Section 1

Introduction to The Critical Reading Inventory

What Is Critical Reading?

If we examine the historical roots of reading instruction in the United States, we will find a long tradition of assessing the reading comprehension of children on the basis of how much of their reading they could recall and recite (Allington, 2001). Few reading experts would argue that a clear recollection of the points that an author makes is not important. But fewer still would argue that recall of information is sufficient to define a good and effective reader. Instead of a rather simple and passive gathering of information, reading is now viewed as "an active process that requires an intentional and thoughtful interaction between the reader and the text" (Report of the National Reading Panel, 2000, pp. 4–5). In addition to the text, the raw material that we use in that interaction is the collection of our past experiences and concepts, rooted in our culture and language (Anderson, Osborn, & Tierney, 1984; Pearson, 1992).

But as complex as this interaction of reading systems may be, it is still only the beginning of our job as readers. After we construct a plausible explanation of the text, we must react and respond to what we have read, and this reaction and response is the heart of what we describe as critical reading. C. S. Lewis described the literary experience in this way: "In reading great literature I become a thousand men and yet remain myself . . . I see with a myriad eyes, but it is still I who see" (Lewis, 1961, p. 141). Critical reading of literature involves the exploration and analysis of characters, their histories, their motivations, their values, and their actions. Critical readers react dynamically to characters, loving some and despising others, forgiving some and condemning others. In short, critical reading expands our knowledge of ourselves as it develops our understanding of others, enabling us to live vicariously through the lives of others (Rosenblatt, 1983). But we also assess the craft of the writer, analyzing techniques that the writer uses to elicit our responses and frequently judging the validity or quality of the writer's reasoning on the basis of that analysis.

And critical reading is not restricted to literature. When we react and respond to informational text, our aim is to incorporate new information into our existing frameworks of understanding. In many ways this task is more challenging than it is when we are reading narrative text. Informational text often presents ideas so new that we must create new schemata in order to actively process the ideas (Bransford, 1984). We have all had the experience of effectively memorizing information and passing tests, only to find that the information is gone from our memories a few days later. But critical readers look for links between new ideas and their own experiences and may even make judgments or propose alternatives in response to informational text. When they do this, they arrive at a level of ownership that essentially ensures that the information they have studied will be more easily accessible to them (Allington & Johnston, 2000).

In short, critical reading as we are defining it for the Critical Reading Inventory (CRI) involves at its root a personal response to text that takes the reader far beyond mere memory for facts. We are intentionally avoiding the traditional definition of critical reading as an analysis of the logical support provided by writers to shore up their theses. We simply find that definition too narrow. For us, critical reading is thoughtful literacy, a dynamic process of thinking about what we read and how it fits in with our own ideas and values, the ideas of others, ideas we have encountered in the past, and ideas that we accept or reject. And critical reading for our purposes is also related to *engaged reading*, in that we must not ignore the simultaneous functioning of motivation, concepts, and social interaction during reading (Alvermann & Guthrie, 1993). The level of engagement in reading is predictive of the amount of reading that children do, and children who are engaged and read more are likely to continue to do so (Wigfield & Guthrie, 1997). Not surprisingly, research has suggested that engagement in reading is predictive of achievement (Anderson, Wilson, & Fielding, 1988; Cipielewski & Stanovich, 1992; Cunningham & Stanovich, 1997). At the core of critical reading is an interest and curiosity that leads readers to go beyond the surface of the text and to try to understand its meaning, its significance, and its relevance to their own lives (Schiefele, 1991).

It is not difficult to envision a reciprocal relationship between thoughtful, critical response to text and motivation to read. The more you are inclined to think about reading, the more you are likely to find it rewarding. The more you find it rewarding, the more you are likely to engage in it. The more you engage in it, the better you are likely to become at it, which in turn enhances the level of thinking you bring to reading. At the center of this complex string of relationships is your view of reading that must include at its very core thinking about and responding to what you are reading. Consequently, reading teachers and reading experts alike have called on assessment professionals to expand their tools to include an assessment of the extent to which readers think about, not simply recall, what they have read. The response to this call has been broad and extensive.

Why Assess Critical Reading?

In response to reading research and theory, critical reading and thoughtful literacy are being more and more widely assessed on national, international, and state levels. At the international level, for example, the National Assessment of Educational Progress (NAEP) Reading Framework assesses four different stances or ways of responding to text: (a) forming an initial understanding; (b) developing an interpretation; (c) generating personal reflection and response; and (d) taking the critical stance. The framework's target distribution of items for the fourth-grade 2000 NAEP Reading Test was 33% critical stance, 33% personal reflection, and 33% combined initial understanding and interpretation (National Center for Education Statistics, 2002).

