SD = 0.76$ ). The lowest score was for "The language used was engaging and encouraged interest and follow-up" ( $\bar{X} = 4.26$ ,  $SD = 0.80$ ).

**Table 4** presents the level of students' satisfaction regarding the illustration design.

Illustration Design	$\bar{X}$	S.D.	Meaning
1. The illustrations are appropriate to the storyline.	4.55	0.76	Highest
2. The illustrations make the reading experience more interesting.	4.50	0.74	High
3. The illustrations are engaging and encourage readers to keep following the story.	4.34	0.81	High
4. The illustrations stimulate the imagination.	4.53	0.77	Highest
5. The illustrations are well-sized and suitable for the target age group.	4.50	0.76	High
<b>Total</b>	<b>4.48</b>	<b>0.55</b>	<b>High</b>

Table 4 indicated that students' overall satisfaction with the illustration design in the children's book was high ( $\bar{X} = 4.48$ ,  $SD = 0.55$ ). The item receiving the highest Mean score was "The illustrations were appropriate to the storyline" ( $\bar{X} = 4.55$ ,  $SD = 0.76$ ), followed by

“The illustrations encouraged imagination” ( $\bar{X} = 4.53$ ,  $SD = 0.77$ ). The item with the lowest score was “The illustrations were attractive and engaging” ( $\bar{X} = 4.34$ ,  $SD = 0.81$ ).

**Table 5** presents the level of students’ satisfaction regarding the book format.

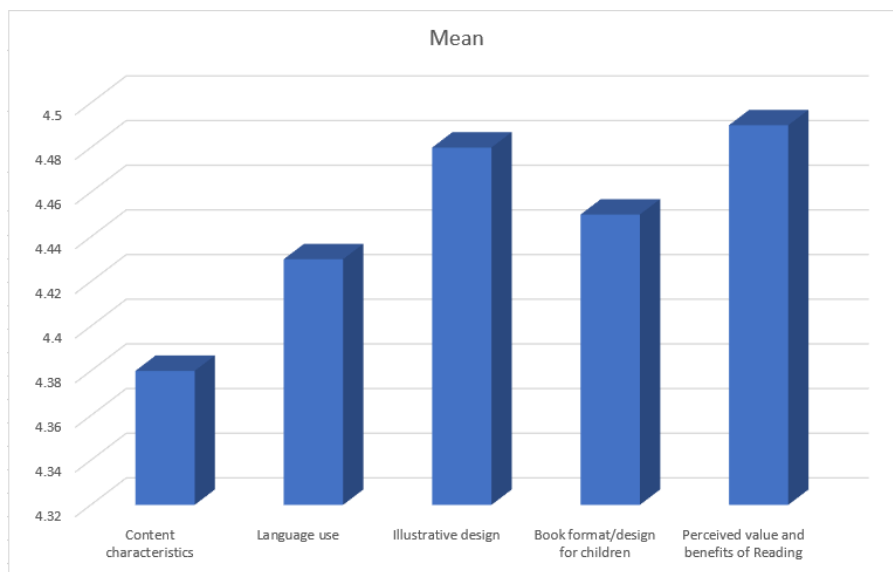
Book Format	$\bar{X}$	S.D.	Meaning
1. The format of the children's book has an appropriate size.	4.56	0.68	Highest
2. The format of the children's book is strong and durable.	4.28	0.80	High
3. The format of the children's book uses quality paper that is suitable.	4.56	0.65	Highest
4. The format of the children's book has an appropriate number of pages.	4.33	0.77	High
5. The format of the children's book features an interesting and engaging title.	4.51	0.73	Highest
<b>Total</b>	<b>4.45</b>	<b>0.47</b>	<b>High</b>

As presented in Table 5, the overall satisfaction of students with the book format was high ( $\bar{X} = 4.45$ ,  $SD = 0.47$ ). The item with the highest score was “The book used high-quality and appropriate paper” ( $\bar{X} = 4.56$ ,  $SD = 0.65$ ), followed by “The book had an appropriate size” ( $\bar{X} = 4.56$ ,  $SD = 0.68$ ). The lowest-rated item was “The book was durable and sturdy” ( $\bar{X} = 4.28$ ,  $SD = 0.80$ ).

**Table 6** presents the level of students’ satisfaction regarding the perceived value and benefits of reading.

Perceived Value and Benefits of Reading	$\bar{X}$	S.D.	Meaning
1. The book encourages the productive use of free time.	4.55	0.67	Highest
2. The book promotes the development of reading skills.	4.51	0.66	Highest
3. The book instills a sense of love and pride in one’s local community.	4.51	0.69	Highest
4. The book fosters understanding of life through Tai Loei local wisdom.	4.52	0.73	Highest
5. The book allows readers to apply the knowledge in their daily lives.	4.36	0.85	High
<b>Total</b>	<b>4.49</b>	<b>0.48</b>	<b>High</b>

Table 6 revealed that students’ overall satisfaction with the values and benefits gained from reading the children’s book was high ( $\bar{X} = 4.49$ ,  $SD = 0.48$ ). The highest-rated item was “Encouraged beneficial use of free time” ( $\bar{X} = 4.55$ ,  $SD = 0.67$ ), followed by “Promoted understanding of life through Tai Loei local wisdom” ( $\bar{X} = 4.52$ ,  $SD = 0.73$ ). The lowest-rated item was “Enabled application of knowledge in daily life” ( $\bar{X} = 4.36$ ,  $SD = 0.85$ ).



