

## Literacy assessment - a case study in diagnosing and building a struggling reader's profile

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### **Abstract**

*Poor language and literacy abilities negatively impact students emotionally, causing low self-esteem, anxiety, and frustration. This affects their attitudes towards learning, reduces motivation, and limits opportunities. Thus, addressing early language and literacy challenges through intervention and accurate assessment is vital for not only positive emotional development but for all round academic growth. In a single-case study, the reading skills of a struggling third grade reader were assessed using tools such as QRI (Qualitative Reading Inventory) and visual-discrimination assessments to create a diagnostic profile. The study aimed to identify the student's reading level, and factors that affect language and literacy abilities. Results showed that the student's instructional reading level was at a low average range for expository texts but at a much higher level (fourth) for narrative texts. Strong word recognition skills were observed, but difficulty in comprehending expository, informational texts was evident. Recommendations include using targeted strategies to improve comprehension skills at all levels (literal, inferential, evaluative) for expository texts, while also addressing the emotional and social development of learners.*

**Keywords:** *literacy assessment, struggling reader, language and literacy, case study, elementary education*

### **Introduction**

Limited language and literacy abilities can negatively impact students in the affective domain, leading to low self-esteem, frustration, anxiety, negative attitudes towards learning, social isolation, reduced motivation, limited opportunities, impaired emotional expression, increased stress during assessments, and hindered critical thinking skills. Students who struggle with reading, writing, and comprehension often experience low self-esteem (Ramin et al. 2023, Shanahan & Shanahan 2023, Cregan & Rutter 2022, Moats 2001). Difficulty in understanding written texts can lead to frustration and anxiety in students. This emotional response may further hinder their learning progress and negatively impact their motivation to engage with academic tasks. Poor language and literacy abilities can create negative attitudes towards learning in general (Rautenbach et al. 2019). Students may develop a dislike for reading or writing tasks, perceiving them as challenging or unenjoyable activities. Students who struggle with language and literacy skills may avoid participating in classroom discussions, group activities, or extracurricular events that involve reading or writing. This social withdrawal can lead to feelings of isolation and alienation from their peers (Rahman et al. 2019). Lacking proficient literacy skills can lead to reduced motivation for academic excellence, potentially resulting in disinterest in pursuing higher education and a lack of motivation to set and achieve academic goals. Persistent struggles with literacy can lead to cycles of underachievement, where students continually fall behind in various subjects due to the interconnected nature of reading and learning (Gay 2018). They may feel inadequate compared to their peers, leading to feelings of frustration, embarrassment, and a lack of confidence in their

academic abilities. Addressing these challenges early on through targeted interventions and support is essential for promoting positive emotional and attitudinal development in students.

Many struggling readers often face challenges in receiving the necessary support and intervention, and in the process, they fall through the cracks in the education system. To address this issue, it is essential for every school to have a high-quality assessment program as a crucial component of an effective curriculum. Such an assessment program can identify struggling readers early, provide targeted interventions, and ensure that their individual needs are met, thus improving their overall academic outcomes. Assessment techniques must be theoretically sound in accurately depicting the skills and knowledge that children are learning and be cognizant of the developmental and individual characteristics of young students. For instance, when a student struggles with phonemic awareness, teachers can provide extra guidance on recognizing word sounds and patterns. Alternatively, if a student finds it challenging to comprehend a text, a teacher could teach them using reading strategies such as summarizing, retelling, or drawing conclusions. Effective interventions, when applied in a timely manner, can prevent reading difficulties from becoming more severe and pervasive (NICHD 2022, Foorman et al. 2016). The ability to read and comprehend the material successfully is ultimately the most effective measure of a student's reading proficiency.

A critical procedure, which assists teachers, determine students' individual reading strengths and shortcomings is the diagnostic assessment in reading. It makes use of a range of assessments and evaluations to gather data on students' proficiency in skills like word recognition, fluency, comprehension, and phonemic awareness. One of the most important advantages of diagnostic reading assessment in early grades is that it enables teachers to identify areas of challenges for students early on and offer focused support. In order to identify students who may be at risk of falling behind in their reading development, the National Reading Panel (2000) suggests that teachers evaluate students' reading abilities in the early grades. Using diagnostic tests, teachers can identify children who have difficulties with specific reading abilities and provide them targeted instruction to help them catch up.

This article is centered around a rising third grader, Nancy (pseudonym), who was eight years old at the time of the assessment during summer. Her parents were concerned about her poor comprehension skills in reading. A range of assessment tools were used to determine Nancy's specific struggles, her instructional reading level, her reading potential, and any impediments to her reading abilities. The process of diagnosis will be discussed along with implications and recommendations for Nancy.

### **Theoretical background**

According to the Science of Reading (SOR), reading is not a natural or intuitive process, but one that must be explicitly taught (Seidenberg 2017). This approach of literacy instruction places a high emphasis on the development of basic abilities, including phonological awareness, decoding, and fluency (Kilpatrick 2015). One key aspect of the SOR is the use of diagnostic assessment to identify students' specific reading strengths and weaknesses (Foorman et al. 2016). Diagnostic assessment allows teachers to provide targeted interventions and instructional strategies that are tailored to students' needs. It helps teachers to understand how a student's reading skills develop over time and identify any areas that need additional support.

