



The use of Genre-Based Instruction – Linguistic, Syntactic, and Schematic Knowledge (GBI-LiSSK) model to improve students’ reading comprehension

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Abstract

Reading comprehension is considered as the crucial skills of students in the learning areas using English as medium of instruction. Based on the 2022 overall report of school-based Phil-IRI pretest assessment, students’ competency levels in reading were found to be alarming. This study proposed an intervention module based on the GBI-LiSSK model to improve the reading competency of grade 10 learners identified at the frustration level in reading comprehension. To address the reading difficulties, the participants took part in a quasi-experimental intervention conducted during the third quarter using the GBI-LiSSK model-based material. Findings showed that out of 20 participants, 9 demonstrated improvements, moving from the Frustration level to the Instructional level. Five participants did not change in terms of reading level but showed increased scores, while six progressed to the independent level. Overall, the data indicated a trend of improvement among the participants. Additionally, reading speed levels also increased based on the pre-test values, although the gains were not sufficient to advance participants to a higher reading level. Despite noticeable improvements in two of the assessed dimensions, most of the participants remained at the Frustration level. The results highlight the potential of the GBI-LiSSK-based intervention model to enhance students’ reading comprehension skills, reduce their apprehension in understanding text passages, and improve their academic performance across various learning areas.

Keywords: *genre-based instruction, linguistic, syntactic, and schematic knowledge, reading comprehension*

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1. Introduction

Reading is considered as the most important skill in teaching and learning English. It has been perceived as the most needed skill in students' higher academic pursuit (Dera, 2025; Castillo-Martínez & Ramírez-Montoya, 2021; Sumipo et al., 2025). Knowing and understanding what is being read is the key to comprehension, and this comprehension will be based on the capability of decoding and identification of words. This is one of the skills which is crucial for any language course, especially to the students studying secondary education in public schools. Reading is particularly considered as a selection process depending on readers' expectations towards the content of a reading text. With background knowledge to the text, however, gives different impact to the readers' knowledge level. Readers with lower level of background knowledge may benefit more from the text with high cohesion in contrast to those with weak reading skills (Smith et al., 2021). Due to the complexity of reading process, it is necessary to sustain more focus on developing background knowledge, vocabulary, and comprehension monitoring, and knowledge to text structure to improve learner's reading comprehension (Elleman, 2019).

In this process, LiSSK or linguistics, syntactic, and schematic knowledge was utilized to raise genre awareness. Moreover, the exposure of genre-based instruction developed a better comprehension of different kinds of texts. Particularly, narrative texts made more text-based and knowledge-based inferences, and expository texts made more comments and asked more questions but made a higher number of invalid knowledge-based inferences; and low-comprehending readers generated a higher number of inaccurate elaborative and predictive inferences (Kraal et al., 2018, 2019; van Zeijts et al., 2025; Yoo, 2024; Härtig et al., Mar et al., Berman & Nir-Sagiv, 2007).

The results of the school-based PHIL-IRI pre-test assessment indicate that several Grade 10 students remain at the frustration level in reading comprehension. This finding suggests that these students struggle to understand grade-level texts independently and often require significant support to grasp the meaning of what they read. One plausible factor contributing to this outcome is the disruption caused by the COVID-19 pandemic, which significantly affected the traditional academic environment (Di Pietro, 2023; Csorba & Dabija, 2024). During this period, students had limited face-to-face interactions with teachers, reduced opportunities for guided reading, and less exposure to collaborative learning activities that promote comprehension skills (Le et al., 2022; Sing Yun, 2023). The shift to remote or blended

learning models may have further limited students' practice in critical reading strategies, which are essential for developing proficiency in comprehension. Consequently, the lack of consistent exposure to these skills likely hindered students' reading development, leaving some at the frustration level even as they progress to higher grade levels. This underscores the need for targeted interventions and structured reading programs that can help students recover lost learning and build stronger comprehension skills.