**Figure 3** shows the overall level of students' satisfaction with the children's book

## Discussions

This study investigated the development and effectiveness of a reading innovation grounded in Tai Loei local wisdom. The discussion below highlights key findings and interprets them in light of relevant literature, theory, and contextual insights.

Findings from Objective 1 revealed that students encountered various reading-related difficulties, including limited reading comprehension, low motivation, and insufficient access to reading materials that resonate with their social and cultural context. These challenges are likely influenced by the increasing prevalence of digital technology, which shifts students' attention toward screen-based content. This corresponds with Guthrie and Wigfield (2000), who emphasized that both intrinsic motivation and Meaningful materials are essential to foster reading engagement. Krashen (2004) also asserted that access to rich, relevant texts plays a critical role in shaping students' reading habits.

The rationale behind these findings lies in the disconnect between students' lived experiences and the conventional reading content available to them. When reading materials fail to reflect students' social world, they become disengaged. Furthermore, limited exposure to varied reading strategies and insufficient school-based interventions may have compounded comprehension difficulties. These findings echo concerns in previous Thai education reports (Rueangdam, 2021), which point to the lack of contextualized reading programs as a persistent barrier to literacy development.

Findings from Objective 2 indicated that local wisdom, especially the Tai Loei identity encapsulated in the provincial motto— “The city of sea of mountains, the coldest place in Siam, the land of flowers in three seasons, the dwelling of noble monks, and a place of cleanliness”— can be an effective foundation for creating engaging reading content. The participants suggested integrating such themes into children's literature, supplemented by multimedia that reflects local traditions and aesthetics. This aligns with Vygotsky's (1978) sociocultural theory, which asserts that cultural tools mediate learning. Heath (1983) similarly observed that children make sense of language through culturally situated narratives and routines.

In this context, “local wisdom” serves not only as content but as a pedagogical strategy. It fosters familiarity, cultural pride, and identity, which in turn contribute to reading motivation. The use of local idioms, settings, and values makes abstract reading tasks more tangible and Meaningful. Importantly, this stage highlights that reading innovation does not always require external models—culturally embedded content can be equally powerful in promoting literacy when aligned with students' sense of place and belonging.

Findings from Objective 3 showed that the innovation developed from the previous stages resulted in a children's picture book written in poetic form, enriched with local imagery and selectively infused with English vocabulary. This bilingual approach aimed to promote both cultural rootedness and global literacy. The innovation also featured illustrations and digital enhancements, such as interactive e-books and culturally themed reading applications. This aligns with Boonyakanjan (2014), who noted that children are more interested in stories that reflect nature, courage, kindness, and community—all themes embedded in local narratives.

Moreover, the integration of digital technology increased accessibility and appeal. This finding is supported by Prensky (2001), who observed that digital tools could enhance student motivation and learning outcomes. Gee (2003) also emphasized the potential of digital platforms in supporting critical thinking and narrative engagement. However, some students initially struggled with unfamiliar formats or English vocabulary. This challenge suggests the need for instructional scaffolding, especially for learners with limited English exposure. Despite this, the fusion of tradition and technology proved effective in bridging generational and cognitive gaps among learners.

Findings from Objective 4 demonstrated that the reading innovation significantly improved students' interest in reading and enhanced their reading skills, particularly in comprehension and critical thinking. These improvements are likely due to the innovation's alignment with students'



cultural context, prior knowledge, and preferred learning styles. The findings correspond with Kolb's (1984) experiential learning theory, which holds that learning is most effective when students actively participate and engage with real-world content. Similarly, Chaikhambung and Tuamsuk (2017) found that digital storytelling drawing upon ethnic narratives fosters engagement and comprehension in diverse educational settings.

Interestingly, the evaluation revealed no significant differences in satisfaction based on gender, grade level, or school size, echoing the findings of Guthrie et al. (2007). This may be attributed to the universal resonance of the Tai Loei cultural themes, which transcend demographic boundaries. However, it is important to note that the evaluation occurred over a short period. Long-term studies are necessary to assess the sustained impact on literacy behavior and identity development.