The "robust and socially just science of reading" framework suggested by Aukerman & Schuldt (2020) emphasizes the need for reading education to focus on linguistic, cultural, and individual variation by acknowledging and utilizing the diverse strengths and perspectives that students from nondominant cultures bring to their learning and take away from it. The Science of Reading is an evidence-based approach to teaching reading that emphasizes the importance of phonics, phonological awareness, and other foundational skills in early grades (Moats 2020).

An interactive model of literacy development and instruction recognizes that code-related skills (e.g., phonological awareness, decoding, spelling) and language-related skills (e.g., vocabulary,

comprehension, writing) are interconnected and mutually reinforcing (Adams 1990). In other words, these skills are not seen as mutually exclusive, but rather as part of a complex and dynamic system of literacy development (NRP 2000). Informal inventories were used for assessment, which are a widely accepted type of formative assessment in the field of literacy. One key aspect of the evaluation involves the use of miscue analysis, which is an effective method for identifying the ways in which readers deviate from text when reading. The cornerstone of miscue analysis is the notion that reading is a cognitive psycholinguistic activity and that, in order to identify words and understand text, readers need a variety of cues, including grapho-phonetic, syntactic, semantic, and pragmatic information. By examining the category of miscues made by readers, valuable insights can be gained into the coding system used for word recognition and the impact of miscues on reading comprehension. This makes miscue analysis an important tool for assessing and supporting readers' development of reading skills. The effectiveness of miscue analysis in this context has been demonstrated by researchers (Miller & Smith 2023, Goodman 1969, Goodman & Goodman 1977) who have contributed significantly to the understanding of reading development and instruction.

In general, teachers find that performance samples and observational approaches provide them with the greatest information regarding a young child's reading and writing abilities. Learning to read and write is a cultural and developmental process, just like learning to speak orally. However, reading and writing are complex tasks that integrate several processes and can change from context to context based on the resources a child has access to and the background knowledge they bring to a given task (Teale 1988). To avoid making unwarranted generalizations about a child's ability, it is best to examine a young child's literacy development in a range of contexts. To accurately depict a child's strengths and limitations, significant utilization of samples and observations is required.

### **Methodology**

The research methodology for this study is a single-case study design. The study selected one struggling third-grade reader as the participant. Various tools, such as QRI (Qualitative Reading Inventory) and visual-discrimination assessments, were used to assess the participant's reading skills. QRI, a widely used reading assessment tool, was employed to measure the student's reading level and comprehension abilities. Visual-discrimination assessments were utilized to identify any visual processing issues that might affect reading. Data were collected on the participant's reading skills, including word recognition skills and comprehension abilities for both expository and narrative texts. The collected data from the assessments were analyzed to create a diagnostic profile of the participant's reading skills. The researchers likely compared the participant's instructional reading level for expository and narrative texts and identified factors that affected the participant's language and literacy abilities.

### **Purpose statement**

The major goal of the diagnostic session was to determine Nancy's present reading level focusing on what is needed across a broad range of literacy skills (word recognition, decoding, reading accuracy, reading fluency, reading comprehension) in different situations with varied texts, such as, narrative texts and expository texts. By conducting a comprehensive assessment of the learner's reading abilities, specific areas that require improvement can be identified, and targeted instruction can be provided to address these needs, based on a complete reading profile of the learner. This study adopted a single case study approach (Stake 1995) to achieve its objectives, which were guided by three questions.

1. What is Nancy's present level of reading, and what is her reading potential?
2. What are the factors, if any, that obstruct her reading abilities and potential?
3. What measures can be taken to assist the learner in achieving her full reading potential?

### Background Information

Nancy was brought for literacy evaluation after her parents expressed their concern regarding her limited ability to comprehend text. They reported that although she enjoys reading and has reasonably good decoding skills, she struggles with processing and retaining information. Her parents worried that as she entered third grade, the focus would shift from learning to read towards reading to learn, exacerbating her difficulties. They informed the school and requested an evaluation, but the child study team concluded that Nancy did not qualify for special education, and no IEP (Individualized Education Program) or 504 plan was proposed, both the programs are legally binding documents in USA. An IEP is a working document that provides accommodations for special education services for students with significant difficulties that affects their ability to access general education curriculum, while a 504 plan ensures that students with disabilities are not discriminated against and can access educational opportunities easily. An Individualized Education Program (IEP) includes specific educational goals, specialized instruction, and related services. IEPs are legally binding and are based on the Individuals with Disabilities Education Act (IDEA). A 504 Plan, on the other hand, is designed for students with disabilities that limit major life activities, such as learning, walking, seeing. It provides accommodations and modifications to help students access the general education curriculum. 504 Plans are based on Section 504 of the Rehabilitation Act of 1973 (USA) and aim to ensure equal educational opportunities for students with disabilities.

