

Original Article

A Linguistic Analysis of Oral Reading Miscues and Difficulties Towards Designing an Innovative Reading Program

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Abstract. Oral reading miscues reveal how learners coordinate sounds, printed forms, and meaning while reading. However, the linguistic processes underlying these miscues remain insufficiently examined among Filipino adolescent second-language readers. This sequential mixed-methods descriptive study with qualitative priority investigated the oral reading miscues and difficulties of Grade 7 struggling readers in a public secondary school. Of the 144 learners who met the eligibility criteria based on their Philippine Informal Reading Inventory Group Screening Test scores, 120 completed an audio-recorded oral reading assessment using a Grade 5 Phil-IRI passage. Frequencies, percentages, and rankings identified the three most prevalent miscue types and the five most frequently miscued words within each type. These words were examined according to their phonological, orthographic, and lexical features. Ten learners with the highest number of miscues participated in one-on-one interviews, and their responses were analyzed thematically. Integration occurred when the assessment results guided the selection of miscues, words, and interview participants, while the linguistic and interview findings were combined during interpretation. A total of 754 miscue instances were recorded. Mispronunciation was the most frequent at 51.33%, followed by repetition at 26.92% and substitution at 21.75%. Mispronunciations were associated with cross-linguistic phonological differences, complex consonant clusters, and weak phoneme-grapheme correspondence. Repetitions reflected irregular spelling patterns, incomplete orthographic mapping, and attempts at self-correction, while substitutions were linked to limited vocabulary, weak morphological awareness, and reliance on familiar lexical forms. Interviews further revealed difficulties in letter-sound recognition, word familiarity, and exposure to English vocabulary. The findings support Goodman's view of reading as a meaning-making process and demonstrate how phonological, orthographic, and lexical constraints interact in producing oral reading miscues. The integrated findings informed a localized reading program designed to strengthen decoding accuracy, orthographic mapping, vocabulary knowledge, and oral reading confidence.

Keywords: *Linguistic analysis; Oral reading miscues; Phonological and orthographic processing; Reading difficulties; Reading intervention program.*

Reading aloud is an important part of literacy development because it helps teachers see how students decode text, process language, and understand meaning. Through oral reading, teachers can observe decoding, fluency, and comprehension, which are key skills for reading success. However, many students struggle with oral reading, and these difficulties can affect their overall academic performance. One way to better understand these challenges is by analyzing oral reading miscues. These miscues are not just errors but show how learners use graphophonemic, syntactic, and semantic cues as they try to make sense of written text (Ali & Ghnee, 2023; Yeager & Sandra, 2018).

Reading fluency is closely linked to comprehension. Students who lack fluency often struggle to understand what they read (Rasinski, 2014). Several recent studies have examined reading performance and emphasized the importance of oral reading behavior in understanding how learners process language (Canoy & Loquias, 2022; Casaljay & Malabarbas, 2022). These studies show that fluency acts as a bridge between word recognition and comprehension, allowing readers to understand texts more effectively (Rasinski, 2014, as cited in Aldhanhani & Abu-Ayyash, 2020). However, many of these studies focus more on general reading outcomes and strategies rather than on the detailed linguistic features that shape reading errors.

Although previous studies have identified common oral reading miscues and examined their relationship with fluency and comprehension, an important conceptual limitation remains (Aldhanhani & Abu-Ayyash, 2020). Miscues are often treated primarily as observable errors — such as mispronunciation, repetition, and substitution — without sufficiently explaining how particular linguistic processing difficulties produce these distinct error patterns. Moreover, phonological, orthographic, and lexical factors are frequently examined separately, limiting understanding of how they interact during oral reading. As a result, existing research provides limited explanation of why a learner mispronounces one word, repeats another, or substitutes a printed word with a more familiar form (Shen et al., 2020).

Goodman's (1967) Psycholinguistic Theory provides an important foundation for understanding reading as an active meaning-making process in which readers draw on graphophonemic, syntactic, semantic, and prior-knowledge cues. However, although the theory explains readers' reliance on available linguistic cues and expectations, it does not by itself fully specify the word-level mechanisms involved in particular oral reading miscues. A more detailed explanation requires attention to phonological processing, which concerns the perception and production of speech sounds; orthographic processing, which involves the mapping of letters and spelling patterns onto sounds; and lexical processing, which supports the recognition, retrieval, and understanding of words.

Accordingly, the theory-driven contribution of this study lies in extending the application of Goodman's Psycholinguistic Theory through an integrated analysis of phonological, orthographic, and lexical processing. Rather than treating oral reading miscues merely as observable errors, this study aimed to identify the most prevalent oral reading miscues among participating Grade 7 struggling readers, analyze the phonological, orthographic, and lexical features of the most frequently miscued words, explore the reading difficulties reported by learners, and use the findings as the basis for a localized reading program. The study provides a contextually grounded explanation of how word-level linguistic constraints are reflected in oral reading miscues among Filipino second-language readers.

The research addresses four key objectives:

- (1) Identify the common oral reading miscues committed by Grade 7 students.
- (2) Analyze the linguistic features of the students' oral reading miscues in terms of:
 - (a) Phonology
 - (b) Orthography
 - (c) Lexicon
- (3) Determine the specific difficulties experienced by the students during the oral reading assessment.
- (4) Develop an innovative reading program based on the study's findings to address the identified miscues and linguistic difficulties.

Methodology

Research Design

The study employed a sequential mixed-methods descriptive design with qualitative priority. This design was appropriate because the study combined descriptive quantitative assessment data with linguistic and qualitative interview analyses to provide a comprehensive account of the oral reading miscues and difficulties of participating Grade 7 struggling readers. The quantitative component established the prevalence and distribution of the miscues, while the linguistic and interview components provided the principal explanation and interpretation of the observed patterns. This follows the principle of mixed-methods research in which quantitative and qualitative forms of evidence are intentionally connected to develop a fuller understanding of a research problem (Creswell & Creswell, 2023).

In the first phase, oral-reading data from 120 learners were summarized using frequencies, percentages, and rankings to determine the prevalence and distribution of reading miscues. These quantitative results served as a descriptive foundation for identifying dominant patterns and selecting areas requiring deeper examination. In the second phase, the miscues were analyzed linguistically, and interviews with 10 participants were conducted to explore the factors and experiences underlying the observed patterns. Integration occurred during participant and data selection and during the final interpretation of the findings. The quantitative results guided the selection of the miscue types and words for linguistic analysis and the learners for the interviews. Qualitative analysis remained the dominant component because the study primarily sought to explain the linguistic characteristics and possible underlying difficulties associated with the recorded miscues. The numerical results served a descriptive and connecting function; they were not used to test hypotheses or make statistical generalizations beyond the participating learners.

Research Participants

The study used purposive sampling to select Grade 7 struggling readers from a public secondary school during School Year 2023–2024. The participants were initially screened using the Phil-IRI Group Screening Test. Learners who passed the screening test were excluded before the eligible pool was established. Of the 144 learners who met the inclusion criteria, 120 completed the oral reading assessment, representing 83.3% of the eligible pool. The remaining eligible learners did not participate because they transferred schools, dropped out, or declined participation. Purposive sampling was appropriate because it enabled the selection of information-rich participants who could provide relevant evidence on oral reading miscues and difficulties (Palinkas et al., 2015). An a priori power analysis was not applied because the study did not test hypotheses or estimate population parameters; instead, sample adequacy was supported by the high coverage of the clearly bounded eligible population. Accordingly, the findings were interpreted within the participating school context and were not intended for statistical generalization beyond the study sample. From the 120 participants, 10 learners with the highest number of miscues, corresponding to the lowest oral reading performance, were selected for one-on-one interviews because their responses were expected to provide detailed insights into the most pronounced reading difficulties. This interview sample was considered appropriate for focused qualitative inquiry and allowed the researcher to obtain sufficiently detailed responses regarding participants' reading difficulties (Rusu Mocănașu, 2020).