Based on one of the shared concerns from DO 14, S. 2018 – Policy Guidelines on the Administration of the Revised Philippine Informal Reading Inventory, the Phil-IRI data shall also serve as one of the bases in planning, designing/redesigning the reading instruction to improve the school's reading performance. Furthermore, the national assessment declared from the DepEd memo no.173, s. 2019 of Hamon Bawat Bata Bumabasa (3Bs Initiative), high school learners are still deficient in literacy skills both in languages and content areas, and the low performing learners were not able to comprehend Math and Science word problems that are written in English. Hence, the researcher attempted to develop the materials for intervention associated to GBI-LiSSK Model to improve students' level of performance in reading comprehension. Subsequent to the content of the latest Phil-IRI full package (2018) of Filipino and English which is applicable only to grade 7 learners.

The study examined the reading comprehension level of 20 Grade 10 learners in a national high school in the Philippines, and used an intervention based on the GBI-LiSSK model-based module to improve student's reading competency level. The result of this study may help enhance student's skills in reading comprehension and their performance in English, Science, and Mathematics. With this probable result, the school, then, can produce and develop equitable and quality education that promotes lifelong learning opportunities to all learners.

2. Literature Review

2.1 Linguistic Knowledge on Reading Instruction

Reading instruction primarily emphasize systematic phonics wherein the teaching of English reading must begin with the explicit instruction of letter (grapheme) to sound (phoneme) correspondences before moving toward meaning-based approaches such as whole language instruction (Bowers, 2020). Related studies further indicate that linguistic knowledge interacts with semantic transparency in word-meaning inference; specifically, morphemic and

grammatical knowledge significantly contributes to the inference of word meaning in transparent words when learners' short-term memory is taken into account (Chen et al., 2020; Kaivanpanah & Alavi, 2008; Yang et al., 2023; Oikawa et al., 2025; Bozic et al., 2025).

Moreover, word recognition is regarded as a multifaceted construct that involves various subskills essential for identifying a word through the linguistic information (phonological and morphological) encoded in its visual form (Li & Koda, 2022; van Viersen et al., 2025; Atouf & Issa, 2025). In addition, general linguistic knowledge has been demonstrated to be a moderate to strong predictor of reading comprehension (Brooks et al., 2023; Friesen & Frid, 2021; Rogde et al., 2019; Hackemann et al., 2022; van Wingerden et al., 2014).

2.2 Syntactic Knowledge on Reading Comprehension

Syntactic knowledge has been identified as a significant predictor of reading comprehension when controlling for age, gender, non-verbal IQ, word recognition, oral vocabulary, and morphological knowledge (Simpson et al., 2019). Its predictive capacity, however, appears to be moderated by proficiency level (Rodríguez-Ortiz et al., 2021; Wang et al., 2025; Cai, 2020; Suzuki & Kormos, 2024). Specifically, while syntactic knowledge contributes to comprehension, its effect is attenuated among highly proficient L2 readers, where lexical breadth emerges as the stronger predictor. In contrast, lexical breadth accounts for the greatest variance in L2 reading comprehension among learners at intermediate and lower proficiency levels (Taşçı & Turan, 2019).

Further evidence for the role of syntactic knowledge is provided by studies that have examined its construct validity and relationship to comprehension outcomes. Poulsen et al. (2022) investigated syntactic knowledge using two sentence-level measures, sentence comprehension and sentence repetition, and evaluated their convergent and discriminant validity in relation to reading comprehension. Results indicated that the syntax measures were more strongly correlated with each other than with tasks assessing working memory or vocabulary, suggesting that syntactic knowledge represents a construct at least partially distinct from these domains. Moreover, syntactic knowledge explained unique variance in reading comprehension beyond controls. While the syntax tasks were influenced by working memory, the observed correlations with comprehension could not be attributed primarily to memory demands, underscoring the unique contribution of syntactic knowledge to reading processes.

