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# miscues:

## meaningful assessment aids instruction

*By Pamela Luft*

LeRoy was a deaf sixth grader who used signs and his voice to communicate. Yanetta was a deaf eighth grader who had deaf parents and preferred American Sign Language (ASL). Michael was a deaf fifth grader in a suburban school who attended an oral program and used his voice exclusively to communicate. All three students struggled with reading. They had taken standardized tests and other tests required by the No Child Left Behind legislation, but the tests did not give their teachers the insight to develop an effective teaching plan. For LeRoy, Yanetta, and Michael, like so many deaf students (Charlesworth, Charlesworth, Raban, & Rickards, 2006; Luckner & Handley, 2008; Schirmer, 2000), reading comprehension threatened to be a barrier that prevented them from achieving academically.

In an effort to assess their reading more fully and to develop effective instructional plans, teachers decided to use miscue analysis. Miscue analysis has been defined as a structured observation of student reading (Chaleff & Ritter, 2001) in which teachers give students interesting and challenging material and systematically note errors as they read (Goodman & Watson, 1998; Goodman, Watson, & Burke, 1987; Miller, 1995). Used since the late 1960s, miscue analysis enables teachers to see how effectively students use and apply content and textual schemata and observe students' successful and unsuccessful skills and strategies as they make sense of print. Wilde (2000) has suggested use of miscues for individualized academic work and Individualized Education Program planning, particularly for struggling readers. For deaf students, linguistic and experiential factors may interfere with miscue evaluation, but in recent years it has been adapted for use with them (Ewoldt, 1981; Chaleff & Ritter, 2001). Our experience with LeRoy, Yanetta, and Michael shows how teachers can use miscue analysis to identify