Exhausting all options available at the school, Nancy's parents sought an independent evaluation. Despite not qualifying for either service, Nancy's parents remained concerned about her ability to succeed academically and plan to seek further support. They also reported that Nancy had significant astigmatism in her right eye (5 diopters) and moderate astigmatism in her left eye (4 diopters), which can impair reading skills. She wore prescription glasses (Right eye RX=-3.75 +5 98 and Left eye RX=-2.5 +4 80) to correct her vision. Astigmatism has been linked to decreased performance on low-level visual tasks such as distinguishing between small details and reading skills (American Optometric Association (AOA) 2016)).

Nancy and her younger sister, lived with her parents, who were both college graduates and employed. She was generally in good health and was accompanied by her grandfather and father to the testing center. Nancy was initially quiet but opened up when her family left, showing eagerness to read. She responded appropriately during testing. To ensure optimal on-task behavior, both the evaluator and the student took necessary brain breaks from the assessment tasks.

A range of assessment tools were selected to obtain a comprehensive understanding of the learner's abilities, which included assessing her decoding skills, comprehension, fluency, as well as her self-monitoring skills during reading. To ensure accurate comprehension assessments, both silent and oral reading tasks were administered, since some students perform better with read aloud, while others demonstrate better comprehension through silent reading (Vidal-Abarca Gilabert & Martínez 2003, Rasinski & Padak 1994). As word identification and decoding become automated in intermediate grades (3-5) and the texts grow linguistically more complex and lengthier in information, issues with comprehension could become more pronounced (Perfetti & Hart 2002, Ehri 2005), as was beginning to be the case with Nancy.

### Assessments administered

The following assessments were given to Nancy:

- Informal Oral Reading Inventory (Qualitative Reading Inventory – QRI-5)
- Listening Comprehension Test
- Cloze Silent Reading Comprehension Test
- Visual Discrimination Test

Typically, teachers use Informal Reading Inventory (IRI), a procedure for analyzing student's reading level as well as their reading behaviors. Students read word lists and running texts through which, several literacy skills and behaviors can be assessed, such as word recognition (sight words), word identification, comprehension in narrative and expository texts, reading accuracy, fluency, decoding skills, vocabulary knowledge, as well as affective factors such as self-esteem, motivation, confidence. The designation 'informal' for this measure is somewhat misleading because the procedures, process, measures, and standards for using these inventories have been based on multitude of observations and data-driven analysis (Leslie and Caldwell 1994, Betts 1946, Johns 1997). The IRIs have been used and revised in clinics and schools for more than 50 years, which makes it slightly misleading (Johns 1997). Thorough field testing, study, discussion, and use have all been applied to criterion-referenced performance levels used in reading inventories (Johnston & Allington 1983, Powell 1984, Johns 1997, Leslie & Caldwell 2006, Betts 1946).

Informal Reading Inventories are effective tools in reading assessment for a variety of reasons. Firstly, they provide a comprehensive evaluation of a student's reading performance, including their accuracy, fluency, and comprehension. This information assists teachers in creating a customized instructional plan that addresses the specific needs of a student. Based on IRIs teachers can determine the instructional level for learners. IRIs offer texts that are suitable for various age groups, covering both narrative and expository genres. IRIs can be easily administered by a reading specialist, giving teachers the chance to periodically evaluate student progress and modify their course of instruction as necessary. IRIs are acceptable for use with children of various ages and reading levels because they have been developed to be age-appropriate and cover a range of reading levels. A Qualitative Reading Inventory (QRI-5, Leslie and Caldwell, 2016) was chosen as one of these IRIs for assessment purposes.

#### **Rationale for selecting QRI (Qualitative Reading Inventory)**

QRI provides a variety of different opportunities to observe a student's reading behavior. For example, passages with pictures for pre-primers, passages designed to assess oral and silent reading, texts with narrative and expository passages at each readability level, passages for listening comprehension, as well as assessment of students' prior knowledge of passage content. When a reader possesses background knowledge about a topic, they find it easier to comprehend text. Conversely, readers have more difficulty with unfamiliar topics. This can influence instructional levels for familiar or unfamiliar texts (Leslie & Caldwell 2016). QRI addresses this issue by assessing prior knowledge of the learner on a given topic. It also provides a measure for word-identification speed – rate of reading for fluency purposes. It allows for teacher's awareness of the child's dialect variations while interpreting the language patterns of the learners. Several researchers use the QRI as a diagnostic assessment tool due to its usefulness and dependability (Sitthitikul 2018).