At the national level, the Stanford Achievement Test–9 (SAT-9), a widely used nationally normed achievement test, includes open-ended items as well as more traditional multiple-choice measures. Each open-ended item on the SAT-9 measures one of three reading processes: initial understanding, interpretation, or critical analysis (Harcourt, 2002). The Terranova Performance Assessments in Communication Arts assess the ability to establish understanding, explore meaning, extend meaning, and examine strategies, and to evaluate critically (CTB McGraw-Hill, 2002). A random sampling of 20% of the frameworks that guide the construction of state tests reveals that 90% of the statewide measures include open-ended or reader response items.

This increased emphasis on the ability to think about and respond to text represents a challenge for future success in reading instruction in the United States. For although the assessments are increasingly emphasizing critical thinking, classroom instruction does not seem to be responding. Allington (2001) reported that in study after study of the nature of classroom tasks, the overwhelming emphasis has been on "copying, remembering and reciting with few tasks that engage students in thinking about what they have read" (p. 94). And whereas the NAEP performance of American students has risen to historically high levels of achievement with regard to literal comprehension, "only a few students can demonstrate even minimal proficiency with higher-order literacy strategies" (p. 8). It stands to reason that students who are asked more often to explain or discuss ideas from their reading are

more likely than their counterparts to demonstrate proficiency in higher-order tests (Donahue, Voelkl, Campbell, & Mazzeo, 1999). It appears that the challenge to develop thoughtful literacy is landing squarely in the schools.

But with the NAEP, national and state tests acting as summative assessments, it appears that little is being done in the way of formative assessment, assessment that can redirect the teaching curriculum as it is being delivered. In fact, Black and Wiliam (1998) found that classroom assessment tends to be characterized by measures of rote and superficial learning. Questions that teachers use tend to be noncritical, focusing instead on the narrow learning that teachers believe will ensure short-term success on high-stakes tests (Black, 2000). If Black and his associates are correct, not only is there a gap between what is being assessed and what teachers are teaching, but there is also a fundamental misunderstanding on the part of many teachers about the kinds of learning that are now being assessed on national and state tests.

It is precisely this gap in formative assessment that the Critical Reading Inventory has been designed to fill. There appears to be widespread agreement among experts that reading involves a thoughtful response to and interaction with text (Flippo, 2001) and because of this agreement, the assessment of thoughtful response had been included in national and state assessments. But if there is indeed a mismatch between assessments that emphasize critical response and classrooms that do not address it, we must find a means for teachers and administrators to identify and approach the issue.

Why a Critical Reading Inventory?

The decision to add yet another reading inventory to a field where more than a dozen well-known and widely used inventories already exist was a difficult one. We had used several different informal reading inventories (IRIs) in our advanced diagnosis courses, courses that in our programs led to study in instructional strategies and techniques. Our orientation toward critical thinking and thoughtful literacy shaped our study of instructional strategies, but we perceived a heavy weighting toward literal comprehension in inventories that we had used. We even modified one such inventory, adding items that called for higher-level thinking and thoughtful responses. But such modifications eliminated the benefits of the validity or reliability data that had been gathered on the original instrument. And so the mismatch between our concern for critical reading and our use of instruments that did not seem to measure it effectively led us to a more formal investigation of the problem (Applegate, Quinn, & Applegate, 2002).

We identified eight of the most widely used and cited IRIs and developed detailed descriptions of items that were text-based and items that were response-based. Text-based items called for readers to recall information verbatim from the text or to make simple and rather obvious low-level inferences. Response-based items required the reader to draw logical conclusions based on a combination of information from the text and ideas from their experience; or they called for readers to express and defend their reactions to the underlying significance of the key ideas in the text. From a sample of nearly 900 open-ended questions taken from the eight IRIs in the study, we found an overwhelming emphasis on text-based thinking (see Table 1–1). More than 91% of the items required only literal recall of information or low-level inferences. Items that required readers to draw a logical conclusion or to discuss the significance of a story occurred at a rate of less than 9%.

Needless to say, we found the results of our study disconcerting. We saw the use of open-ended questions to assess literal recall as a missed opportunity to make maximum use of the diagnostic potential of such items. Even aside from the fact that literal recall can be measured more easily and more reliably by objective test items, we concluded that the IRIs we studied were unable to distinguish between readers who could *remember* what they read and those who could *think about it*.