2.3 Genre-based Instruction on Reading Comprehension

For Brevik (2019), the effective reading comprehension instruction involves the use of L2 texts to develop critical literacy and enhance meta discourse awareness through scaffolding. Students who spend more than half their time engaged in reading comprehension instruction of narrative and expository texts benefit from guided strategy practice tailored to their needs, while also being encouraged to apply known reading comprehension strategies.

In the investigation of Kraal et al. (2018), the comprehension processes and strategy use of second-grade low- and high-comprehending readers when reading expository and narrative texts for comprehension. Both low- and high-comprehending readers exhibited similar patterns in text-processing strategies, the used of a range of comprehension techniques from literal repetition to elaborate knowledge-based inferences. However, there was one key difference emerged: in expository texts, low-comprehending readers produced a greater number of inaccurate elaborative and predictive inferences. This dichotomy led to a classification of readers into two groups: struggling paraphrasers, who construct a limited mental representation primarily reflecting the text's literal meaning, and struggling elaborators, who attempt to enhance their understanding by generating elaborative and predictive inferences.

As Elleman and Oslund (2019) examine the various theoretical models of comprehension, they highlight key components that serve as potential targets for instruction. They then emphasize the importance of collaboration among researchers, educators, and policymakers in finding solutions to enhance comprehension. This includes maintaining a strong focus on developing background knowledge, vocabulary, inference skills, and comprehension monitoring all throughout the learning process.

Filderman et al. (2021) describe the relative effects of various approaches to comprehension intervention for struggling readers in Grades 3 through 12 using meta-analysis. A meta regression model indicated a significant higher effect associated with researcher-developed measures, background knowledge instruction and strategy instruction, and significantly lower effects associated with instructional enhancements. Their findings highlight the importance of background knowledge instruction and strategy instruction to improve comprehension for struggling readers in upper elementary grades and beyond.

However, in the conduct of a critical review, Smith et al. (2021) determine the influence background knowledge on the reading comprehension of primary school-aged children. Then,

they found the difference on the range of effect on the background knowledge of stronger and weaker readers. Readers with limited background knowledge appear to benefit more from highly cohesive texts, while those with weaker reading skills can partially compensate for their difficulties when they possess a strong background knowledge.

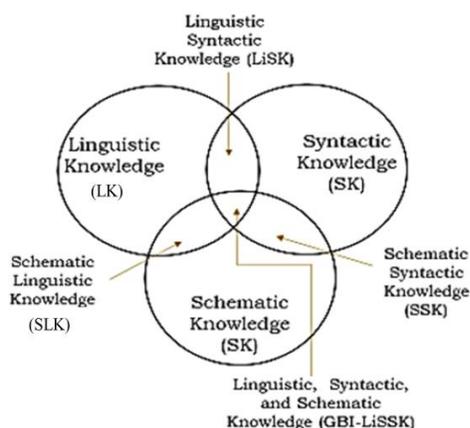
There is really a need to enhance the complexity of the reading and learning process. Based on reviews, the use of effective text genres, particularly narrative and expository texts, is essential for improving reading comprehension. Then, sustain the focus on developing background knowledge, vocabulary, comprehension monitoring, and understanding of text structures that is crucial for enhancing learners' reading comprehension skills.

3. Methodology

Text comprehension extends beyond the mere act of instructing students to read and interpret written material. Effective understanding requires the activation of background knowledge, particularly with regard to the lexical items employed in the text. Prior exposure to vocabulary through structured drills, coupled with pre-reading activities that scaffold semantic processing, facilitates learners' ability to construct meaning within context and enhances overall comprehension outcomes.

Figure 1

GBI-LiSSK model



A GBI-LiSSK is a Genre-Based Instruction associated to Linguistic, Syntactic, and Schematic Knowledge. In this study, linguistic knowledge focused phonological and morphological in visual form to help learners cope with their difficulties in word recognition

and vocabulary words; Syntactic knowledge, focused on sentence construction exercises to raise student's awareness on the rules and structure of English; and Schematic knowledge focused on the representation of narrative and expository text type knowing that the two text types are considered as effective genres to improve reading comprehension. These are integrated to students' background knowledge of common places, experiences that they have had, and so on provided in the content given in a text.