#### **Results and discussion**

##### **Word recognition in isolation (word list)**

Nancy was administered word lists as a starting point. Word lists can help the teacher decide which level of passage to administer to the student first. They provide a quick estimate of the students' word recognition ability, particularly when the student is new, and teacher has little information on the student. It helps in determining the appropriate starting point for administering the narrative and expository reading passages. One limitation of using a word list is that the words are presented without context, which can make decoding more difficult. Each word list in the word identification component of the QRI has 20 words. In order to avoid any potential student discomfort, the teacher often begins the assessment with a word list that is two or more years below the student's chronological grade placement. It is preferable to start low than to put the student in an uncomfortable situation of putting the reader at a possible frustration level, particularly if the tester is not familiar with the student. Initial

experience of success puts the learner at ease. Since Nancy was a rising third grader, she was given level 1 word list. She was able to read the words in the first-grade list, followed by level 2 and 3 lists, scoring at instructional level (70-85%). Since she scored at the lower end of instructional level for Grade 3 and looking at the declining trend of scores, in order to prevent learner from experiencing failure, word list assessment was stopped. Table 1 shows scores obtained in word list assessment.

**Table 1:**Diagnostic result of isolated word recognition assessment.

Grade level of word list	Score obtained	Reading level
First grade	20/20 = 100%	Independent
Second grade	17/20 = 85%	Instructional
Third grade	14/20 = 70%	Instructional (borderline)

**Word recognition in context and comprehension assessments**

Word recognition demonstrates the ability of a learner to instantly and automatically recognize words based on their visual appearance or prior encounter with the word. This procedure depends on the reader's proficiency with phonics and sight words. Because word recognition enables readers to assimilate text rapidly and effectively, it is a crucial skill for fluent reading. The phrase "word identification," on the other hand, has a wider definition and refers to both word recognition and additional aspects of reading comprehension, such as decoding strategies, in terms of how a reader identifies words. Readers can use multiple strategies for word identification, such as, context cues, structural or morphemic analysis. Word identification is a necessary component of reading, but it also entails comprehension of the words' meanings and their placement within a sentence or paragraph.

The QRI measures three reading levels: independent, instructional and frustrational levels. Students read each passage aloud, and then retell what they remember from the text. As the student reads aloud, the evaluator listens and records the student's miscues (deviations from text, Goodman, 1969). After the passage is read, the student provides a retelling of the passage and answers comprehension questions. The assessment also informs about child's reading behaviors in decoding, comprehension, and fluency. Nancy was administered levels 1, 2, 3 and 4. Table 2 shows results for Word Recognition and Comprehension Questions Scores for Oral Reading.

**Table 2:**Word recognition and comprehension questions scores for oral reading.

Levels for passages	Total miscues	WR level	Comprehension level	Questions missed
1 Narrative	0	Independent	Independent	0/6
1 Expository	0	Independent	Frustration	3/6 (missed 2 fact, 1 inference)
2 Narrative	1	Independent	Independent Instructional	2/10 (missed 1 fact, 1 inference Q)
2 Expository	2	Independent	Frustration	6/10 (fact, inference)
3 Narrative	1	Independent	Independent	1/10 (1 fact)
3 Expository	2	Independent	Frustration	7/10 (fact, inference, evaluation)
4 Narrative	4 (self-corrected)	Independent	Instructional	3/10 (fact Qs)

Nancy read aloud the given passages with ease, making minimal miscues and self-corrected some miscues. She read the given passages with almost hundred percent accuracy. However, in response to comprehension questions, she needed prompting and referred to text (lookbacks) to recall information and details for some questions. In response to retelling for the narrative text at level 2, she captured the main idea well without any prompting, providing specific details without referring to text. She missed one fact and one inference question for level 2 narrative passage but missed 6 questions for expository text. With respect to word recognition for level 3, she made one semantically unacceptable miscue [spot] /sport/which was not self-corrected. Since the miscue [spot] did not fit within the context of the sentence and the student continued reading, it indicated that she was not effectively monitoring her comprehension. Similarly, on a different narrative passage she made two semantically unacceptable miscues [cot] /coat/ and [fright] /front/ without self-corrections.

Nancy read aloud level 3 & 4 passages with moderate ease, and when she encountered some difficult words, sometimes she paused and figured out (e.g. microscope). Even though Nancy's oral reading skills were excellent for all the narrative passages, her comprehension started to dwindle at level four for the narrative passages. However, when given an expository passage for level 3, despite high accuracy rate in word recognition, her comprehension dropped down to frustration as she missed seven out of ten questions. She consistently missed facts, inference-based and evaluative questions. Additionally, there was no response to a related affective question, like, 'what might you do to keep the bear away?' She kept silent. There is no definite right answer to affective questions, as the correctness is determined subjectively based on the possibility of the proposed answer. The intent of these questions is to stimulate imaginative, creative thought to learn how a reader connects with the text.

### **Listening comprehension**

In addition to oral reading levels, it is important to get a rough estimate of the student's listening level or potential for substantial growth in reading in order to learn whether a student can comprehend apart from reading, listening assessments are conducted (Ur 1984, Field 2008). Listening comprehension is often regarded as a representative of a child's comprehension potential in the absence of decoding problems (Gough & Juel 1991, Stanovich 1991). Assessing listening comprehension is important to determine a learner's reading potential because listening and reading comprehension are closely related skills. Both involve understanding and processing information from written or oral text. Listening comprehension can provide valuable information about a student's ability to understand spoken language, including vocabulary, sentence structure, and discourse organization. This information can then be used to inform instruction and support the development of reading skills.

