A descriptive study examined reading errors of emergent at-risk readers to determine which cueing system(s) they used initially, and whether or not there were changes over time in cues they used during reading. Running records of 30 first-grade children (participating in Reading Recovery programs at urban or suburban public elementary schools in five counties in California) taken during the first three months of school were analyzed for the types of cues used. Responses were coded as Accessing meaning (M), accessing structure (S), accessing visual aspects of print (V), meaning and structure (MS), structure and visual (SV), meaning and visual (MV), and meaning, structure, and visual (MSV). Results indicated that: (1) MS represented the majority of the cueing sources for substitutions for the first five lessons, and M, S, and MS represented virtually all of the substitutions made in all lessons; (2) the use of M, S, and MS increased as text level and difficulty increased between lessons 1 and 30; (3) the use of V information gradually increased between lessons 1 and 30; and (4) in lessons 10 through 30, V, MV, and MSV combined represented virtually all of the self-corrections made. Conclusions from the data are constrained by the reliability of running records and the small sample size. Findings suggest that, just as other children, at-risk emergent readers draw upon their knowledge of the world and their familiarity with language structure when they approach the initial task of learning how to read. (RS)
High-Risk Emergent Readers' Use of Cueing Systems

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Theoretical Framework
Readers use varying sources of information to obtain meaning from print: semantic cues, syntactic cues, and graphophonic cues. Conflicting arguments have been made about the sources of information most likely to be used by good and poor readers. For example, Smith (1971) hypothesized that better readers are less reliant on graphic information and that the poor reader is a "slave to print." Others have also suggested that struggling readers over-rely on visual information when they encounter unknown words in print (Goodman, 1973; Carbo, 1988).

On the other hand, studies of the oral reading errors of first-graders have indicated that both good and poor readers make contextually appropriate errors (Beimiller, 1970; Weber, 1970). Based on his work with first grade students, Beimiller (1970) suggested that during the very beginning stages of learning to read, children rely on contextual information and few of their errors are graphically bound. As reading develops, graphic information is used more so that both context and graphic information influence oral reading errors. Weber found that around 90% of the errors made by both good and poor first graders were grammatically acceptable with the preceding text. Stanovich (1980) indicated that there appears to be no strong tendency for more fluent readers to rely more on context. He concluded that an interactive-compensatory model may best account for reading error behavior. "The compensatory assumption states that a deficit in any knowledge source results in a heavier reliance on other knowledge sources, regardless of their level in the processing hierarchy....the poor reader who has deficient word analysis skills might possibly show a greater reliance on contextual factors (p.63)."

The purpose of this descriptive study was to examine reading errors of emergent at-risk readers to determine which cueing system(s) they used initially, and whether or not there were changes over time in cues they used during reading.

Objectives
The objectives of this investigation were twofold: 1) to examine the running records (Clay, 1985) of text reading by beginning readers who had been designated in the bottom 20% of their first grade classrooms in order to discover which sources of information (meaning, structure, or visual) they used for problem-solving at points of reading difficulty; and, 2) to survey running records over the first three months of school in order to determine if changes occurred in the patterns of cue usage by these emergent readers.
Methodology
Running records of 30 first-grade children taken during the first three months of school were analyzed for the types of cues used. All children were receiving one-on-one tutorial assistance in reading after being selected from the bottom 20% of their first grade cohort based upon initial teacher identification and subsequent testing using Clay’s Observational Survey (Clay, 1985). Running records were obtained for analysis of each child’s reading for the first five days (lessons 1-5) of tutorial instruction, and for lessons 10, 15, 20, 25, and 30 for a total of 300 running records.

The sample of running records was obtained from tutors-in-training as teacher leaders for Reading Recovery intervention in school-based programs. All running records were recorded in the uniform manner as delineated by Clay (1985). Children in the sample were of varying ethnic backgrounds and attended urban and suburban public elementary schools in five counties in California.

Data Source
Running records of children’s text reading was the source of data. The running records were obtained as children read emergent reader texts appropriate to their level of literacy development. Children had been introduced to the running record text material the preceding day; therefore, the material was neither novel nor well-known, and it represented an opportunity for children to problem-solve any difficulties by utilizing their current level of accessing cueing systems.

Running records were analyzed by considering the type of miscues made and how children attempted to resolve them through efforts to self-correct or to make substitutions.

