

Error Analysis in Word Reading and Spelling

In the data-based individualization (DBI) framework, when a student demonstrates limited response to a validated intervention delivered with fidelity, educators use diagnostic data to determine how to best intensify the intervention. Errors in students' oral reading and spelling are examples of informal diagnostic data that educators may use to better understand students' skill gaps. **Error analysis** is a process for analyzing student errors to (a) identify common types of errors for a student and (b) use this information to better align the intervention with the student's needs. Research shows that learning to read and learning to spell rely on much of the same underlying knowledge (Moats, 2005–2006; Moats et al., 2006). Therefore, educators can use information from oral reading and spelling errors to inform instructional decisions in both areas. This tip sheet provides an overview of how to analyze students' errors in oral reading and spelling.

How does error analysis differ from miscue analysis and running records?

Miscue analysis and running records focus on interpreting the student's reading behavior and require educators to make subjective judgments about the student's errors that may result in a lack of reliable information to inform reading instruction (Fawson et al., 2006; Paris & Carpenter, 2003). In miscue analysis, educators analyze reading errors to determine if they are related to the meaning, syntax, or graphophonic (i.e., letter and sound) cues in the text. In running records, educators analyze errors to determine if they are related to the meaning, structure, or visual information in the text. Error analysis focuses on analyzing the features of the words that the student misreads and is a more effective method for aligning instruction with a student's word reading needs (Toste et al., 2025).

1. Select student work to analyze.

When conducting an error analysis, first collect a sample of student work and mark or notate the word reading or spelling errors. Exhibit 1 provides information about the types of work samples that educators may use to conduct error analysis. Write the student's error above the written text for oral reading assessments and follow all assessment scoring procedures.



Exhibit 1. Types of Work Samples for Error Analysis

Focus	Types of work samples	Example of notated work sample
Oral reading	- Oral reading fluency or word identification fluency progress-monitoring assessments - Other sources of connected text - Word lists	forst exkept The forest was quiet, except for the rustling leaves.
Spelling	- Writing sample - Spelling assessment	Yesterday we had a party at skool. We had balones because it was almost sumer. We played a game. It had lots of rous but I thot it was fun. It will be vakashan soon.

2. Categorize student errors and identify error patterns.

After scoring an oral reading passage or writing sample, the next step is to categorize the types of errors. Multiple ways exist to categorize the types of errors. One way is to categorize errors as related to phonemic, orthographic, morphological, and high-frequency word knowledge (Toste et al., 2025). Accurate reading and spelling require the integration of phonemic, orthographic, morphological, and high-frequency word knowledge (Moats et al., 2006). Exhibit 2 defines the error types and provides examples.

Exhibit 2. Error Types, Definitions, and Example Errors

Error type	Definition	Example errors
Phonemic	Errors involving a 1:1 letter-sound correspondence. For example: - Vowel or consonant substitutions - Vowel or consonant omissions	- Brash for brush - Junp for Jump - Westerday for yesterday



Error type	Definition	Example errors
Orthographic <i>Note:</i> orthographic errors in spelling are often phonetically plausible.	Errors involving more complex spelling patterns (i.e., patterns beyond 1:1 letter-sound correspondence). For example: ▪ Vowel teams ▪ VCe (i.e., Vowel-Consonant-e) ▪ Vowel-r ▪ Complex consonants ▪ Digraphs/trigraphs ▪ Syllable junctures	Reading ▪ Scrēch for screech ▪ Hat for hate ▪ /s/ /k/ /ch/ /oo/ /l/ for school Spelling ▪ Skreach for screech ▪ Hait for hate ▪ Skool for school
Morphemic	Errors involving roots or base words, prefixes, and suffixes.	▪ Desision for decision ▪ Inprove for improve ▪ Classis for classes
High-frequency words	Errors involving common words with irregular spellings. For example: ▪ The ▪ Have ▪ Would	Any misspelling or misreading of a high-frequency word. For example: Reading: ▪ Hāve for have Spelling: ▪ Wood for would

Example of Categorizing Oral Reading Errors

Exhibit 3 is an example of a notated oral reading fluency passage and Exhibit 4 provides a sample error analysis chart for categorizing oral reading errors.



Exhibit 3. Example of Notated Oral Reading Fluency Passage

The Curious Fox

One crisp aut^{NR}umn morning, a young fox named Fern peek^{peek}ed out from her den. The for^{forst}est was quiet, ex^{exkept}cept for the rustling leaves. Fern had never explored bey^{behind}ond the big oak tree, but today she felt brave. She trotted past the tree, sniffing the air and listening for sounds. Suddenly, she hear^{hear-d}d a splash! Fern crept closer and saw a raccoon washing berries in the stream.

“Hello,” Fern said shy^{shy-lie}ly.

The raccoon smiled. “Want to try one?”

Fern tasted a berry. It was sweet and juicy. She than^{thank}ked the raccoon] and continued her journey. Along the way, she saw squirrels gathering nuts and birds flying south. Fern realized the forest was full of surprises. When she returned home, she told her family about her adventure. They listened closely, proud of her courage.