Students' performances can differ depending on their individual strengths and limitations, the specific task and assessment setting, as well as other factors. While some students might be better at decoding and reading aloud text with ease, others might excel at comprehending spoken language and taking in information through listening comprehension. To fully grasp a student's overall language proficiency in early grades, it is crucial to evaluate both reading aloud and listening comprehension level. Teachers generally read aloud a text passage to a student to determine the highest level of material that the student can understand. One is cautioned that working memory and attention can impact listening comprehension, thus, it is sometimes discouraged to use this procedure with students in the primary grades.

The examiner begins the reading aloud of a passage at student's highest instructional level. The examiner then continues reading more difficulty passages until the student reaches frustration level based on comprehension questions. The highest passage at which students miss three or fewer questions becomes their listening level (Leslie & Caldwell 2016). For listening comprehension, Nancy went up to level 3 as instructional for narrative passage but showed frustration at level 2 with expository

passage. Narrative passages typically tell a story, fictional or non-fictional and research shows that students show a higher comprehension score for narrative texts compared to expository texts, which are informational passages (Joshi et al. 2020). Students need to be able to read both types of texts. In the upper grades, the content areas become more important as students get more exposed to informational texts. Since Nancy was a rising third grader, the examiner decided to evaluate Nancy's comprehension level for expository texts.

Nancy demonstrated a higher level of comprehension for narrative texts compared to expository texts. Her scores were in the low ranges at frustration level in expository texts. Nancy's diagnostic results were typical of learners, as readers generally score higher for comprehension with narrative texts than expository texts, because narrative texts follow a predictable and familiar structural pattern with descriptive language and tend to be more engaging. Conversely, expository texts tend to be more complex with unfamiliar vocabulary and informational concepts with deeper meaning (McNamara & Magliano 2009).

The results of the reading diagnosis indicated that she was currently performing at a low average level in reading. According to the QRI-5 assessment, Nancy's reading level was below average for a rising third grader (level 1 for expository texts). Nancy struggled with comprehending expository/informational texts for below her age group, but she showed effective word recognition skills.

Results indicated that Nancy encountered difficulties with comprehending informational texts, making inferences, remembering details, and making connections with the text. The difficulty she experienced with comprehending expository texts in particular highlights a need for targeted instruction and support in this area. While Nancy appeared to have a relatively stronger grasp of narrative texts, it was important for her to develop skills and strategies for comprehending different types of texts, especially as she progresses through the upper grades and encounters more informational texts in content areas.

### **Cloze silent reading comprehension test**

The purpose of the Cloze Silent Reading Comprehension test is to evaluate the student's ability to comprehend content materials using context clues to determine missing vocabulary. Cloze reading is a widely used reading comprehension technique in which students are given a text passage with missing words, where they fill in the blanks with the appropriate words. The purpose of cloze reading is to assess if students can monitor their reading. It helps to improve reading comprehension by engaging students in active reading and developing their ability to use context clues to infer meaning (Davis & Stephens 2011). To fill in the missing gaps in cloze assessments, students must be able to recognize the semantically acceptable words by using their knowledge of the context and vocabulary. Cloze reading has been shown to be a reliable and valid measure of reading comprehension for both native English speakers and English language learners in research by Hudson and Pearson in 2004. Furthermore, cloze reading has been found to be a valuable tool for assessing reading comprehension. Nancy was given passages for various levels:

Pre-primer Level = Instructional (9/10)

Primer Level = Independent (10/10)

Level 1 = Independent (10/10)

Level 2 = Instructional (9/10)

Level 2 = Independent (10/10)

Level 3 = Frustrational (2/10)

The results of the Cloze Silent Reading Comprehension Test indicated that Nancy's silent reading instructional level was two. Nancy's performance on the Cloze Silent Reading Comprehension Test was



at the instructional level for the Pre-primer Level and Level 2, at the independent level for the Primer Levels 1 and 2, and at the frustrational level for Level 3. It is important to note that a student's instructional level may vary depending on other factors such as type of text, prior knowledge, and interest.

**Visual discrimination test**

The purpose of the visual discrimination test is to assess the student’s ability to distinguish likenesses and differences between letters or words. Since Nancy had astigmatism, the task was conducted to evaluate any deficits in visual perception using an assessment incorporating a match-to-target paradigm that is commonly used to measure visual perception and visual spatial skills.

- Test A = 10/10 (Acceptable Level)
- Test B = 12/14 (Acceptable Level)
- Test C = 18/18 (Acceptable Level)
- Test D = 17/20 (18 or above is acceptable)

The results of the Visual Discrimination Test showed Nancy’s visual discrimination skills to be at borderline acceptable level.

It is important to note that standardized tests or informal tests, while they can provide valuable information about a student's reading skills and abilities, should not be considered as the sole factor in determining the suitability of reading materials for a student. A single test should not be used to make definitive conclusions about an individual's abilities. Other factors such as testing conditions, motivation, and other individual differences also affect academic performance. A comprehensive assessment that takes into account multiple sources of information, including standardized tests, informal tests results, observations, and interviews with the individual and those who know them well, would be necessary to accurately evaluate an individual’s reading performance.