**Miscues:**
Figures 1, 3, and 4 show samples of how a teacher documents a student's misunderstanding of text.

**Figure 1: Text for LeRoy's Miscue Analysis**

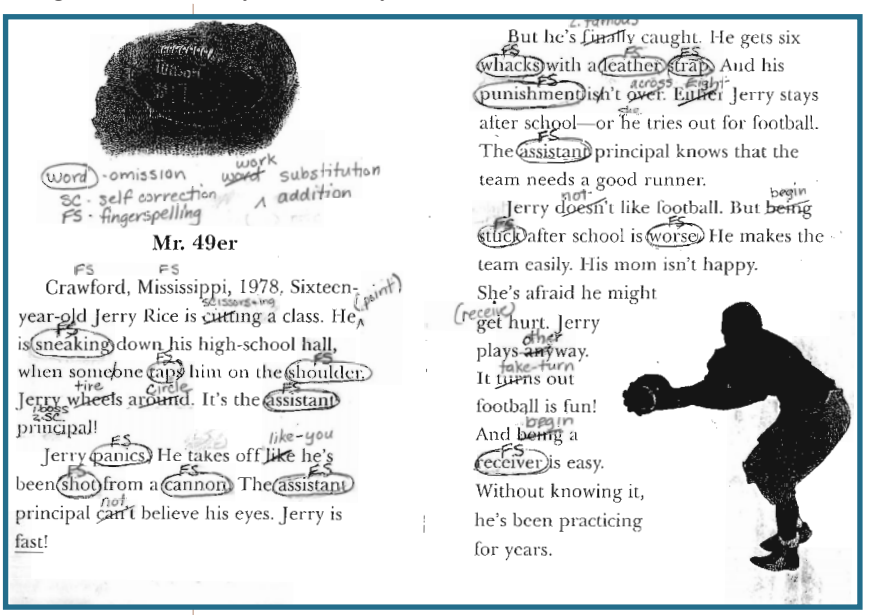


**Figure 2: This chart illustrates how a teacher transfers the miscue data into a form for analysis.**

| LeRoy's Scored Miscue: Mr. 49er | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **TEXT** | **MISCUE** | **OMISS** | **SUBSTITUTIONS** | | | **ADDN** | **REVRS** | **REPTN** | **AIDED** | **SIGNED** | **SELF-CORRECT** | ***Comments*** |
| | | | Beginning | Middle | End | | | | | ENG/ASL | | |
| Crawford, MS | FS | | | | | | | | | OK | | |
| right | Correct | | | | | | | | | OK | | Common Use Error |
| But | And | | 0.5 | | | | | | | | | Makes sense |
| pressure | 1. FS 2. SC | | | | | | | | | | 1 | |
| is | it | | | 0.5 | | | | | | | | noncentent for ASL |
| his | her | | | | | | | | | OK | | sloppy |
| drops | disappear | | | | 1 | | | | | | | |
| passes | pass-by-s | | | | | | | | | 1 | | |
| supposed | think | | 0.5 | | | | | | | | | mouths "think" |
| Fans | fan-himself | | | | | | | | | 1 | | |
| a while | all | | | 0.5 | | | | | | | | "After all" makes sense |
| settles | sit | | | | 1 | | | | | | | |
| season | s.. | | | | 1 | | | | | | | |
| got | great | | | 0.5 | | | | | | | | "he's great" makes sense |
| By | Past | | | | | | | | | 1 | | |
| **TOTALS** | | **53** | **3.5** | **5.5** | **11.5** | **0** | **0** | **0** | **0** | **13.5** | **7** | |
| | | | | | **Total MISCUE** | | **87** | | | | | |

Percent of words correctly read by student: _____ [total words - miscues/total words]
648 - 87 = 561 / 648 = 86.57%

**Brief statement of decoding patterns:**

- Omissions and fingerspelling patterns: 51 of 53 = FS; could improve use of context, bricks and pressure used FS to SC (bricks may have used picture)
- Substitution patterns: many show strong graphophonic skills: begin/being, proud/proud; others show making sense: supposed/think, know/think
  - commonly substituted female pronouns for male (she/he, her/his)
- Addition, repetition, and reversal patterns: additions of pointing for he/his, 2 repetitions of single words (every, greatest = emphasis)
- Teacher-aided words: none
- Signed English/ASL issues and patterns: 13.5 conceptual errors that may impair comprehension: scissors/cutting class, tire circle/wheels around, take-turns/turns, before/past, pass-by/pass (ball)
- Self-corrections: 7 self-corrections with 3 for small or non-content word errors (his/has, from/of)
  - not clear how he decoded "pressure" from the context

**Other observations and comments:**

- Surprising lack of recognition of football words: receiver, defender, positions, score, tackle, records, passes, touch-down signed as 2 words
- Used "disappear" for both drops and deep
- Would benefit from a meaning-focused approach; may be overusing word parsing and exact reading from prior Signed English instruction
- Six errors made sense (in the phrase or when signing); 2 errors are commonly mis-signed (not counted off): right away = correct a-way
- Surprising error with "can't" signed as "don't" or "not"
- He uses spatial indexing for he/his but never set up locations in space that he used in his signing
- Used a name sign throughout the story

appropriate research-based literacy practices for deaf students regardless of the communication policies of their schools.

## LeRoy— A Football Fan

### *Text Selection*

LeRoy was interested in football and talked about NFL star Jerry Rice on several occasions. For this reason a chapter about Rice's life, "Mr. 49er" from the book *Football Stars* by S. A. Kramer, was selected for his miscue analysis. The chapter's reading level is 3.9 on the Flesch-Kincaid scale. The text was copied with enough space between each line of type to note how LeRoy decoded each word. (See Figure 1.) At 648 words, the text was somewhat long; however, it was a complete story and it began while Rice was in school, a fact with which we assumed LeRoy would surely identify.