Fern couldn’t wait to explore again tomorrow.

Note: Oral reading fluency passage generated by Microsoft Copilot.



Exhibit 4. Sample Error Analysis Chart

Printed word	Student response	Teacher analysis (What caused the error?)	Error type
autumn	No response	Vowel team in initial sound, silent final consonant	Orthographic
peeked	peek	Omission of suffix (-ed)	Morphemic
forest	forst	Short vowel omission (ě)	Phonemic
except	exkept	Misreading soft “c”	Orthographic
beyond	beyind	Short vowel substitution (ĩ for ö)	Phonemic
shyly	shy-lie	Misreading suffix (-ly)	Morphemic
heard	hear-d	Substitution of ‘hear’	High-frequency word
thanked	thank	Omission of suffix (-ed)	Morphemic

For this student, the teacher sees a range of error types. One error pattern falls under the morphemic error type, in which the student often misreads or omits suffixes.

Example of Categorizing Spelling Errors

Exhibit 5 is an example of a notated writing sample and Exhibit 6 demonstrates how the teacher would categorize errors.



Exhibit 5. Example of Notated Writing Sample

Yesterday we had a party at skool. We had balones because it was almost sumer. We played a game. It had lots of rouls
but I thot it was fun. It will be vakashan soon.

Exhibit 6. Sample Error Analysis Chart

Student's spelling	Correct spelling	Teacher analysis (What caused the error?)	Error type
skool	school	Complex consonants (sk for sch)	Orthographic
balones	balloons	Syllable juncture (l for ll); vowel teams (o for oo); suffix (es for s)	Orthographic and morphemic
sumer	summer	Syllable juncture (m for mm)	Orthographic
rouls	rules	Vce (ou for u_e)	Orthographic
thot	thought	Vowel teams (o for ough)	Orthographic
vakashan	vacation	Consonant substitution (k for c); suffixes (shan for tion)	Phonemic and morphemic
hav	have	Misspelling (no ending e)	High frequency

The teacher notices the predominant spelling errors are orthographic, with several errors related to vowel combinations.

3. Plan targeted instruction.

After categorizing the student's errors and identifying error patterns, the next step is to plan targeted instruction based on this information. Note that conducting error analysis on more than one work sample may be helpful for identifying the most salient error



patterns before adapting the student’s intervention. Exhibit 7 provides possible intervention adaptations, example strategies, and related resources based on error categories.

Exhibit 7. Possible Intervention Adaptations, Example Strategies, and Resources by Error Type

Error type	Possible intervention adaptations	Example strategy	Related resources
Phonemic	Explicit and systematic instruction in consonant and phoneme vowel identification	Have students write and group words with the same short vowels into “vowel families.”	Phonemes Linked to Letters (REL Southeast) Letter-Sounds (REL Southeast) Letter-Sound Identification (NCII) Change One Letter (NCII) Read and Write Words With Consonant Blends (NCII)
Orthographic	Explicit and systematic instruction in spelling patterns within words and between syllables	Provide models of reading vowel combinations and their variants in which initial consonants change but vowel combination remain.	Vowel Pattern Word Sort (REL Southeast) Advanced Word Building (REL Southeast) Short or Long? (NCII) Hide and Seek (NCII)
Morphemic	Explicit and systematic instruction in prefixes, roots/base words, both kinds of suffixes (inflections and derivational suffixes), combining forms, word origin, and the relationship between meaning and spelling	- Use root and affix cards to build and break apart words into morphemes. - Provide guided practice in reading prefixes and suffixes in isolation and in a target multisyllable word.	Morphology (REL Southeast) Base Word, Prefix, Suffix, (REL Southeast) Vocabulary Instructional Routine Third Grade: Base Words and Affixes (NCII) Vocabulary Instructional Routine: Base Words and Prefixes (NCII)



Error type	Possible intervention adaptations	Example strategy	Related resources
High-frequency words	Explicit instruction to develop automatic recognition of high-frequency words	- Use word walls to build and maintain recognition of sight words. - Use practice lists and word cards to build fluency and automaticity.	High-frequency Words (REL Southeast)

Note: Related resources address the error type but do not necessarily illustrate the example strategies listed. NCII = National Center on Intensive Intervention. REL Southeast = Regional Educational Laboratory Southeast

Conclusion

When a student is not making adequate progress in a reading intervention, one possible reason for this may be that the intervention needs to be better aligned with the student's learning needs in the area of word reading or spelling. Error analysis helps teachers identify patterns of errors to better align instruction to the word reading and spelling needs of the student. This document provides one approach to categorizing oral reading and spelling errors. For a different approach to categorizing oral reading errors, see [Error Analysis for Reading](#) within the IRIS Center module [Intensive Intervention \(Part 2\): Collecting and Analyzing Data for Data-Based Individualization](#). Additionally, NCII provides a [phonics inventory](#) which educators may use to collect student data for error analysis.



References

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