Research Instrument

This study used the standardized miscue analysis tool from the Philippine Informal Reading Inventory (Phil-IRI) Manual as its primary data-gathering instrument. The Phil-IRI is a recognized and contextualized instrument for assessing oral reading performance among learners in Philippine public schools. It measures students' reading fluency and comprehension by considering speed and accuracy, while also helping teachers identify specific reading difficulties (Abril et al., 2022). The Phil-IRI Graded Passages allow teachers to observe reading behaviors such as words read per minute, cues used in word recognition, reading manner, and comprehension. These results guide teachers in planning appropriate reading interventions. The instrument had two parts. The first was the English Grade 5 reading passage (Set A), chosen because it is two levels below the participants' grade level, based on their Phil-IRI Group Screening Test (GST) scores. The second part was a miscue analysis table used to record the types and frequency of errors during oral reading. The assessment was conducted by the researcher with two intercoders who evaluated the miscues using the Phil-IRI tool. In addition, one-on-one post-assessment interviews were conducted using a structured guide to explore students' reading difficulties and explain their miscues through linguistic analysis. The combination of oral reading assessment and interviews provided sufficient and

meaningful data about students' reading errors and their underlying causes. The interview guide was evaluated for content validity using Lawshe's (1975) Content Validity Ratio (CVR) method. Eight experts with advanced degrees in English assessed whether each item was essential to the instrument. The CVR calculated for each item was compared with Lawshe's critical value of 0.75 for a panel of eight experts. Three items obtained a CVR of 1.00, while two items obtained a CVR of 0.75; thus, all five items met the required threshold and were retained. The instrument obtained an overall Content Validity Index (CVI) of 0.90, exceeding the acceptable standard of 0.80 and demonstrating adequate content validity for data collection.

Data Gathering Procedure

The study followed a structured data-gathering procedure comprising several phases. In Phase 1, the researcher first obtained permission from the Division Office and the school principal, including details on participants, criteria, and procedures. Parental informed consent was secured during the Homeroom PTA meeting held on Card Day, where the purpose of the study, selection criteria, and procedures were explained, along with the presence of intercoders and assurance of confidentiality. Parents were also informed that non-participation or withdrawal would not affect their child's grades. Student assent was likewise obtained after the National Mathematics Program (NMP) period through an orientation, during which the Informed Consent Form was discussed, and all questions were addressed. In addition, permission was secured to access Phil-IRI passages and Grade 7 GST results (2023–2024) to identify eligible participants. Parental informed consent and student assent were reaffirmed before the interviews. In Phase 2, the oral reading assessment was conducted. A 15-minute reading activity was held in the library to ensure a quiet and controlled setting. Participants were randomly called, assigned numbers for confidentiality, and asked to read a Grade 5 passage from the Phil-IRI set, which is two levels below their assessed level (Abril et al., 2022). Reading sessions were audio-recorded, and light conversation was used to reduce anxiety. The researcher and two trained intercoders recorded and coded miscues using the Phil-IRI framework to ensure reliability. The miscue types included mispronunciation, substitution, insertion, omission, transposition, repetition, and hesitation, while self-correction was not counted as an error, per the Phil-IRI Manual (Abril et al., 2022).

In Phase 3, all recorded miscues were tabulated and ranked to determine the most frequent errors and patterns among students. This helped identify common reading difficulties and recurring miscue types. In Phase 4, to gain deeper insights into students' reading challenges, one-on-one interviews were conducted with selected participants who had the highest number of miscues, corresponding to the lowest oral reading performance. Parental informed consent was again secured, and interview questions were shared during the PTA meeting. Each interview lasted about 10 minutes and was conducted after the NMP period in the library. Although shorter interviews were used, this was considered sufficient since focused responses and data saturation were achieved, consistent with Fusch and Ness (2015) and Saunders et al. (2018). The interviews explored students' oral reading difficulties and possible causes of errors such as mispronunciation, omission, insertion, and word reversal. Questions were asked in Hiligaynon, and responses were given in the language preferred by participants. All sessions were audio-recorded with consent, and participants were assured that their grades would not be affected. Finally, all data were coded for confidentiality, and documents were securely stored in the school office.

Data Analysis Procedure

Data analysis followed the sequential mixed-methods design of the study. For Research Question 1, descriptive statistics: frequency counts, percentages, and ranks were used to summarize the oral reading miscues recorded among the 120 participants. The percentage of each miscue type was calculated and ranked to identify the three most prevalent miscues. These quantitative results served as the basis for selecting the miscue types and words for further linguistic analysis and identifying the participants for the qualitative interviews. For Research Question 2, a linguistic feature analysis was conducted on the most prevalent miscues to determine the orthographic, phonological, and lexical factors influencing them. The three most prevalent miscue types were identified, after which the five most frequently miscued words within each type were subjected to phonological, orthographic, and lexical analysis. The linguistic analysis focused on mispronunciation, repetition, and substitution because these recorded the highest frequencies and most clearly represented the participants' dominant oral reading difficulties. Phonological analysis in this study employed Distinctive Feature Analysis (Gussenhoven & Jacobs, 2017). Orthographic analysis focused on spelling, particularly phonemic orthography (Zarić et al., 2021), and on emphasis, such as bold and italics, while excluding word boundaries and punctuation, as they were not applicable at the lexical level. Lexical analysis examined word frequency using the Dolch Sight Words, word length based on phonemes and graphemes, and semantic complexity, which refers to a word's possible meanings (McElvenny,

2021; Nguyen et al., 2020).

To assess the consistency of the linguistic analysis, two independent intercoders with master's degrees in English examined 30% of the dataset (O'Connor & Joffe, 2020). The complete dataset comprised 45 miscued words: 15 under mispronunciation, 15 under repetition, and 15 under substitution. Thirty percent of 45 is 13.5; therefore, the subsample was rounded upward to 14 randomly selected miscued words. The same 14 words served as the units of analysis and were independently examined by both intercoders according to their phonological, orthographic, and lexical features. The independent judgments were subsequently compared, and percentage agreement was calculated by dividing the number of agreements by the total number of coding comparisons and multiplying the quotient by 100 (Cofie et al., 2022). The independent analyses yielded 93% observed intercoder agreement, indicating a very high level of consistency between the intercoders' judgments regarding the phonological, orthographic, and lexical features of the selected miscued words. The result represents as observed agreement rather than as a chance-corrected reliability coefficient. The complete agreement matrix and computation are presented in Appendix O.

For Research Question 3, thematic analysis was used to analyze interview responses and feedback gathered through one-on-one interviews. The analysis followed Braun and Clarke's (2022) six-step thematic analysis framework, which includes familiarization, coding, theme development, theme refinement, pattern identification, and report writing, ensuring a systematic and rigorous approach to the qualitative data analysis. Integration occurred during interpretation. The descriptive results established the prevalence and distribution of the miscues, while the linguistic and thematic findings explained their possible underlying features and contexts. Greater interpretive emphasis was placed on the linguistic and interview evidence, consistent with the study's qualitative priority. Finally, the integrated findings informed the development of the innovative reading program for Research Question 4.

Ethical Considerations

This study strictly followed the ethical standards set by the School Research Ethics Committee. The research protocol underwent review and approval to ensure that all procedures protected participants' rights, dignity, and welfare. Ethical Clearance was secured, confirming that the study complied with ethical research guidelines and supporting the credibility of its findings. Before data collection, written informed consent was obtained from the participants' parents or guardians during the Homeroom PTA meeting. Student assent was subsequently obtained through an orientation in which the study's purpose, procedures, possible risks, and voluntary nature were explained. To ensure understanding, both the informed consent and assent forms were translated into Hiligaynon. Participants were assured of anonymity and confidentiality, with numerical codes used instead of names and all data used only for academic purposes. In line with the Data Privacy Act, all information was securely stored with password protection and accessible only to the researcher. The data will be permanently deleted one year after the study is completed. Participation was voluntary, and students and parents were informed that they could withdraw at any time without any academic or personal consequences. The researcher also declared no conflict of interest, as the study was conducted purely for instructional and learner development purposes, without any monetary or academic incentives for participants. Finally, the study's results were shared with the School Principal and the School Division Office and may also be presented at conferences and in publications. The developed Innovative Reading Program will be implemented and presented during the School Innovation Showdown. With approval, key findings will also be shared with parents and learners during the General PTA Meeting.