An intervention program based on the GBI-LiSSK model is used for the study, delivered through a series of modules and exercises over a period of three months.

This study used an experimental research design to purposively sampled students who were identified at the Frustration level based on the latest Phil-IRI pre-test results. The students underwent an intervention program that utilized the GBI-LiSK model-based module. The experiment was participated by twenty Grade 10 students of the following sections: 8 from section Jeremiah, 7 from Ephesians, 3 Colossians, and 2 from Acts handled by the researcher. The experiment was conducted in a classroom within the school premises. Sessions were conducted every Saturday for two hours. Then, additional one-hour session was held twice on weekdays after class for the participants who were not able attend on Saturdays.

Data were gathered through the assessment result using the Phil-IRI with the materials provided as instrument for the both pre-test and post-test. The data was analyzed based on the computation, analysis, and interpretation guidelines provided in the Phil-IRI full package manual 2018.

Possible confounding variables were accounted for, and informed consent was sought from the parents prior to the intervention. The safety and welfare of the participants, as well as the confidentiality and data protection were also ensured. Additionally, the conduct of the study and the use of school facilities were duly approved by the school principal.

4. Findings and Discussion

Pre-test data shows that the word reading, reading comprehension, and reading speed registered levels of Frustration. This indicates that most of the participants of the study find it difficult to read sufficiently. The participants recognize words but are unable to articulate them well. Their rate of reading is below par with their peers.

Despite having previous learning experiences, most of the participants may have issues regarding the retention of reading skills, and a lack of a nurturing environment to sustain any

previous learning may further degrade any learning thus far. Socioeconomic factors have been known to affect the reading skills of students. However, Brevik (2019) stated that in classroom setting, teachers had to engage their students in reading comprehension instruction using narrative and expository text, offer guide strategy practices based on student's needs, and encourage the daily use of comprehension strategies instead of explicitly teaching the new ones. Systemic phonics, then, highlights the need to explore alternative approaches to reading instruction (Bowers, 2020).

Figure 1

Phil-IRI pre-test Data

Participants	Word Reading		Comprehension		Reading Speed	
	Score	Level	Score	Level	Score	Level
M1	84	Frustration	14	Frustration	59	Frustration
M2	82	Frustration	43	Frustration	61	Frustration
M3	85	Frustration	29	Frustration	62	Frustration
M4	58	Frustration	14	Frustration	40	Frustration
M5	83	Frustration	29	Frustration	68	Frustration
M6	81	Frustration	43	Frustration	87	Frustration
M7	81	Frustration	43	Frustration	82	Frustration
M8	84	Frustration	43	Frustration	66	Frustration
M9	86	Frustration	43	Frustration	40	Frustration
M10	80	Frustration	29	Frustration	53	Frustration
M11	88	Frustration	43	Frustration	51	Frustration
M12	87	Frustration	29	Frustration	62	Frustration
M13	85	Frustration	29	Frustration	63	Frustration
M14	84	Frustration	29	Frustration	60	Frustration
F1	83	Frustration	57	Frustration	65	Frustration
F2	85	Frustration	14	Frustration	63	Frustration
F3	84	Frustration	29	Frustration	61	Frustration
F4	81	Frustration	14	Frustration	62	Frustration
F5	82	Frustration	43	Frustration	63	Frustration
F6	84	Frustration	29	Frustration	95	Frustration

Moreover, the higher levels of background knowledge have a range of effect to the nature of the text and the presence of reader misconception about the text. Reader with lower background benefits more from text with high cohesion, while weaker readers were able to

compensate somewhat for their relatively weak reading skills in the context of a high degree of background knowledge (Smith et al., 2021).