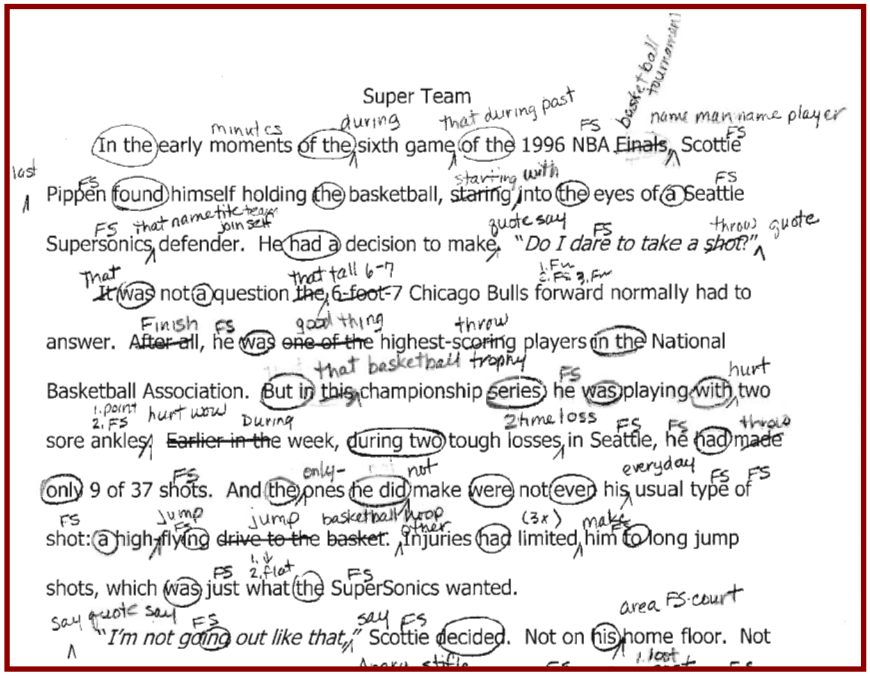
LeRoy was asked if he would be willing to read and be videotaped and he agreed. His assignment was to read "aloud and in sign" in a corner of the classroom where he was comfortable and relaxed. After he completed the reading, the teacher used a retelling procedure to further analyze his comprehension.

### *Scoring*

After LeRoy completed reading, the teacher marked his errors directly on her copy of the text and then transferred the information to a form based on the work of Miller (1995). (See Figure 2.) To show areas where LeRoy's signs did not reflect accurate representation of the English text this form was adapted by this author to include a new column to mark sign-related errors. LeRoy's program was based in *conceptually correct sign language*; therefore his teacher marked as correct LeRoy's translation of the English words "big," "large," and "great" into the sign *big*. Were LeRoy in a program using *English-based signs*—as he had been in the years prior to testing—he would have needed to produce initialized signing to have his translation marked correct.

The teacher evaluated LeRoy's fingerspelling according to whether or not the word was commonly fingerspelled in the Deaf community or in her classroom. If LeRoy fingerspelled

**Figure 3: Text for Yanetta's Miscue Analysis**




a word that was usually rendered in sign, his fingerspelling was marked to indicate a non-meaningful production. The remaining procedures followed Miller's (1995) guidelines with Ewoldt's (1981) recommendations for coding the signs of American Sign Language according to syntactic and semantic acceptability.

### *Results*

LeRoy had a total of 87 miscues over 648 words for a score of 86.6 percent. He had seven instances of self-correction and no additions, reversals, repetitions, or words aided. His substitution patterns showed 3.5 beginning-word, 5.5 middle-word, and 11.5 end-of-word miscues. LeRoy showed word parsing skills that were sometimes accurate and sometimes not. For instance, Deaf adults use one sign to show the terms "is not" and "touchdown"; LeRoy used two signs for those terms. LeRoy also seemed more focused on decoding than meaning-making, resulting in inaccuracies such as signing *scissors* for the English idiom "cutting class" and signing *wheel* and *round* (as in a circle) when he read that a person "wheels round." LeRoy's retelling evaluation was below 60 percent, and he seemed to focus his retelling on the illustrations rather than on the text. Clearly, he struggled with comprehension, even with a familiar topic.