Results and Discussion

Common Oral Reading Miscues Produced by Grade 7 Students

Top 3 Oral Reading Miscues

Table 1 presents the top three (3) oral reading miscues produced by the participating Grade 7 struggling readers: mispronunciation, repetition, and substitution.

Table 1. Oral Reading Assessment Result - Instances of Miscues			
Types of Miscues	F	%	Rank
Mispronunciation	387	51.33	1
Repetition	203	26.92	2
Substitution	164	21.75	3
Total	754	100.00	

This finding is consistent with the results of previous studies by Canoy and Loquias (2022) and Maramag (2022), which likewise identified mispronunciation as the most dominant reading miscue influencing students' oral reading performance. Of the 103 words in the passage, 45 were miscued by at least one participant. Across the 120 participants, a total of 754 miscue instances were recorded. Mispronunciation accounted for the largest proportion at 51.33% (n = 387), followed by repetition at 26.92% (n = 203) and substitution at 21.75% (n = 164).

Most Frequently Mispronounced Words

Table 2 shows the words students most frequently mispronounced: waddled, asked, smiled, buzzing, and Mr. Clear patterns emerged in how these words were rendered during the oral reading task. For instance, waddled was often read as "wadled," asked as either "aks" or "askid," smiled as "smayled," buzzing as "bozing," and Mr. as "Mer." These variations highlight specific phonological difficulties the students experienced throughout the assessment.

Table 2. Top Five Mispronounced Words

Types of Miscues	F	%	Rank
Waddled	76	34.39	1
Asked	60	27.15	2
smiled	32	14.48	3
Buzzing	30	13.57	4
Mr.	23	10.41	5
Total	221	100.00	

During the oral reading assessment, many participants attempted to pronounce words by matching each syllable to the vowel or consonant-vowel (CV) pattern most familiar to them in their native language. This behavior closely aligns with the findings of Leaño et al. (2019) and Dewi et al. (2024), who reported that learners with limited knowledge of English phonology and weak phoneme-grapheme mapping often reconstruct syllables using the nearest vowel or a CV combination from their first language. Such substitutions frequently lead to pronunciation errors. This result suggests that the students' pronunciation in the target language is strongly shaped by how similar words or sounds function in their L1. A similar insight was emphasized by Dyani et al. (2025), who explained that learners tend to produce sounds that align more closely with their native phonological system, showing noticeable L1 interference in their pronunciation.

Most Frequently Repeated Words

Table 3 shows that the words most frequently repeated during reading were Mr., waddled, asked, smiled, and came.

Table 3. Top Five Repeated Words

Types of Miscues	F	%	Rank
Mr.	30	28.30	1
waddled	25	23.58	2
asked	22	20.75	3
smiled	17	16.04	4
came	12	11.32	5
Total	106	100.00	

As seen in the oral reading assessment, the participants demonstrated weak decoding skills, making it difficult for them to translate written symbols into their corresponding sounds and meanings with fluency and accuracy. This inefficient decoding led to repeated attempts as students tried to self-correct or confirm unfamiliar words. The same pattern was observed in the study by Maramag (2022), in which participants attempted to decode individual words by rereading them, a behavior that reflects their still-developing word-recognition skills. Similar to the present findings, these readers tended to read either too quickly or too slowly and demonstrated reduced confidence while reading aloud. This study also showed that the words mispronounced by participants were often the same ones they repeated during the oral reading task.

Most Frequently Substituted Words

As shown in Table 4, the most frequently substituted words were came, swam, Mr., smiled, and then. For instance, came was read as "come," swam as "swim," Mr. as "em-ar," smiled as "smelled," and then as "the." In addition

to the influence of learners’ first language, these substitutions suggest that students replaced unfamiliar or less frequent words with more familiar forms, indicating reliance on their existing lexical knowledge when decoding unfamiliar items.

Table 4. Top Five Substituted Words

Types of Miscues	F	%	Rank
came	30	30.61	1
swam	25	25.51	2
Mr.	15	15.31	3.5
smiled	15	15.31	3.5
then	13	13.27	5
Total	98	100.00	

This finding is consistent with that of Dewi et al. (2024), who reported that students often replace English words containing phonemes not present in their native language with similar sounds in their L1. Furthermore, the participants demonstrated low familiarity with abbreviations and past-tense verb forms. Recent research has shown that insufficient knowledge of past-tense forms, especially irregular verbs, frequently leads to substitution errors in both oral and written tasks. When learners encounter unfamiliar past-tense forms, they often revert to the base form of the verb or incorrectly apply regular conjugation patterns (Fundano & Fortes, 2025; Reig et al., 2024).

Linguistic Features in Oral Reading Miscues of Grade 7 Students

Phonological Analysis of Mispronounced Words

Table 5 reflects the phonological analysis of the words waddled, asked, smiled, buzzing, and Mr. This indicates that most mispronunciations were closely tied to how students produced or simplified sounds during oral reading. For example, in *waddled*, the omission of the /d/ reflects difficulty in maintaining the manner feature of the stop consonant, leading to simplification of the double consonant. The word asked was frequently read as *aks*, with the /s/ and /k/ sounds reversed – an error related to place of articulation and the sequencing of consonant clusters, which often challenges developing readers. Similarly, *smayled* for smiled demonstrates confusion in the vowel space, with a shift from /aɪ/ to /eɪ/, indicating difficulty distinguishing similar long-vowel sounds. In the case of *boozing* instead of *buzzing*, suggest a vowel-quality shift and vowel height, altering the intended sound pattern. Finally, reading Mr. as *mer* shows vowel reduction and omission of the final consonant, reflecting limited control over major class and laryngeal features that distinguish voiced from voiceless sounds.

Overall, these mispronunciations indicate that participants’ errors were systematic rather than random, reflecting how they processed key phonological features – voicing, manner, place, and vowel quality – during oral reading. These features shaped how words were articulated and perceived, showing that developing readers often rely on approximate sound patterns rather than precise phonological representations (Ehri, 2020). Therefore, when a participant mispronounces a word, such as *aks* for asked or *boozing* for buzzing, it is likely influenced by the phonological constraints of their native language, as certain sound patterns allowed in one language may be restricted in another. Most mispronunciations were linked to participants’ phonetic reading approach, in which words were pronounced according to how they sounded. This observation supports Goodman’s Psycholinguistic Theory, which posits that a reader’s existing knowledge and schema in their first language influence comprehension and reading performance in a second language.

Table 5. Phonological Analysis of Most Prevalent Mispronounced Words

Standard Pronunciation	Actual Pronunciation	Major Class Features	Laryngeal Features	Manner Features	Place Features	Vowel Space
waddled [wæ.dəld]	wadled [wad.lid]	Syllabic nucleus is a schwa, which may present difficulty for learners whose first language has limited schwa usage; final sound is a complex cluster / dld /.	Final sound is voiced and unaspirated	Final syllable cluster is a combination of plosives /d/ and liquid /l/	Final sounds are alveolars	Word contains a low-front vowel /æ/
asked [æskt]	aks [æks]	Syllabic nucleus is the lax vowel /æ/; the word contains a	Only /æ/ is voiced. All consonants (/s/,	A combination of vowel, fricative,	Final sounds are a complex combination of	Word contains the vowel /æ/