Based on the Informal Reading Assessment, Nancy demonstrated strong word recognition skills in context and a good sight vocabulary during oral reading. She was able to decode text at level 4 with ease. She could read and comprehend narrative texts at level 4 (instructional level). She used the strategy of ‘lookbacks’ effectively to respond to comprehension questions. However, she had a significantly restricted understanding of informational texts. Nancy's low comprehension level was concerning, and without timely intervention, it is likely to deteriorate further. The IRI assessment revealed that she required explicit instruction on inference-based, summary-based, and evaluation-based questioning techniques for informational texts, these questions may overlap (Table 3).

**Table 3:**Types of comprehension questions.

<b>Types of comprehension questions</b>	<b>Description and examples</b>
Fact-based	These questions ask for specific information that is directly stated in the text, such as "What color was the car?"
Inference-based	These questions ask the reader to draw conclusions based on information that is implied or hinted at in the text, such as "Why do you think the character acted that way?"
Vocabulary-based	These questions test the reader's understanding of the meanings of specific words or phrases used in the text, such as "What does the word 'obstinate' mean in this sentence?"
Summary-based	These questions ask the reader to provide a brief overview of the main ideas or events in the text, such as "What was the story about?"

Evaluation-based	These questions ask the reader to form an opinion or make a judgment about the text, such as "Do you think the author effectively conveyed their message in this story?"
Affective	An affective question is designed to elicit an emotional or personal response from the reader. "How did the story make you feel?" "Did this character's actions make you feel angry or sympathetic?"

Students who have been excessively trained in phonics and decoding techniques may tend to approach the reading process as a straightforward decoding task, rather than actively seeking to extract meaning from the text. This can result in difficulties with comprehension, as they may not fully understand or engage with the content they are reading. Research shows that over-emphasizing phonics and decoding can lead to surface-level reading that does not fully engage with the content and may hinder the development of higher-level comprehension skills (Ehri 2005, NRP 2000).

Ultimately, the best test of a student's reading skill is their ability to successfully read and comprehend the material. By using a combination of formal and informal tests, as well as considering individual student factors such as interests and prior knowledge, teachers can make more informed decisions about the best reading materials and strategies for each student's unique needs.

Assessment results showed that Nancy needed diverse instructional approaches to improve her comprehension skills, particularly with expository texts at all levels (literal, inferential, evaluative). She would gain from focusing on self-monitoring strategies on meaning during the reading process. She would benefit from a variety of instructional tools and strategies, such as pre-reading strategies, prior knowledge activities, anticipation guides, graphic organizers, summarization of chunks of texts, vocabulary review, questioning during reading, and practice with cloze passages. The intervention in school and/or during individualized tutoring by a professional educator should benefit from the following strategies:

1. Building background knowledge and activating student’s prior knowledge using anticipation guides or KWL ("What I Know, What I Want to Know, and What I Learned") can significantly improve comprehension.
2. Question-Answer Relationship (QAR) – This comprehension strategy teaches students how to ask key questions about their reading, and how to find answers to their questions – whether related to a specific fact, drawing an inference, or connecting the reading to their own experiences. It categorizes questions into four types: Right there, Think and Search, Author and You, On My Own questions that guide students in developing effective comprehension skills (see Figure 1).
3. Cloze passages (expository and narrative): A cloze passage is a reading comprehension exercise in which words are removed (usually every fifth or seventh word or a content word) from a text, and the reader is asked to fill in the missing words. This activity assesses the reader's understanding of the context and their ability to predict the missing words, making it a valuable tool for assessing reading comprehension and vocabulary (see Figure 2).
4. SQ3R (Survey, Question, Read, Recite, Review): SQ3R is a study and reading comprehension strategy that stands for "Survey, Question, Read, Recite, Review." It involves a five-step process:
  - Survey: Skim the text to get an overview.
  - Question: Formulate questions about the content.
  - Read: Actively read the material while looking for answers.
  - Recite: Summarize or recite what you've learned.
  - Review: Review the material to reinforce understanding.

SQ3R is designed to enhance comprehension and retention of information when studying textbooks or other written materials (see Figure 3).