But even more crucial is the missed opportunity to use assessment data as a spur to instructional reform. If we cannot demonstrate that many children are unable to think about and respond to text, we will have no compelling reason to convince teachers that they need to adjust their instruction to address such needs. And because research suggests that classroom questioning is largely literal (Allington, 2001; Brown, 1991; Elmore, Peterson,

Table 1-1	Percentage of Item Types Found in Informal Reading Inventories					
Informal Reading Inventories		Total Text-Based	Total Response- Based			
Bader (1998)		92.5%	7.5%			
Burns & Ro	e (1993)	(N = 136) $88.1%$	(N = 11) $11.9%$			
Ekwall & Shanker (2000)		(N = 111) $99.2%$	(N = 15) $0.8%$			
Flynt & Coo	oter (2001)	(N = 121) $89.6%$ $(N = 86)$	(N = 1) $10.4%$ $(N = 10)$			
Johns (1994	4)	(N - 30) 91.8% (N = 123)	8.2% $(N = 11)$			
Leslie & Caldwell (2001)		81.6% $(N = 93)$	18.4% $(N = 21)$			
Silvaroli & Wheelock (2001)		98.5% ($N = 66$)	$ \begin{array}{c} 1.5\% \\ (N=1) \end{array} $			
Woods & Moe (1999)		90.1%	9.9%			
TOTAL		(N = 73) $91.2%$ $(N = 809)$	(N = 8) $8.8%$ $(N = 78)$			

& McCarthey, 1996; Knapp, 1995; Tharp & Gallimore, 1989), the cycle of poor performance on assessments that call for thoughtful responses is likely to remain unbroken. Fortunately, the research into exemplary literacy classrooms suggests that teachers who engage children in reading, problem solving, and linking ideas across texts routinely obtain superior performance on standardized achievement tests (Gottfried, 1990; Pressley et al., 2001; Ruddell, Draheim, & Barnes, 1990; Taylor, Pearson, Clark, & Walpole, 2000). But we still must be able to provide a reason for teachers to learn and use effective literacy strategies in their classrooms.

The American Educational Research Association (AERA) has advised that "tests should be aligned with the curriculum as set forth in standards documents representing intended goals of instruction" (2000, p. 3). We noted that the experts agree, the developers of curriculum standards agree, and the writers of national and state tests agree that thoughtful response is a central part of the act of reading. We did not find an equal emphasis on critical response in the inventories we studied. We concluded that the challenge for reading specialists and experts is clear: We can lead the way toward fundamental changes in our approach to the assessment of thoughtful literacy, or we can wait until external assessments force us to follow.

Who Will Use the CRI?

We envision the CRI as useful to four distinct groups: preservice teachers; in-service teachers; reading specialists and graduate students; and researchers.

Preservice Teachers

The CRI can be useful in helping prospective teachers develop the skills of diagnostic teaching rooted in the ability to identify student strengths and weaknesses. More specifically, we envision the CRI as a structured way to introduce students to the role of informal assessment as a guide to instruction. The diagnostic data they gather can be used as the basis for the development of instructional plans and programs. An important offshoot of the use of the CRI is the development of greater sensitivity to the notion of reading as thinking and the types of questions that distinguish literal and critical readers. It is our hope that the study and use of these kinds of questions will promote the ability of preservice teachers to develop thought-provoking questions for use in their own classrooms.

In-Service Teachers

The variety of uses to which in-service teachers may put the CRI calls attention to the flexibility of the instrument itself. Classroom teachers are frequently asked by their schools or districts to gather assessment data on their children. They may find it useful to use only a numerical or abbreviated version of the CRI, testing children, for example, only at their grade level, only on oral or silent reading, or to contrast performance on narrative and informational text. In other circumstances they may wish to assess critical thinking in response to silent reading for students at those grade levels selected for state or local assessments. But teachers may also need to confirm or estimate reading levels for students with specific needs (e.g., new students). This task calls for a much different alignment of CRI features. It would be unusual for teachers to be asked to do a comprehensive diagnostic analysis on each of their students, but they may need to complete such analyses on some of their students.

As a consequence, the CRI should be seen as a tool to be tailored to meet a wide variety of demands and not as a rigidly formulated instrument. For example, if CRI results are being used as evidence of student growth, then steps should be taken to ensure that the test is administered and scored as consistently as possible. If the CRI is being used to gather general diagnostic insights to inform a teacher about her program of instruction for a given child, then the teacher could exercise a good measure of latitude in selecting and administering those elements of the test that best meet her needs. Further discussion of the various uses of the CRI is included in Section 4.