## A Reading Plan

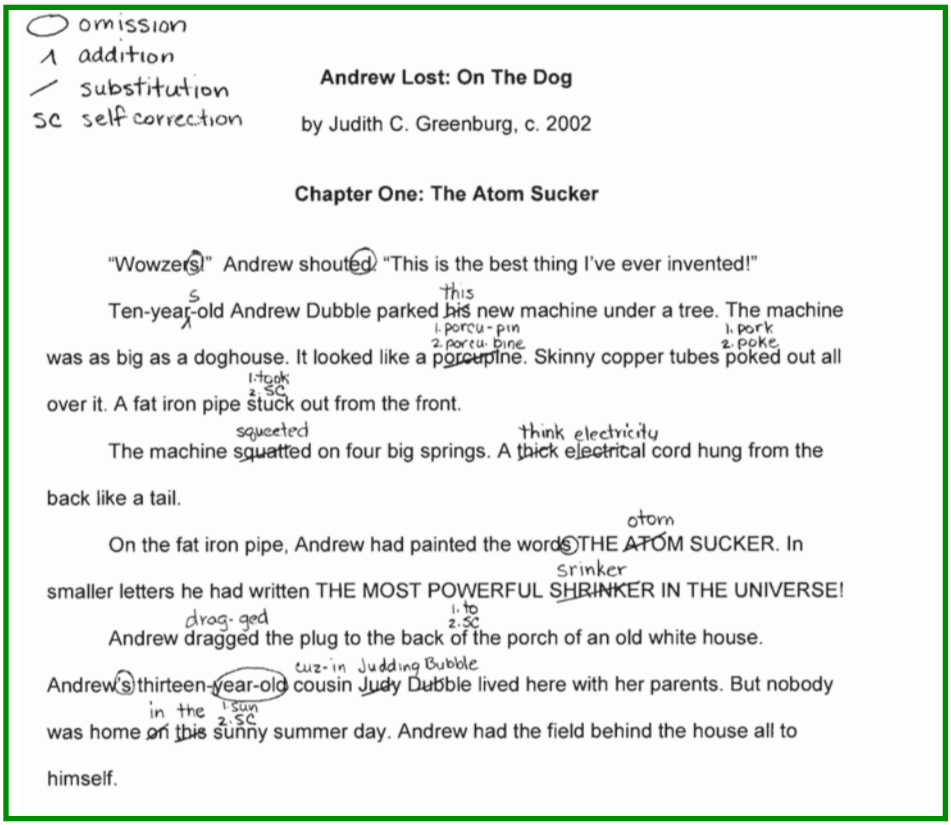
LeRoy's miscue analysis indicated that teachers should develop a reading plan for him that focused on meaning using tools to increase his comprehension and integrating and building on his decoding skills. This could begin by activating LeRoy's background knowledge through activities such as developing a concept map about football and undertaking a Know-Want-Learn discussion about Jerry Rice's life. Then LeRoy could reread each paragraph while his teacher monitored his comprehension, including discussions of known and unknown words, sentence syntax, and understandings linked to the Know-Want-Learn chart and concept map. Discussions of sign choice would build on LeRoy's current use of beginning letters to decode words, combining this with signs that better fit the topic and context of the sentence. For example, LeRoy tended to make sign choices for English cognates that were similar at the beginning of the word, such as the sign *angry* for the English word "agree."

A first rereading focusing on meaning-making could lead to another rereading focusing on analyzing the story's structure. This story uses a consistent time sequence that LeRoy could incorporate to formulate a story "road map" or timeline of key events. Another set of strategies, based in ASL, would focus on effective use of spatial indexing to consistently mark key persons and events. This strategy would reinforce meaning-making as well as support a stronger sense of story structure. The time-sequence strategy could be linked to other nonfiction reading.

## Yanetta and Michael
## More Evaluation, More Insights, More Plans

Halfway through eighth grade, Yanetta was compliant but reticent in classes, showed little interest in academics, and yet was able to converse at a high level on topics that interested her. The book chosen for Yanetta's miscue analysis, based on her personal interests, was *Scottie Pippen: His Life Story* by Peter Hurrell, the story of a basketball star. The book's reading level is a 6.8 on the Flesch-Kincaid readability scale. (See Figure 3.) Yanetta read by translating the text into ASL, a process she handled fluently. This meant that the teacher should evaluate the miscue analysis on the phrase- and sentence-level. Her score was 96.88 percent, with no scored omissions, repetitions, substitutions, or words aided, and one self-correction. The substitution columns showed no beginning-word or middle-word errors and one end-of-word error. She was marked as having 5.5 miscues in her sign choices. These included a possible misreading of "stare" for which she signed *start with*. Additional analysis of the videotape showed that she was able to accomplish this real-time translation by using sign-holds and repetitions and by pausing at English punctuation marks. During these times Yanetta was observed to scan ahead in the text. Overall, Yanetta demonstrated high levels of bilingual fluency in decoding written English into conceptually appropriate and spatially accurate ASL and her use of sign space, sign directionality, and