5. **Guided Reading:** Guided Reading is an instructional strategy used in literacy education, particularly in elementary school settings. In Guided Reading, a teacher works with a small group of students, typically at similar reading levels, to provide targeted support and instruction. The teacher selects appropriate reading materials, introduces the text, guides students in reading and discussing the text, and helps them develop reading strategies and skills. This approach aims to improve students' reading comprehension, fluency, and word recognition in a personalized and focused manner.
6. **Summarizing:** Summarizing involves identifying the most significant information and presenting it in one's own words. Readers condense the main ideas, key details, and important points of a text into a shorter, coherent version. This helps readers grasp the text's central message, improve retention, and demonstrate comprehension.
7. **Herringbone Technique:** Herringbone technique is a structured outlining procedure to get the important information in a text by using six basic comprehension questions (who, what, when, where, how, and why (see Figure 4).
8. **Context Clues:** Context clues are a reading comprehension strategy where readers use not only the surrounding words and phrases in a text to infer the meaning of an unfamiliar word or phrase, but also the reading environment and the context of reading. By analyzing the context in which the unknown word is used, readers can make educated guesses about its definition, which helps them better understand the overall content. This strategy encourages self-sufficiency in vocabulary development and enhances comprehension (see Figure 5).
9. **Making Connections** (For instance, This reminds me of ...; I know about this topic because...; This book / story reminds me of ...)
10. **Diagramming paragraph into main idea and details:** Diagramming helps readers visualize the structure of a paragraph or passage, making it easier to identify key information and relationships between ideas. It is a valuable strategy for studying, summarizing, and extracting essential content from texts. To enhance clarity, use colors or highlighting to mark the main idea and details. For instance, a reader might use a specific color for the main idea and another for supporting details.
11. **Using a graphic organizer like a word web with main idea in the center bubble and the rest of the supporting details in the surrounding bubbles.**
12. **Ask Questions and Visualize**
  - What did I just read? Let me rephrase in my own words.
  - If I have to teach this to a younger student or sibling what and how will I tell the student about it?
  - This does not make sense, let me go back and re-read.
  - I have read a lot of information; now, let me stop and think about this for a minute.

Key factors to consider for support at home:

- **Motivation and Engagement:** Positive reinforcement for strengths in other areas can motivate students to continue pursuing their interests and passions. When they receive recognition for their accomplishments, it can spark enthusiasm and engagement in those areas.
- **Emphasizing Progress and Growth:** Struggling readers may be on a journey of improvement, and it's essential to acknowledge their progress in all aspects of their development. Recognizing

achievements beyond reading shows that growth can happen in various domains, helping students understand that they can overcome challenges with dedication and effort.

- Creating a Supportive Environment: Commending students for their strengths fosters a supportive and nurturing learning environment. When educators focus on positive attributes, students feel valued and encouraged, which, in turn, can enhance their overall learning experience and willingness to participate actively in class.
- Ensuring that a struggling student does not feel pressured to read better is crucial for their overall progress and well-being. While the intention behind encouraging improvement may be positive, excessive pressure can lead to added stress and hinder the student's reading development.
- Encourage the student to read for pleasure, particularly non-fiction books about their interests. Regular visits to the library can be beneficial for finding new material.
- Have students retell what was read, can improve their listening and comprehension skills. Provide prompts if needed and ask questions that they can answer to build their confidence.
- Students in the earlier stages of reading development should read both orally and silently, while higher-level students can read silently before answering questions. Encourage the student to read silently.
- Congratulating and commending students on their strengths in other areas is essential for fostering self-esteem, motivation, and a positive learning environment. By recognizing their talents and accomplishments beyond reading difficulties, educators and parents can assist students develop a more comprehensive and optimistic view of themselves, supporting their overall growth and academic progress.

## **Conclusion**

Early intervention is critical for addressing reading difficulties, as it can prevent the gap in reading ability from widening over time. Addressing reading difficulties early on can improve the reader's overall academic performance, increase their engagement and motivation, and promote lifelong learning. Identifying struggling readers' strengths and weaknesses is essential in optimizing instruction and maximizing their potential. The findings of this study can be used to inform assessment and guide the development of individualized goals for a student. Accurately determining a learner's reading comprehension level is crucial in understanding their abilities and tailoring instructional materials to their level. In summary, the study's findings highlight the importance of using a variety of tools and assessments to understand a student's reading abilities and requirements. By creating a personalized plan for instruction based on assessment results, teachers can help struggling readers to achieve their full reading potential.

## **Limitations and significance of the study**

The author would like to acknowledge that single case studies are limited in terms of generalizability and have constraints. In this study, the researcher's primary focus is to provide a rich and detailed understanding of a specific in-depth case. These findings are context-specific and not intended for broad generalization. Future research might build on these findings or replicate the study in different contexts to enhance generalizability. The researcher would like to emphasize that single case studies are valuable for exploring complex, unique cases in-depth. This single case study is valuable as it offers several contributions to a deeper understanding of the subject of addressing language and literacy difficulties in students, particularly focusing on reading in early grades. Here are the key ways in which this study adds value:

**In-depth analysis:** The study provides a detailed and in-depth analysis of a struggling third-grade reader's reading abilities. It goes beyond mere quantitative assessment and delves into qualitative aspects, such as comprehension skills and emotional impacts.

**Tailored intervention:** By identifying the specific strengths and weaknesses of the student, the study offers the potential for tailored interventions. It recognizes that reading abilities can vary, even within a single student, as seen in the contrast between narrative and expository texts. This insight can guide educators in developing personalized strategies to improve the student's reading skills.