Reading Specialists and Graduate Students

Reading specialists and specialist candidates are or will be in the position of providing full-scale diagnostic analyses or estimating reading levels for students whom they assess. They may be called upon to provide instructional direction to classroom teachers or to instructional support groups. They may help school or district personnel make decisions about instructional materials, programs, or strategies. Finally, they may also engage in research at a variety of levels and their need for reliable and valid assessment data may be met by the CRI. Reading specialists and graduate students or even those seeking master teacher status would normally use the CRI in its most comprehensive form and it is to these individuals that the full-scale directions for test administration are generally directed. However, the flexibility of the CRI allows for decision making to be guided by the needs of the user and the demands of the situation (Bean et al., 2002; Bean, Swan, & Knaub, 2003).

Researchers

Researcher and school administrators who wish to gather pretest and posttest data to assess the progress of readers will be able to do so through the use of additional passages at all levels of the CRI. Electronic tutorials have been demonstrated to enhance the reliability of the scoring of comprehension items, retellings, and miscues. Automated calculation of retelling and fluency scores can minimize errors, further enhancing the reliability of the scoring of the CRI.

Special Features of the CRI

Three Measures of Comprehension

The most salient feature of the CRI is its use of three distinct item types in the assessment of reading comprehension. *Text-based items* require the reader to recall information from the text or to make fairly obvious connections between and among the ideas in the text. Factual information and readers' concepts comprise the building blocks upon which critical thinking is based. Thus, text-based items are also included in the CRI for the purpose of contributing to differentiated diagnosis. Users of the CRI will discover, as we have, many students who can recall text and answer text-based items but who cannot think about the text in any other way.

The CRI measures higher-level thinking in two different ways: *Inference items* require readers to draw conclusions by relating the information in the text to what they already know by, for example, predicting events, explaining ideas, or devising alternative solutions to problems. *Critical response items* require readers to address the "big picture" and arrive at statements of the broader significance of the text. They then must defend their ideas, based on information in the text that is linked with from their background experiences. A common critical response item will, for example, require readers to make a judgment about a character or a character's actions and to defend that judgment. Thus the CRI can effectively measure a child's ability to recall the text, but at least 40% of the items assessing comprehension of a selection will require inferences and at least 20% of the items will require critical responses.

Complete and Extended Text

The CRI includes, as most inventories do, selections that can be used for oral as well as silent reading, and passages that are narrative as well as informational in nature (Johnson, Kress, & Pikulski, 1987). In the CRI we have developed original passages centered on topics chosen for their potential appeal to readers, but also that were not overly familiar. We were mindful of the criticisms leveled at the short and sometimes choppy passages that are used in reading assessment measures (Goodman & Goodman, 1994; Klesius & Homan, 1985). We were also aware that research had found that the nature of children's miscues changed as they began to develop a sense of the context of the text that they were reading (Goodman, 1970; Goodman & Burke, 1972). Because many informal reading inventories include passages that tend to be short or even incomplete in terms of story elements, children who read them do not always have an opportunity to develop a solid sense of the semantic and syntactic elements in the text. These observations create something of a dilemma for the constructors of IRIs because they must balance the demands for complete text with the demands of time spent in the diagnosis of reading difficulties. In the CRI, we opted for longer, more fully developed text, mindful of the need to match our assessment with the text that characterizes most instructional materials, as well as national and state standardized assessments in reading. Longer stories enable us to assess the reader's ability to construct meaning and develop a greater sense of story, content, and context. Because the longer and more fully developed text resembles actual reading tasks, we feel that they provide a higher level of validity in the assessment of comprehension.

Automated Scoring and Interpretation Interview (ASII)

As former reading specialists and teachers, we were very much aware of the demands upon time that informal assessment can make on professionals. In order to make up for the extra time that testing with somewhat extended text would take, we developed a procedure to streamline the calculations and recording that the use of an inventory would normally involve. The Automated Scoring and Interpretation Interview (ASII) gives the CRI user the opportunity to input information about the child's performance in a modified interview format. The ASII then calculates and displays for the user a completed Recapitulation Record, a visual summary of a child's reading performance suitable for use in the child's academic records. The Recapitulation Record includes the child's chronological age, the total comprehension scores for oral and silent reading, the average comprehension scores for each level, the number of each item type that the child has answered correctly at each level, and two types of miscue analysis data.