		complex final consonant cluster /skt/	/k/, /t/ are voiceless.	and stop sounds. Specifically, it has: One vowel (/æ/), a sibilant, /s/, and two stops /k/ and /t/	sibilant and plosives	found in the initial position
smiled [smaɪld]	smayled [smeɪld]	Syllabic nucleus is the diphthong /aɪ/. It separates the onset cluster /sm/ from the coda /ld/.	Has voiced sonorants and voiced vowel sounds, with voiceless /s/ unaspirated and no aspiration on the voiced final /d/.	A mix of sibilant /s/, nasal /m/, diphthong vowel /aɪ/, liquid /l/, and voiced stop /d/.	Includes a sibilant /s/ in the initial position, a bilabial /m/ forming a cluster with /s/, and a diphthong vowel (/aɪ/).	The nucleus is a diphthong /aɪ/, moving from a low-front to a high-front position.
buzzing [bʌzɪŋ]	boozing [buːzɪŋ]	Syllabic nucleus is the vowel /ʌ/, a mid-central, unrounded, lax vowel.	Contains all voiced sounds/, with no aspiration on any consonants.	Includes voiced stop /b/, lax vowels /ʌ/ and /ɪ/, voiced fricative /z/, and a nasal /ŋ/	Initial position bilabial /b/, mid-central nucleus /ʌ/, alveolar /z/, and velar /ŋ/	Word includes the mid-central vowel /ʌ/ and the high-front lax vowel /ɪ/.
Mr. [mɪs.tər]	mer [mɜː]	Syllabic nucleus is the lax vowel /ɪ/, a schwa /ə/.	Mostly voiced except for the voiceless /s/ and /t/ with no aspirated consonants	The nasal /m/, sibilant /s/, plosive /t/, vowel /ɪ/ and rhotic vowel /ə/, covering nasal, fricative, stop, and vocalic manners.	Initial position bilabial nasal /m/, and mid-central rhotic (/ə/)	Word includes the high-front lax vowel /ɪ/ and the mid-central rhotic vowel /ə/

Orthographic Analysis of Mispronounced Words

Table 6 reveals that many of the mispronunciations were closely associated with spelling deviations, highlighting how errors in phonemic orthography – the mapping between sounds and letters – can affect oral reading accuracy. The five most frequently mispronounced words – waddled, asked, smiled, buzzing, and Mr. – showed consistent orthographic issues, such as missing letters, reversed consonants, altered vowels, and omitted morphemes.

Table 6. Orthographic Analysis of Most Prevalent Mispronounced Words

Mispronounced Words	Phonemic Orthography	Word Boundary	Emphasis	Punctuation
waddled - wadled [wæ.dəld] [wad.lɪd]	The phoneme /ə/ is a schwa or a weak vowel.	NA	Less emphasis on the schwa sound	NA
asked - aks [æskt] [aks]	The past tense inflectional morpheme -ed must be pronounced as /t/.	NA	Emphasis on the past tense inflection /t/	NA
smiled - smayled [smaɪld] [smeɪld]	The past tense inflectional morpheme -ed is pronounced as /d/.	NA	Emphasis on the past tense inflection /d/	NA
buzzing - bozing [bʌzɪŋ] [buːzɪŋ]	The root <i>buzz</i> ends in a voiced consonant /z/, so the present participle suffix -ing is added without changing voicing.	NA	Primary stress is on the first syllable	NA
Mr. - mer [mɪs.tər] [mɜː]	The word is an abbreviation of the longer word, “mister”.	NA	Primary stress is on the first syllable	NA

These patterns suggest that students struggled not only with how words sounded but also with how sounds were represented in print, indicating gaps in their ability to connect phonemes (sounds) to graphemes (letters) during decoding. For example, waddled was often read as *wadled*, with one “d” omitted, breaking the English convention of doubling consonants after short vowels and demonstrating limited awareness of morpheme structure in the past tense. Students relied more on auditory cues than correct spelling, reflecting incomplete mastery of phoneme-grapheme correspondence. Similarly, asked was read as *aks*, reversing /s/ and /k/ and dropping the -ed ending,

disrupting both consonant sequencing and morphological spelling. These errors align with previous studies indicating that weak orthographic awareness makes it difficult for learners to process consonant clusters and inflectional morphemes, which are essential for decoding and comprehension (Ehri, 2020).

In the case of *smiled*, pronounced as *smayled*, the vowel shift from /aɪ/ to /eɪ/ highlights reliance on familiar but incorrect letter patterns, showing difficulty with vowel digraphs. Likewise, *buzzing* read as *boozing* reflects confusion in vowel representation, where the vowel sound shifted from /ʌ/ to /u:/ simplified the word's visual and phonological structure. These alterations distorted the word's phonemic mapping and meaning, emphasizing the importance of accurate spelling for correct pronunciation and reading. *Mr.* as *mer* illustrated a misinterpretation of orthographic conventions rather than pronunciation alone. Participants appeared to rely on phonetic cues, overlooking that 'Mr.' is the abbreviation for 'Mister'. This suggests limited familiarity with abbreviations and a tendency to depend on sound rather than orthographic form to derive meaning. These findings collectively demonstrate that accurate phoneme-grapheme mapping and spelling knowledge are essential for reducing oral reading errors. The integration of orthographic, phonological, and morphological knowledge is essential for accurate reading (Ehri, 2020; Perfetti & Stafura, 2014). As observed, most mispronounced words occurred because most participants appeared to be phonetic, pronouncing words the way they sounded. Casaljay and Malabarbas (2022) describe the mistakes that frequently result from students using phonetic reading patterns in Filipino, in which words are pronounced exactly as they are spelled. Furthermore, letters or sounds not present in participants' first language (L1) were often substituted or omitted, reflecting weak orthographic processing skills. This supports Marković et al. (2024), who argue that a solid understanding of orthography reduces reading errors, such as mispronunciations and omissions, evident in this student's reading.

Lexical Analysis of Mispronounced Words

Table 7 presents a lexical analysis of the words *waddled*, *asked*, *smiled*, *buzzing*, and *Mr.*, showing that word frequency, word length, and semantic complexity influenced how participants pronounced these words. Longer, less familiar, or semantically complex words were more difficult to decode, leading participants to rely on partial sound patterns instead of complete word recognition. For example, *waddled* and *buzzing*, which are relatively uncommon and morphologically complex, were mispronounced as *wadled* and *boozing*, demonstrating that low-frequency words posed greater challenges for accurate decoding. Even frequent words, such as *asked*, were misread as *aks*, likely due to consonant clusters and inconsistent sound-spelling correspondences. Words like *smiled* and *Mr.* highlighted how unfamiliar vowel patterns and nonstandard abbreviations affected pronunciation and comprehension.

Table 7. Lexical Analysis of Most Prevalent Mispronounced Words

Mispronounced Words	Word Frequency	Word Length	Semantic Complexity
waddled - <i>wadled</i>	Dolch List Grade 5	7 graphemes, 4 phonemes	Meanings: (1) [v.] 1. to walk with short steps swinging the forepart of the body from side to side 2. to move clumsily in a manner suggesting a waddle (2) [n.] an awkward clumsy swaying gait
asked - <i>aks</i>	Dolch List Grade 5	6 graphemes, 4 phonemes	Meanings: (1) [trans v] 1.a: to call on for an answer b: to put a question about c: speak, utter 2.a: to make a request of b: to make a request for 3. to call for : require 4. to set a price of 5. invite (2) [intrans v] 1. to seek information 2. to make a request (3) [n] something asked for, requested, or required of someone — used especially in phrases like a big ask and a tough ask to say that what is being asked for or hoped for is difficult or unlikely
smiled - <i>smayled</i>	Not on the Dolch Sight Word List	6 graphemes, 5 phonemes	Meanings: (1) [intrans v] to have, produce, or exhibit a smile; 2.a: to look or regard with amusement or ridicule; b: to bestow approval; c: to appear pleasant or agreeable (2) [trans v] 1 :to affect with or by smiling; 2 :to express by a smile.
buzzing- <i>bozing</i>	Not on the Dolch Sight Word List	7 graphemes, 5 phonemes	Meanings: (1) [intrans v.] 1: to make a low continuous humming sound like that of a bee; 2.a: murmur, whisper; b: to be filled with a confused murmur the room buzzed with excitement; 3: to make a signal with a buzzer; 4 :to go quickly; 5: to feel high especially from a drug. (2) [trans v] 1: to utter covertly by or as if by whispering; 2: to cause to buzz; 3: to fly fast and close to planes buzz the crowd; 4: to summon or signal with a buzzer

			also : to let in through an electronically controlled entrance; 5: dialectal, England : to drink to the last drop.
Mr. - <i>mer</i>	Dolch List Grade 1	2 graphemes, 4 phonemes	Meanings: [N] 1: used as a conventional title of courtesy except when usage requires the substitution of a title of rank or an honorific or professional title before a man's surname; 2: used in direct address as a conventional title of respect before a man's title of office; 3: used before the name of a place, profession, or activity or before an epithet (such as clever) to form a title applied to a male viewed as representative of the thing indicated.