Although overall student responses were positive, challenges emerged in the initial adoption of digital tools, particularly in under-resourced schools with limited internet access. Moreover, while cultural familiarity enhanced engagement, students from outside the Tai Loei context may require contextual orientation to fully appreciate the content. Another limitation is that the study primarily used quantitative satisfaction data; qualitative data such as student reflections or interviews could offer deeper insight into the transformative potential of culturally grounded reading experiences.

## **Knowledge from Research**

The Reading Innovation Model illustrates a culturally grounded approach to literacy development, as exemplified in this study that integrated Tai Loei local wisdom into reading materials for under-resourced yet culturally rich educational settings. The model progresses through four stages—Inputs (local wisdom and student context), Processes (design and delivery of culturally responsive, student-centered content), Outputs (engagement, comprehension, and satisfaction), and Outcomes (long-term literacy development). This model underscores the effectiveness of integrating local culture, student voice, and multimedia design in advancing literacy.

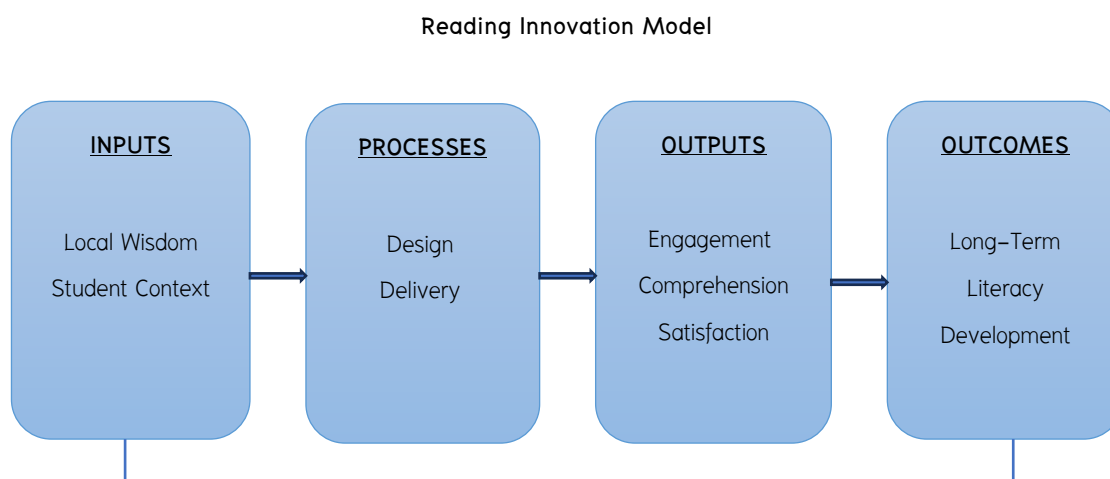


Figure 4 shows knowledge from research

## Conclusion

This study explored reading difficulties among Thai students and developed innovative reading materials based on Tai Loei local wisdom. Major challenges included lack of suitable resources, low motivation, and ineffective teaching methods. To address these, researchers created bilingual children's books inspired by Loei's provincial identity. These books integrated local culture with global literacy through Thai-English stories and digital features. The culturally grounded approach significantly improved students' reading comprehension and engagement. Learners reported high satisfaction with the materials. The innovation demonstrated how local wisdom can enhance modern literacy education. It also highlighted the importance of connecting traditional knowledge with current teaching strategies. The study emphasized the role of cultural identity in fostering reading motivation. Future reading policies should support bilingual, culturally relevant innovations to promote sustained literacy growth.

## Suggestions

### 1. Recommendations for Applying the Research Findings

The findings of this study may be applied at various levels.

For educational institutions, schools should incorporate reading materials drawing upon local wisdom into the curriculum to promote cultural literacy. It is also recommended that teacher training workshops be organized to guide educators in using culturally grounded materials and

integrating them with digital tools, such as interactive e-books and learning apps, to enhance student motivation and engagement.

For government and private sector organizations, policies should support the digital publication and nationwide dissemination of the Tai Loei bilingual book series. Public-private partnerships could be formed to fund initiatives like youth digital storytelling contests, teacher-led reading innovation labs, and regional reading festivals rooted in local culture.

For families and communities, community reading clubs and shared reading activities using materials that reflect local wisdom should be encouraged. Libraries and learning centers should be equipped with both physical and digital resources that reflect regional identity. Local storytellers and cultural practitioners may be invited to participate in reading events, fostering intergenerational knowledge transmission.

## 2. Recommendations for Future Research

Future research should evaluate the long-term effects of the innovation to determine whether improvements in reading motivation and comprehension are sustained over time. In addition, pre- and post-assessment tools should be employed to measure actual gains in reading skills and critical thinking, beyond self-reported satisfaction. Researchers are also encouraged to explore the scalability and adaptability of the innovation across diverse regions with distinct cultural contexts, including the potential for translating the materials into other languages or adapting them to different media formats. Furthermore, it is important to investigate the impact of family and community involvement in reinforcing reading behaviors among students through the use of culturally relevant innovations.

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