Post-test data shows that, after intervention, the word reading, reading comprehension, and reading speed registered between Frustration and Instructional. Several participants improved to a level of Independent. This implies that, when comparing individual scores of pre-test and posttest values, most of the students have slightly improved during the 8-week intervention, with several students reaching levels of independent. Furthermore, in terms of word reading, 14 out of the 20 participants reached a level of Instructional and 1 of them reached a level of independent. Though the level of 5 participants did not change, but their score is improving. This indicates that the intervention can elevate the participants' ability to read a word correctly under supervision, though a handful may still find it difficult to properly read a word.

Figure 2

Phil-IRI Post-test Data

Participants	Word Reading		Comprehension		Reading Speed	
	Score	Level	Score	Level	Score	Level
M1	89	Frustration	86	Independent	65	Frustration
M2	91	Instructional	71	Instructional	62	Frustration
M3	93	Instructional	86	Independent	67	Frustration
M4	85	Frustration	71	Instructional	42	Frustration
M5	91	Instructional	71	Instructional	68	Frustration
M6	92	Instructional	71	Instructional	85	Frustration
M7	93	Instructional	100	Independent	91	Frustration
M8	92	Instructional	71	Instructional	69	Frustration
M9	96	Instructional	86	Independent	48	Frustration
M10	90	Instructional	57	Frustration	61	Frustration
M11	97	Independent	71	Instructional	52	Frustration
M12	94	Instructional	71	Instructional	73	Frustration
M13	88	Frustration	57	Frustration	65	Frustration
M14	89	Frustration	57	Frustration	66	Frustration
F1	92	Instructional	100	Independent	73	Frustration
F2	95	Instructional	71	Instructional	63	Frustration
F3	88	Frustration	57	Frustration	66	Frustration
F4	91	Instructional	57	Frustration	65	Frustration
F5	94	Instructional	86	Independent	99	Frustration
F6	96	Instructional	71	Instructional	128	Frustration

For reading comprehension, the data shows mixed results. 9 of the participants evidently improved upon their previous level from Frustration to Instructional, 5 of them were

not able to show improvement on level but the score, though 6 participants improved to Independent levels. Most of the data still leans towards improvement for the participants. This indicates that the intervention program can improve the participants' reading comprehension but may not be as effective for others. This may imply that other factors could hamper the effectiveness of the intervention, such as aptitude, socioeconomic factors, personal, among others. On the other hand, reading interest, reading habits, reading motivation, and reading self-efficacy are significantly correlated with the performance of the students (Zhang et al., 2019).

Reading speed levels indicate an improvement based on the pre-test values but were not enough to classify to another level. Though there were considerable gains, majority of the participants still garnered a level of Frustration despite the improvements on the two other dimensions. The result of the study implies that the intervention is slightly ineffective in improving reading speed levels.

5. Conclusion

The use of the GBI-LiSSK model-based intervention enhanced reading comprehension skills for most participants. The overall results of the study indicate that several participants improved from the Frustration level to the Instructional level, while a few reached the Independent level. Most of the data suggest a general trend of improvement among the participants. Additionally, reading speed showed gains based on pre-test values, although these improvements were not sufficient to classify participants into a higher level.

The reading intervention using the GBI-LiSSK model significantly improved students' reading comprehension skills. The findings show that most participants advanced from the Frustration level to the Instructional level, with some reaching the Independent level. Furthermore, the GBI-LiSSK model-based intervention may also enhance student performance in other learning areas that use English as the medium of instruction. To maximize its benefits, it is recommended to provide a printed module associated with the GBI-LiSSK model for use by students and parents/guardians both at home and during school sessions, conduct training for English teachers to integrate the GBI-LiSSK model into their teaching methods, and pursue future studies on strategies to improve students' reading speed.

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Institutional Review Board Statement

This study was conducted with clearances from Sampaguita Village National High School and consent from the parents of the students.

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