These patterns indicate that participants' miscues stemmed, in part, from weak lexical representations, reflecting limited familiarity with how words look, sound, and convey meaning. As Dewi et al. (2024) explain, lexical interference may also occur when learners apply sound patterns from their first language after failing to recall the correct English form. Overall, these findings support the view that reading fluency relies not only on phonological and orthographic skills but also on a strong lexical foundation that integrates spelling, sound, and meaning (Nation, 2017; Perfetti & Stafura, 2014).

Phonological Analysis of the Most Prevalent Instances of Repetition

As shown in Table 8, repetition miscues in words such as Mr., waddled, asked, smiled, and came revealed that participants often repeated words when they struggled to articulate specific sounds. Many repetitions occurred when vowels were reduced to a schwa (/ə/) or when syllables became unclear, prompting participants to repeat words for clarity. For instance, in words such as asked and smiled, difficulties with voicing and aspiration were evident, as participants hesitated between voiced and voiceless consonants such as /s/-/z/ and /t/-/d/.

Table 8. *Phonological Analysis of the Most Prevalent Instances of Repetition*

Standard Pronunciation	Mispronunciation	Major Class Features	Laryngeal Features	Manner Features	Place Features	Vowel Space
Mr. [mɪs.tər]	mer [mɜr]	Syllabic nucleus is the lax vowel /ɪ/, a schwa /ə/.	Mostly voiced except for the voiceless /s/ and /t/ with no aspirated consonants	The nasal /m/, sibilant /s/, plosive /t/, vowel /ɪ/ and rhotic vowel /ə/, covering nasal, fricative, stop, and vocalic manners.	Initial position bilabial nasal /m/, and mid-central rhotic (/ə/)	Word includes the high-front lax vowel /ɪ/ and the mid-central rhotic vowel /ə/
waddled [wæ.dəld]	wadled [wad.lɪd]	Syllabic nucleus is a schwa, which may present difficulty for learners whose first language has limited schwa usage; final sound is a complex cluster /dld/.	Final sound is voiced and unaspirated	Final syllable cluster is a combination of plosives /d/ and liquid /l/	Final sounds are alveolars	Word contains low-front vowel /æ/
asked [æskt]	aks [æks]	Syllabic nucleus is the lax vowel /æ/; the word contains a complex final consonant cluster /skt/	Only /æ/ is voiced. All consonants (/s/, /k/, /t/) are voiceless.	A combination of vowel, fricative, and stop sounds. Specifically, it has: One vowel (/æ/), a sibilant, /s/, and two stops /k/ and /t/	Final sounds are a complex combination of sibilant and plosives	Word contains the vowel /æ/ found in the initial position
smiled [smaɪld]	smayled [smeɪld]	Syllabic nucleus is the diphthong /aɪ/. It separates the onset cluster /sm/ from the coda /ld/.	Has voiced sonorants and voiced vowel sounds, with voiceless /s/ unaspirated and no aspiration on	A mix of sibilant /s/, nasal /m/, diphthong vowel /aɪ/, liquid /l/, and voiced stop /d/.	Includes a sibilant /s/ in the initial position, a bilabial /m/ forming a cluster with /s/, and a	The nucleus is a diphthong /aɪ/, moving from a low-front to a high-front position.

			the voiced final /d/.		diphthong vowel (/aɪ/).	
came [keɪm]	come [kʌm]	Syllabic nucleus is the tense, mid-front vowel /eɪ/; the word has no consonant cluster, no schwa, and the final -e is silent.	Features a voiced vowel and voiced consonants with a voiceless aspirated initial stop /k ^h /	Includes voiceless stop /k/, a glide /eɪ/, and a voiced nasal /m/	Has a velar place of articulation for the initial /k/ and a bilabial place for the final /m/, with the vowel /eɪ/	Word is occupied by the tense diphthong /eɪ/, moving from a mid-front to a high-front position

Repetitions were also common in words containing complex consonant clusters, including asked and smiled, where producing multiple consecutive consonants caused pauses or restarts. This result aligns with Al-Yami and Al-Athwary (2021), who found that consonant clusters not present in a learner's first language often led to real-time pronunciation breakdowns. Similarly, in words like came, vowel-space confusion led participants to restart the word when vowel sounds were too short or unclear. Overall, these repetitions indicated phonological monitoring and self-correction, reflecting learners' attempts to repair unclear speech.

Orthographic Analysis of the Most Prevalent Instances of Repetition

Table 9 presents the orthographic feature analysis of the top five repeated words. The repetition miscues observed in words such as Mr., waddled, asked, smiled, and came were strongly influenced by their written forms and spelling patterns. When words contained irregular or complex letter sequences, participants often hesitated, misread, and repeated the words to self-correct. The inconsistencies of English phonemic orthography, where spelling does not always correspond directly to pronunciation, contributed to these decoding difficulties. For example, words like asked and waddled contain atypical letter clusters that disrupted fluency and prompted rereading.

Table 9. *Orthographic Analysis of the Most Prevalent Instances of Repetition*

Repeated Words	Phonemic Orthography	Word Boundary	Emphasis	Punctuation
Mr. - mer	The word is an abbreviation of the longer word, "mister"	NA	Primary stress is on the first syllable	NA
waddled	The phoneme /ə/ is a schwa or a weak vowel.	NA	Less emphasis on the schwa sound	NA
asked	The past tense inflectional morpheme -ed must be pronounced as / t /.	NA	Emphasis on the past tense inflection / t /.	NA
smiled	The past tense inflectional morpheme -ed is pronounced as / d /.	NA	Emphasis on the past tense inflection / d /.	NA
came	This is an irregular past tense verb (from come) and does not use the -ed inflection.	NA	Emphasis on the vowel /eɪ/	NA

This finding aligns with Grippando (2021), who noted that increases in orthographic complexity can slow speech fluency and trigger repetitions during reading. Similarly, Marinelli et al. (2016) emphasized that deeper or irregular spelling systems, such as English, pose challenges for decoding and often result in pauses or word repetitions. In this study, participants' repetitions appeared to stem from weak orthographic mapping—an incomplete connection between a word's visual representation and its pronunciation—which led them to reread or self-correct to maintain fluency.

Lexical Analysis of the Most Prevalent Instances of Repetition

Table 10 presents the lexical feature analysis of the top five repeated words. The repetition miscues observed in Mr., waddled, asked, smiled, and came were influenced primarily by lexical factors, including word frequency, word length, and word meaning.