**Figure 4: Text for Michael's Miscue Analysis**



omission
addition
substitution
sc self-correction

**Andrew Lost: On The Dog**

by Judith C. Greenburg, c. 2002

**Chapter One: The Atom Sucker**

"Wowzers!" Andrew shouted. "This is the best thing I've ever invented!"

Ten-year-old Andrew Dubble parked his new machine under a tree. The machine was as big as a doghouse. It looked like a porcupine. Skinny copper tubes poked out all over it. A fat iron pipe stuck out from the front.

The machine squatted on four big springs. A thick electrical cord hung from the back like a tail.

On the fat iron pipe, Andrew had painted the words THE ATOM SUCKER. In smaller letters he had written THE MOST POWERFUL SHRINKER IN THE UNIVERSE!

Andrew dragged the plug to the back of the porch of an old white house.

Andrew's thirteen-year-old cousin Judy Dubble lived here with her parents. But nobody was home on this sunny summer day. Andrew had the field behind the house all to himself.

non-manual markers was extremely clear and accurate. Teachers should build links between her experiences and the information that unfolds in textbooks. These links would enhance her academic performance by reinforcing the high-level skills Yanetta applies to personal reading.

Michael, who loved to talk about spaceships and UFOs, was evaluated reading the first chapter from *Andrew Lost on the Dog* by Judith Greenburg. This chapter's reading level is a 4.1 on the Flesch-Kincaid readability scale. (See Figure 4.) As an oral student, Michael's evaluation proceeded similarly to that of hearing students except that his frequent omission of ending sounds—/s/ or /z/ for plurals and /t/ or /d/ for past tense verbs—was recognized as a possible consequence of hearing loss and, in accordance with Miller (1995), who addresses dialect and speech differences, was not counted as error.

Michael's results showed 51.5 miscues across 696 words for a score of 92.6 percent. Analysis of patterns showed 4.5 miscues for omitted words, no additions, reversals, repetitions, or words aided and 8 self-corrections. Substitutions indicated 8.5 beginning-word errors, 22.5 middle-word errors, and 16 end-of-word errors. Michael appeared to misread words by confusing them with words that were orthographically similar. Some of the confusions reflected accurate understanding of content, such as his reading of *electricity* for "electrical" and *controller* for "controls." What concerned his teacher, however, were those confusions that were not semantically correct. For example, Michael said *skinner tub* for "skinny tube," *less* for "like," *fur* for "far," *pork* for "pocket," and *buttons* for "bottoms." In addition, he said *in* for "a," *look good* for "let's go," and *but* for "past."

An instructional plan for Michael would build on his good initial letter phonics skills to combine middle- and end-of-word letter sounds with a focus on text comprehension, including self-monitoring and psycholinguistic strategies that focus on syntactic substitutions (Schirmer & McGough, 2005). In addition, Michael could reread the story with his speech teacher to work on contextual correction of the five instances of missing /s/ or /z/ plural sounds and 14 instances of missing /t/ or /d/ for past tense.

## Effective Assessment Means Effective Teaching

For LeRoy, Yanetta, and Michael, miscue analysis provided an opportunity for testing that was authentic, descriptive, and comprehensive. It provided meaningful assessment across the range of communication methods. It also allowed a choice of reading material that was flexible and student-centered, thereby allowing teachers to ensure that the reading content provided sufficient and familiar context so that it was an authentic and optimal measure of the students' abilities. Miscue analysis helped teachers understand their students' reading skills, improve their teaching strategies, and make their instruction more effective.

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