**Emotional and social development:** The study recognizes the emotional impact of poor language and literacy abilities, emphasizing the importance of addressing not just academic challenges but also the emotional and social development of learners. This holistic approach is crucial in ensuring the well-rounded development of students.

**Early intervention:** The study underscores the significance of early intervention in addressing reading difficulties. It emphasizes that identifying and addressing these challenges in the third grade can prevent the gap in reading ability from widening, which can have long-term implications on academic performance and motivation. It emphasizes the critical need for early intervention to prevent the gap in reading ability from widening over time.

**Informing assessment and instruction:** The findings have practical applications in informing assessment practices and guiding the development of individualized instructional goals. It stresses the importance of using various tools and assessments to understand a student's reading abilities, thereby helping educators make informed decisions about instructional materials and strategies.

**Optimizing academic performance:** Ultimately, the study's value lies in its potential to optimize a student's academic performance, increase engagement, and promote lifelong learning. It aligns with the goal of helping struggling readers reach their full reading potential, thereby improving their overall educational journey.

In summary, this single case study offers a holistic perspective on addressing language and literacy difficulties in students, highlighting the emotional, academic, and social aspects. By providing insights into individualized assessment and intervention, it contributes to a deeper understanding of how to support struggling readers effectively, potentially benefitting both educators and students in the process.

**Figure 1:** Sample QAR (question-answer relationship task for second graders)

**Figure 1**  
**Sample QAR (Question-Answer Relationship) task for second graders**

Instructions:

1. Read the following passage: "My favorite animal is the dolphin. Dolphins live in the ocean and are known for their intelligence and playfulness. They are also great swimmers and can jump really high out of the water. Dolphins like to travel in groups called pods. They communicate with each other by making clicking and whistling sounds."
2. Answer the following questions:
  - Right There Question: Where do dolphins live?
  - Think and Search Question: What are some characteristics of dolphins?
  - Author and You Question: Why do you think the author likes dolphins?
  - On My Own Question: Have you ever seen a dolphin before? If so, where and when?

Note: The QAR strategy helps students understand the relationship between the question and the text and encourages them to use their prior knowledge and experience to make connections with the text.

**Figure 2:** Sample Cloze Passage for Second Graders

Figure 2  
**Sample Cloze Passage for Second Graders**

Summer is my favorite season. I love to go to the \_\_\_\_ (beach) and play in the sand. I also like to go swimming in the \_\_\_\_ (pool) with my friends. Sometimes we have \_\_\_\_ (barbecues) and eat hot dogs and hamburgers. One time, my family went on a \_\_\_\_ (picnic) and we saw a beautiful \_\_\_\_ (butterfly) with orange and black wings. I can't wait for \_\_\_\_ (summer) to come again so I can have more fun!

**Figure 3:** SQ3R

Figure 3 SQ3R		
Letter	Word	Meaning
S	<b>Survey</b>	Scan through to get an overview, headings, pictures, first sentence of paragraphs
Q	<b>Question</b>	Ask questions about the text, purpose
R	<b>Read</b>	Read for key ideas, supporting details, new words, highlight
R	<b>Retell</b>	Summarize main points in your own words
R	<b>Review</b>	Go back over the text for clarification, understanding

Figure 4: Herringbone Technique

Figure 4  
Herringbone Technique

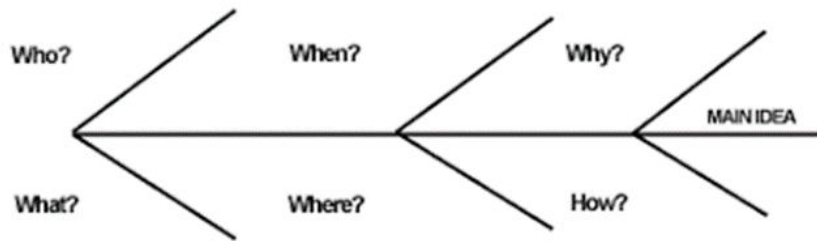


Figure 5: Context Clues

## Context Clues

When strong readers come to an unfamiliar word, they can use context clues to help them determine the meaning of the unknown word.

**There are different types of context clues.**

<b>I</b>	<b>Inference</b> – the meaning is not given so you must use text clues	<i>Don't want to work with Ricardo, unless you want to hear him talk about himself. He is so arrogant.</i>
<b>D</b>	<b>Definition</b> – the meaning of the word is explained in the sentence	<i>Ricardo is so arrogant. He thinks he is more important than everyone else.</i>
<b>E</b>	<b>Example</b> – an example of the word is in the sentence or nearby sentences	<i>Ricardo is so arrogant. He is always bragging about how great he is at sports.</i>
<b>A</b>	<b>Antonym</b> – a word with opposite meaning is used in the sentence or near by sentences	<i>Ricardo is so arrogant. He needs to learn to be humble like his little brother Jose.</i>
<b>S</b>	<b>Synonym</b> – words with similar meaning are used in or near the sentence	<i>Ricardo is so arrogant, proud, self-centered, and over-bearing.</i>

Strong readers will always read the sentences surrounding the unknown word to look for clues.

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