Table 10. *Lexical Analysis of the Most Prevalent Instances of Repetition*

Repeated Words	Word Frequency	Word Length	Semantic Complexity
Mr.	Dolch List Grade 1	2 graphemes, 4 phonemes	Meanings: (1) [n] 1. used as a conventional title of courtesy except when usage requires the substitution of a title of rank or an honorific or professional title before a man's surname 2. used in direct address as a conventional title of respect before a man's title of office 3. used before the name of a place, profession, or activity or before an epithet (such as clever) to form a title applied to a male viewed as representative of the thing indicated (2)

abbreviation			
waddled	Dolch List Grade 5	7 graphemes, 4 phonemes	Meanings: (1) [v.] 1. to walk with short steps swinging the forepart of the body from side to side 2. to move clumsily in a manner suggesting a waddle (2) [n.] an awkward clumsy swaying gait
asked	Dolch List Grade 5	6 graphemes, 4 phonemes	Meanings: (1) [trans v] 1.a: to call on for an answer b: to put a question about c: speak, utter 2.a: to make a request of b: to make a request for 3. to call for : require 4. to set as a price of 5. invite (2) [intrans v] 1. to seek information 2. to make a request (3) [n] something asked for, requested, or required of someone – used especially in phrases like a big ask and a tough ask to say that what is being asked for or hoped for is difficult or unlikely
smiled	Not on the Dolch Sight Word List	6 graphemes, 5 phonemes	Meanings: (1) [intrans v] 1: to have, produce, or exhibit a smile 2. a: to look or regard with amusement or ridicule b: to bestow approval c: to appear pleasant or agreeable (2) [trans v] 1: to affect with or by smiling 2: to express by a smile (3) [n] 1: a facial expression in which the eyes brighten and the corners of the mouth curve slightly upward and which expresses especially amusement, pleasure, approval, or sometimes scorn 2: a pleasant or encouraging appearance
came	Dolch List Grade 1	4 graphemes, 3 phonemes	Meanings: (1) [v.] past tense of come 1.to move closer to 2. to get to a destination 3. to eventually have as a state or quality 4. to take place 5. to move forward along a course

Most of the repeated words were past-tense verbs, indicating that participants were not fully familiar with morphological rules, particularly how the suffix *-ed* alters a verb's tense or meaning. It appears that participants often treated these forms as entirely new words rather than variations of a known base form, which slowed word recognition and led to hesitations or repetitions. This result aligns with Zhou et al. (2023), who reported that limited awareness of morphological structures can disrupt oral reading fluency. Furthermore, although four of the five repeated words are on the Dolch Sight Word List, participants demonstrated low familiarity with their meanings. Words such as *waddled* and *smiled* are infrequently used in daily speech, making them more difficult to recall quickly. Participants with limited vocabulary often rely on prior knowledge and context to interpret what they read, supporting Goodman's theory that reading involves constructing meaning rather than simply decoding words. Even when encountering unfamiliar words, readers make predictions based on their understanding of the passage. As Silva and Fonseca (2021) note, low-frequency words can increase processing time and trigger pauses, misreading, or repetition. Overall, these findings suggest that limited lexical knowledge and weak morphological awareness contributed to slower word retrieval, prompting repetition as a self-correction and confirmation strategy.

Phonological Analysis of the Most Prevalent Instances of Substitution

Table 11 explains the phonological analysis of the top five substituted words. The substitutions observed were: *came* → *come*, *swam* → *swim*, *Mr.* → *M-R*, *smiled* → *smelled*, and *then* → *the*.

Table 11. *Phonological Analysis of the Most Prevalent Instances of Substitution*

Standard Pronunciation	Substitution	Major Class Features	Laryngeal Features	Manner Features	Place Features	Vowel Space
came [keɪm]	<i>come</i> [kʌm]	Syllabic nucleus is the tense, mid-front vowel /eɪ/; the word has no consonant cluster, no schwa, and the final -e is silent.	Features a voiced vowel and voiced consonants with a voiceless aspirated initial stop /kʰ/	Includes voiceless stop /k/, a glide /eɪ/, and a voiced nasal /m/	Has a velar place of articulation for the initial /k/ and a bilabial place for the final /m/, with the vowel /eɪ/	Word is occupied by the tense diphthong /eɪ/, moving from a mid-front to a high-front position
swam [swæm]	<i>swim</i> [swɪm]	Syllabic nucleus is the low-front lax vowel /æ/; the word begins with a consonant cluster /sw/, contains no	Features mostly voiced sounds (/w/, /æ/, /m/), with the initial /s/ being voiceless and unaspirated, and no aspiration	Includes a voiceless sibilant /s/, a liquid /w/, a lax vowel /æ/, and a nasal /m/	Features a sibilant /s/ in the initial position, bilabials /w/ and /m/, and low-front lax	Word is occupied by the low-front lax vowel /æ/

		schwa, and has no silent letters.	occurs in the word since /s/ blocks aspiration on the following consonant.		vowel /æ/	
Mr. [mɪs.tər]	M-R /ɛm ɔr/	Syllabic nucleus is the lax vowel /ɪ/, a schwa /ə/.	Mostly voiced except for the voiceless /s/ and /t/ with no aspirated consonants.	The nasal /m/, sibilant /s/, plosive /t/, vowel /ɪ/ and rhotic vowel /ə/, covering nasal, fricative, stop, and vocalic manners.	Initial position bilabial nasal /m/, and mid-central rhotic (/ə/)	Word includes the high-front lax vowel /ɪ/ and the mid-central rhotic vowel /ə/
smiled [smaɪld]	smelled [smɛld]	Syllabic nucleus is the diphthong /aɪ/. It separates the onset cluster /sm/ from the coda /ld/.	Has voiced sonorants and voiced vowel sounds, with voiceless /s/ unaspirated and no aspiration on the voiced final /d/.	A mix of sibilant /s/, nasal /m/, diphthong vowel /aɪ/, liquid /l/, and voiced stop /d/.	Includes a sibilant /s/ in the initial position, a bilabial /m/ forming a cluster with /s/, and a diphthong vowel (/aɪ/).	The nucleus is a diphthong /aɪ/, moving from a low-front to a high-front position.
then [ðen]	the [ðə]	Syllabic nucleus is the mid-front lax vowel /ɛ/	Begins with a voiced dental fricative /ð/ and contains voiced sounds throughout, with no aspiration present.	Includes a voiced dental fricative /ð/, a vowel /ɛ/, and a voiced alveolar nasal /n/	Includes dental /ð/ in the initial position, mid-front vowel /ɛ/, and alveolar /n/ in the final position	Word is occupied by the mid-front lax vowel /ɛ/

These errors occurred because participants replaced a word with another sharing similar phonological properties or familiar sound patterns, consistent with Macnamara et al. (2011), who noted that phonologically similar words—such as rhyming words or words sharing phonemes—tend to cause confusion and higher error rates. Many substitutions resulted from confusion in vowel space, as seen in *came* pronounced as *come* and *swam* pronounced as *swim*. Participants often replaced lax vowels (/ɛɪ/ and /æ/) with their laxer counterparts (/ʌ/ and /ɪ/), reflecting limited awareness of English vowel contrasts. Challenges in major class features, such as distinguishing vowels from consonantal glides, also contributed to unstable syllable patterns and substitutions.

In the case of *Mr.* read as *M-R*, participants substituted a full lexical pronunciation with letter naming, indicating difficulties in manner and place of articulation, specifically the shift from a smooth rhotic /ə/ to a disjointed bilabial-alveolar pattern. Substitutions like *smiled* → *smelled* reflected uncertainty in voicing and nasal articulation, suggesting difficulties with laryngeal features and assimilation of neighboring sounds. These patterns suggest that participants relied on substitutions to simplify articulation or resolve uncertainty in voicing, aspiration, and vowel length. Additionally, most substitutions were influenced by challenges in vowel space, where tense vowels were replaced with laxer ones (*came* → *come*, *swam* → *swim*), and by uncertainty in voicing and articulation, as in *smiled* → *smelled* and *Mr.* → *M-R*. Many errors occurred at word onset, supporting Alderete’s (2023) “word-onset effect,” which highlights initial consonants are particularly prone to substitution due to their perceptual and articulatory complexity. Overall, these findings indicate that substitution errors were not random but reflected phonological similarity, articulatory difficulty, and reliance on familiar sound patterns, corroborating Goodman’s Psycholinguistic Theory and reinforcing the role of phonological, orthographic, and lexical factors in oral reading performance.

Orthographic Analysis of the Most Prevalent Instances of Substitution

Table 12 reflects the orthographic analysis of the substituted words. The miscues in *came*, *swam*, *Mr.*, and *smiled* indicate that participants often relied more on words’ visual features than on their pronunciation.