For each substitution or self-correction, children’s responses were coded as:
1) accessing meaning (M) if the substitution or self-correction comprised a meaningful response related to the story and/or pictures;
2) accessing structure (S) if the substitution or self-correction comprised a response that was syntactically appropriate;
3) accessing visual aspects of print (V) if the substitution or self-correction comprised a response that was visually similar to the expected response. Additionally, combinations of cue usage were coded as:
4) MS (meaning and structure) if both were used;
5) SV (structure and visual) if both were used;
6) MV (meaning and visual) if both were used; and
7) MSV (meaning, structure, and visual) if all three were used. After coding for cueing sources, running records are analyzed for changes over time in patterns of cue use.

Results and Conclusions
Results of this study indicated the following:
1) MS represented the majority of the cueing sources for substitutions for the first five lessons (significant at the .05 level), and M, S, and MS represented virtually all of the substitutions made in the first five lessons (significant at the .01 level);
2) in Lessons 10, 15, 20, 25, and 30 combined, M, S, and MS again represented the majority of cueing sources used for substitutions (significant at the .05 level);
3) the use of M and S and MS increased as text level and difficulty increased between Lesson 1 and 30;
4) there was a gradual increase in the use of V information for substitutions between Lesson 1 and 30;
5) in the first 5 lessons, self-corrections occurred minimally and were not related to any single or combined use of cueing sources;
6) beginning with lesson 10, the use of self-corrections approached a 1:4 ratio to substitutions and by Lesson 30 the use of self-corrections approached a 1:2 ratio to substitutions;
7) the use of V cues for self-corrections increased significantly and continued to increase with each lesson level analyzed (significant at the .05 level);
8) in Lessons 10 through 30, V, MV, and MSV combined represented virtually all of the self-corrections made (significant at the .01 level).

Tentative conclusions from this data are constrained by the following limitations:

1) the reliability of the running record as a procedure that reveals readers’ use of cueing sources. For this study, running records were recorded by ten individuals who had received instruction in a graduate course in the procedures of taking and analyzing running records; they all received instruction at the same time from experts in the field of emergent literacy. The course involved practice sessions and close supervision from the instructor-experts. However, a determination of interrater reliability was not conducted for this study.
2) the appropriateness of the material relative to each child for whom running records were obtained. Running records were obtained as children read emergent reader books (natural language texts and/or transitional books) according to a gradient of difficulty matching their current instructional level. Books were neither familiar nor novel. Children had read each book one or two times the previous day; this book represented some new learning combined with known features as determined by the teacher for each child. The running records analyzed for this study reflected children’s current levels of using cueing sources, on their own, while reading instructional level material. Although teachers had received instruction in a graduate level course regarding appropriate book selection based on children’s reading behaviors, the selection of the texts on which the running records were obtained in this study were based on teacher judgement.
3) the small sample size. The representativeness of the children and teachers who participated in this study further limits the generalizability of results. Running records of the 30 children were drawn from only 10 teachers, all of whom were in training as teacher leaders with relatively limited experience as tutors. In addition, the experience level of teachers varied because some had been tutors the previous year.
Within the limitations cited, the following tentative conclusions are proposed. First, children in this study designated as at-risk emergent readers, appeared to use meaning and structure as their primary cueing sources when they confronted difficulty in text reading. Second, children in this study appeared to continue their use of meaning and structural information with a concomitant increase in their use of visual information. Third, children in this study engaged in minimal self-correction behavior when they began their formal literacy instruction. Fourth, children in this study increased their rate of self-correction behavior over the first thirty lessons of tutorial instruction. Fifth, when provided a tutorial program which supported the use of meaning and structure cues, while teaching the use of visual information, children in this study increased their use of visual information to self-correct reading errors.

These conclusions support the earlier findings of Beimiller (1970), Weber (1970), and Stanovich (1980). The data appear to indicate that at-risk emergent readers bring with them the same strengths of other children: they draw upon their knowledge of the world and their familiarity with language structure when they approach the initial task of learning how to read. As with many average and high progress children, they initially utilize very little visual information, as that is a major aspect of the learning-to-read task. Teachers and researchers would do well to reexamine their view of the at-risk reader and not define the emergent reader in the same terms as older readers who may over-rely on visual information. At-risk children who are learning to read appear to be using both meaning and structural cues to get meaning from text from the very beginning of their formal literacy instruction, and with appropriate instruction, they are able to learn to integrate visual information in a balanced problem-solving approach to reading.

References