Table 12. Orthographic Analysis of the Most Prevalent Instances of Substitution

Substituted Words	Phonemic Orthography	Word Boundary	Emphasis	Punctuation
came - come [keɪm] - [kʌm]	This is an irregular past tense verb conjugation (from <i>come</i>) and does not use the -ed inflection Begins with a consonant cluster /sw/;	NA	Emphasis on the vowel /eɪ/	NA
swam - swim [swæm] - [swɪm]	Represents an irregular past tense of the verb swim, with a vowel shift from /ɪ/ to /æ/	NA	Emphasis on the vowel /æ/	NA
Mr. - M-R [mɪs.tər] - [ɛm.ar]	The word is an abbreviation of the longer word, "mister"	NA	Primary stress is on the first syllable	NA
smiled - smelled [smaɪld] - [smæld]	The vowel component is a diphthong /aɪ/	NA	Emphasis on the vowel in the stressed syllable, /aɪ/ Emphasis on the "th"	NA
then - the [ðɛn] - [ðə]	The word has a consonant digraph, representing a single sound /ð/.	NA	consonant digraph sound sound /ð/	NA

Many substitutions appeared to be influenced by irregular spelling patterns, visual similarity, and inconsistent sound-letter correspondences, suggesting that the errors were largely orthographically driven. For example, vowel shifts such as /eɪ/ → /ʌ/ (came → come) and /æ/ → /ɪ/ (swam → swim), as well as confusion in diphthongs (smiled → smelled), demonstrate that participants had difficulty aligning English spelling with its varied vowel representations. Errors such as Mr. → M-R and then → the further suggest that participants relied on partial visual cues, misinterpreting abbreviations or familiar words based on their orthographic appearance. This tendency to rely on visual similarity differs from Milledge and Blythe's (2019) findings, which argued that substitution errors are often phonologically driven. In this study, however, participants appeared to substitute words primarily due to familiar or partially recognizable spelling patterns rather than phonetic resemblance. Chen et al. (2019) similarly noted that readers may replace unfamiliar words after recognizing only a portion of a known orthographic pattern. Moreover, participants often focused on initial letter clusters while neglecting vowel distinctions, leading to substitutions of visually similar words. Overall, the findings indicate that the participants' substitution errors were not random but reflected an overreliance on visual form and incomplete orthographic decoding. Weak orthographic mapping led readers to depend on surface-level spelling cues, resulting in substitutions that disrupted both accuracy and reading fluency.

Lexical Analysis of the Most Prevalent Instances of Substitution

Table 13 shows the lexical analysis of the substituted words. The miscues observed in came–come, swam–swim, Mr.–M-R, smiled–smelled, and then–the were influenced by word familiarity, length, and semantic complexity. Even though many of the substituted words were short and high-frequency, differences in meaning or grammatical function created confusion during oral reading. Participants often replaced words with more familiar or easier-to-retrieve alternatives.

Table 13. Lexical Analysis of the Most Prevalent Instances of Substitution

Substituted Words	Word Frequency	Word Length	Semantic Complexity
came - come	Dolch List Grade 1	4 graphemes, 3 phonemes	Meanings: (1) [v.] past tense of come 1. to move closer to 2. to get to a destination 3. to eventually have as a state or quality 4. to take place 5. to move forward along a course
swam - swim	Dolch List Grade 1	4 graphemes, 4 phonemes	Meanings: (1) [v.] past tense of swim 1. a: to propel oneself in water by natural means (such as movements of the limbs, fins, or tail) b: to move with a motion like that of swimming 2. to move with a motion like that of swimming; glide 3. a : to float on a liquid : not sink b: to surmount difficulties : not go under 4. to become immersed in or flooded with or as if with a liquid 5. to have a floating or reeling appearance or sensation; (2) [trans v.] 1. a: to cross by propelling oneself through water b : to execute in swimming 2: to cause to swim or float (2) [n.] 1: a smooth gliding motion 2: an act or period of swimming 3: a temporary dizziness or unconsciousness 4 a: an area frequented by fish b: the main current of activity (3) [adj] of, relating to, or used in or for swimming

Mr. - <i>MR</i>	Dolch List Grade 1	2 graphemes, 4 phonemes	Meanings: (1) [n] 1. used as a conventional title of courtesy except when usage requires the substitution of a title of rank or an honorific or professional title before a man's surname 2. used in direct address as a conventional title of respect before a man's title of office 3. used before the name of a place, profession, or activity or before an epithet (such as clever) to form a title applied to a male viewed as representative of the thing indicated (2) abbreviation
smiled - <i>smelled</i>	Not on the Dolch Sight Word List	6 graphemes, 5 phonemes	Meanings: (1) [intrans v] 1: to have, produce, or exhibit a smile 2. a: to look or regard with amusement or ridicule b: to bestow approval c: to appear pleasant or agreeable (2) [trans v] 1: to affect with or by smiling 2: to express by a smile (3) [n] 1: a facial expression in which the eyes brighten and the corners of the mouth curve slightly upward and which expresses especially amusement, pleasure, approval, or sometimes scorn 2: a pleasant or encouraging appearance
then - <i>the</i>	Dolch List Grade 1	3 graphemes, 3 phonemes	Meanings: (1) [adv] 1: at that time 2. a: soon after that : next in order of time b: following next after in order of position, narration, or enumeration : being next in a series c: in addition; besides 3. a: as a necessary consequence b(1): in that case b(2)used after but to qualify or offset a preceding statement c: according to that : as may be inferred d: as it appears : by way of summing up (2) [n] that time (3) [adj] existing or acting at or belonging to the time mentioned

For example, came–come and swam–swim, both included in the Dolch Grade 1 list, were substituted with their base forms instead of the past tense, indicating limited morphological and semantic awareness. Participants appeared to recognize the root meaning but struggled to process tense variations automatically. Similarly, the substitution smiled–smelled, a longer and less frequent word, suggests difficulty in accessing meaning and retrieving its correct lexical form, prompting replacement with a visually or semantically closer word. Even high-frequency words like then–*the* were miscued, likely because rapid visual recognition overrode full semantic processing. These patterns indicate that word familiarity and semantic accessibility strongly affect substitution errors. When words share visual or conceptual similarities, participants tend to rely on approximate retrieval rather than precise decoding. This aligns with Nation (2017) and Perfetti and Stafura (2014), who emphasized that fluent reading relies on robust lexical representations connecting spelling, sound, and meaning. Likewise, Silva and Fonseca (2021) found that low-frequency or semantically flexible words increase the likelihood of lexical substitution as readers attempt to maintain reading fluency.

The findings also correspond to Levesque and Deacon (2022), who noted that students with weaker morphological skills are more likely to substitute simpler, more familiar forms for unfamiliar words because they cannot reliably analyze word structure. Participants in this study demonstrated low familiarity with irregular verbs, particularly in the past tense. For instance, without automatic recognition of irregular patterns in verbs like came and swam, they defaulted to the more common base forms. Setyawan (2019) similarly observed that learners often revert to simpler, predictable forms when irregular patterns are not internalized. These results support Goodman’s Psycholinguistic Theory, which highlights the role of top-down processing in reading. Readers use prior knowledge, expectations, and schema to predict words, which can influence miscues. Substitution, therefore, often occurs when participants select words that seem contextually or semantically appropriate, even if they differ from the printed text. Recent research by De Rom and Van Reybroeck (2024) reinforces this interpretation, showing that readers frequently make substitution errors when partial decoding or contextual predictions lead them to expect plausible alternatives within the sentence.

Thematic Analysis of the Difficulties Experienced by Students during the Oral Reading Assessment

Following Braun and Clarke’s (2022) thematic analysis framework, themes were developed from the one-on-one interviews with the 10 participants who recorded the highest number of miscues. The analysis examined the difficulties they experienced during oral reading and the factors they associated with their miscues.

Problems with Phoneme-Grapheme Mapping

Incomplete Word Recognition. Participants frequently mispronounced, repeated, or substituted words due to incomplete word recognition. It appears that they had weak visual memory, struggling to remember letter shapes and positions. Illustrative excerpts from the interviews include:

Indi ko mayo kasampot [I can barely pronounce it].

Daw kabudlay sa iya ipronounce [It seems hard to pronounce].

Gakasala ko, gakatalang ko [I got it wrong, and I get confused].

Indi ko maintsindihaan akon hambal [I can't understand what I'm saying].

Daw indi ko mayo ka mitlang sina [I can barely pronounce it].

Indi ko kaintindi kay abi ko "D," "B" gale [I don't understand because I thought it's D, but it's B].

These responses indicate that students had difficulty connecting individual sounds (phonemes) with their corresponding written symbols (graphemes). Weak phoneme-grapheme mapping led participants to misread unpredictable words, substitute them with words that shared initial letters, and repeat words during self-correction. This observation aligns with Fernandes et al. (2024), who emphasized that weak mapping negatively affects reading fluency and accuracy, particularly with less regular word patterns.

Difficulty in Recognizing Letters. Letter recognition is essential for decoding and sight word reading, forming the foundation of reading development, as mastering letter-sound associations precedes effective word decoding and recognition (January & Klingbeil, 2020). In this study, participants demonstrated difficulty recognizing letters, which significantly contributed to their oral reading miscues. Many struggled with the names, shapes, and sounds of letters, particularly when letters were combined or visually similar. Interview excerpts illustrate these challenges:

Ang may "R" Ma'am kag inang may "L" Ma'am" [The one with "R" Ma'am and also with "L" Ma'am].

Indi ko kabalo sang spelling kag kung pano na basahon [I don't know the spelling and I don't know how to read it].

Kay abi ko MR, tabi ko Ma'am MAR [I thought it was RM, thought Ma'am, it's MAR].

Kay indi ko kaintsindi, daw mapitla ko bala. Kay double "M" [I don't understand; I stuttered, because it's double "M" (called "W" as double "M")].

Indi ko ano kasampot sang "L" kag "R." Indi ko kabalo. [I can't pronounce "L" and "R." I don't know how].

These responses suggest that difficulty distinguishing letters contributed to errors in pronunciation, spelling, and meaning, particularly when letters were mixed, blended, or switched. Jabbour-Danial et al. (2024) note that early difficulties with letters and word structure significantly influence later language learning. Supporting studies (Lally & Rastle, 2022; Reilhac et al., 2012) also confirm that misrecognition or confusion of letters disrupts decoding, word retrieval, and comprehension.

Limited Lexicon

Unfamiliarity with Words. Participants reported that oral reading errors often arose from limited knowledge or prior exposure to certain words or concepts. Interview excerpts include:

Kay indi ko familiar sa sina nga mga tinaga [I am not familiar with those words]. Indi ko masyado maintindihaan [I can hardly understand].

Kay wala pako na kabasa [because I haven't read that before].

Wala ko na nakita [I haven't seen that].

Kay indi ko familiar sang mga words [because I am not familiar with those words].

Indi ko ka kakila sang sina nga words kag bag o ko lang man na nakita [I am not familiar with those and it's my first time to encounter them].

These statements reveal limited vocabulary knowledge, even for words included in the Dolch Sight Word List. Linguistic analysis showed that participants struggled with morphological rules, such as how affixes (e.g., -ed) change verb tense or meaning. They also demonstrated low awareness of English phonotactic rules—the permissible combinations of sounds—which affected accurate word recognition and pronunciation. This result supports the findings of Leaño et al. (2019), who emphasized that limited phonotactic awareness hinders vocabulary acquisition and comprehension in second-language learners. Similarly, Giazitzidou and Padeliadu (2022) and Pang and Son (2024) found that weak morphological knowledge negatively impacts oral reading fluency, word recognition, and vocabulary development. The study of Giazitzidou and Padeliadu (2022) suggests that having weak morphological knowledge can hinder fluent oral reading and likely increase miscue generation. This result is supported by the study of Pang and Son (2024), which claims that morphological knowledge contributes directly not only to reading comprehension but also to word recognition and vocabulary knowledge. Thus, accuracy and fluency in oral reading are compromised by poor morphological awareness.

Lack of Exposure to Words Being Assessed. Reading difficulties were also exacerbated by limited exposure to the target words in both spoken and written contexts (Van der Kleij et al., 2022). Frequent and varied exposure is essential for fluent word recognition and decoding (Laufer & Vaisman, 2023). Participants reported struggling with words they had not encountered before, as reflected in the following excerpts:

Indi ko familiar sina, kag indi ko kabalo sang spelling kag kung pano na basahon [I am not familiar with that, and I don't know the spelling and how to read that]

Indi ko maano Ma'am... mabasa mayo. Indi ko familiar, bag o ko lang nabasa [I can't Ma'am, I can't read it well. I am not familiar and it's my first time to read it]

Indi pa ko mayo kabalo mag basa English [I don't know yet how to read well in English].

Kag nabudlayan ko magbasa kay bag o ko lang nakita Ma'am, indi ko kabalo pano na basahon [It's difficult for me to read because it is new to me, I don't know how to read it].

The participants' responses suggest limited familiarity with several of the assessed words, including words commonly introduced during the primary grades based on the Dolch Sight Word List. This pattern may reflect insufficient prior exposure to English vocabulary; however, the study did not directly examine the participants' elementary literacy experiences, reading habits, home support, or access to reading materials. Yang et al. (2021) similarly noted that limited exposure to oral and written language may constrain the development of foundational reading skills, including decoding, fluency, and comprehension. Viewed through Goodman's Psycholinguistic Theory, readers rely on prior linguistic knowledge, experience, and expectations when constructing meaning from text. When lexical familiarity is limited, learners may depend on partial graphophonemic or contextual cues, which can result in mispronunciation, repetition, or substitution. Thus, the present findings are best interpreted as evidence of limited word familiarity during the oral reading task rather than as confirmation of inadequate reading habits or other unmeasured environmental factors.

Conclusion

This study demonstrates that oral reading miscues among the participating Grade 7 struggling readers were not merely isolated pronunciation or word-recognition errors. Rather, the patterns reflected the interaction of phonological, orthographic, and lexical processing difficulties. Mispronunciations were associated with unfamiliar English sound patterns and complex consonant clusters; repetitions reflected difficulties in orthographic mapping and attempts at self-correction; and substitutions indicated reliance on familiar word forms, partial visual cues, and contextual expectations. The interview findings further showed that limited phoneme-grapheme knowledge, word familiarity, and exposure to English vocabulary shaped the learners' oral reading experiences. For classroom practice, the findings indicate that teachers should move beyond recording the number of oral reading errors and examine the linguistic characteristics of the words learners find difficult.

Miscue analysis can help teachers distinguish whether a learner requires support in sound production, letter-sound correspondence, spelling patterns, morphological awareness, vocabulary, or contextual word recognition. Such diagnostic information can guide more focused and individualized reading instruction. At the school and policy levels, the findings may support the use of word-level linguistic analysis as a supplementary component of Phil-IRI-based reading assessment. School leaders may provide teachers with training and appropriate materials to identify phonological, orthographic, and lexical difficulties and to translate assessment results into targeted interventions. However, because the study was conducted in one public secondary school, its implications should be applied cautiously and adapted to learners' linguistic and educational contexts. Theoretically, the study extends the application of Goodman's Psycholinguistic Theory by illustrating how specific word-level linguistic constraints may influence learners' use of graphophonemic, syntactic, and semantic cues during oral reading. The findings do not establish causal relationships but provide a contextually grounded explanation of how these processes may interact in producing different miscue patterns. These findings informed the development of "Tunog-Salita-Kahulugan: Tatlong Hakbang sa Pagbasa," a localized reading program targeting decoding, orthographic mapping, vocabulary development, comprehension, and oral reading confidence. Future research should evaluate the program's effectiveness through implementation studies, include learners from broader linguistic and educational settings, and examine additional factors such as first-language background, reading exposure, home literacy support, and access to reading materials.

Contributions of Authors

As the sole author, the researcher was responsible for the study's conceptualization, design, implementation, data collection, analysis and interpretation, manuscript preparation and revision, and compliance with ethical, institutional, and publication requirements.

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Conflict of Interests

The author declares that there are no conflicts of interest related to the conduct or publication of this study.

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