The ASII includes an option for automated calculation of retelling and fluency scores. The ASII will display the results of its calculations in tabular form to facilitate further analysis of data. Of course, the ASII cannot replace the professional judgment of the examiner in assessing the correctness of the child's responses or the value assigned to a retelling, but it can save considerable time with the mechanical and mathematical tasks associated with informal reading assessment. The ASII is readily available for download by CRI users. Simply log on to <code>www.readinginventory.net</code> and follow the instructions for loading the program into your computer. The ASII program includes a detailed user's manual, and a variety of help functions to provide users with extra instruction in scoring and interpreting reader responses.

Scoring Tutorials

The CRI web site includes 44 separate tutorials that can give users practice in scoring miscues, comprehension item responses, and retellings. Twenty-four tutorials provide practice on narrative text and eighteen use informational text. Each tutorial requires the user to assign a score to authentic reader responses and includes the opportunity to compare the user's scoring to that of expert users of the CRI. After each response, the tutorial returns the expert scoring and a detailed explanation of the rationale for that scoring. Hypertext features allow the user instant access to the story text at any time as well as access to scoring principles and guidelines.

Professor who teach courses in which the CRI is used can assign tutorials to their students to give them practice in scoring student responses. In their present from, the tutorials include a meachanism for professor to track the progress of their students and to maintain a record of which tutorials the students have completed.

Retelling Rubrics

For each narrative and informational passage, the CRI includes a rubric to guide the user in assigning a more consistent numerical value to retellings. The rubrics are built around the central story elements of the narrative passages and the key factual data included in informational passages. The rubrics are thus designed to move users away from a reliance on verbatim recall as a measure of the worth of a retelling; the rubrics assign greater weight to the most significant ideas in the text. Included in the rubric is the element of student response to the text which is factored into the final scoring. The use of the rubric to assign a numerical value to a retelling in no way replaces the careful analysis that can provide qualitative insights into a child's thinking, but it can lessen the wide range of values that might be assigned to retellings in the absence of any guidance. It also provides another source of comparative data that may be useful, given the different purposes for which the CRI can be used. To calculate a numerical value for a retelling, use the Narrative or Informational Scoring Guides in the Examiner's tools section of the text. Each Scoring Guide also includes a description of the meaning of the numerical values.

For users who may wish to avoid the calculations associated with assigning a numerical value to a retelling, the *retelling help* feature of the ASII provides an alternative. Simply locate on the ASII the title of the passage that you are working with and click on the retelling help button. A window will open which allows you to identify those elements of the text that are present in the retelling and the program will automatically calculate the retelling score.

Levels of Interpretation

The CRI includes case studies on its web site that illustrate the three distinct levels of interpretation that are designed to serve the different needs and purposes of CRI users. For situations where assessment data are the primary objective of testing, examiners may choose to carry out a Level One numerical interpretation of the test data. This allows the examiner to compare a child's reading performance on several distinct dimensions of reading (e.g., performance on different item types, oral vs. silent, narrative vs. informational, unprobed comprehension vs. probed comprehension). Level One is far from superficial but it can save a great deal of time for users who must administer numerous assessments, particularly when it is used in conjunction with the ASII. A Level Two analytical interpretation is called for when the user needs detailed information about a child's reading performance. Level Two calls for users to expend the time to examine the child's responses in detail and draw conclusions about the nature of the child's thinking on the basis of those responses. A Level Three comprehensive interpretation is more detailed still, representing an attempt to piece together all available information that may be contributing to a child's reading performance, including personal view of and attitude toward reading, parental involvement, and classroom instruction. Levels of interpretation are simply another means of maximizing the flexibility of the CRI to meet the needs of a wide range of professionals involved in the reading assessment of children.

Interviews

Included as part of the CRI are interview forms that may be used for children (both older and younger), parents/guardians, and teachers. If the purpose of the CRI administration is to obtain a comprehensive picture of the child's entire reading situation, the interviews can provide some valuable insights. Under optimum conditions, the interviews are designed to support and supplement the CRI user's inquiry into the child's overall reading milieu, but they can also be used in their present form as stand-alone instruments. Ultimately, the interviews can, at the very least, give the CRI user information about children's view of and attitude toward reading, the level of parental support for and awareness of any reading problems, and the type of instruction that the children receive on a daily basis.

Reading Accuracy Index (RAI) and Meaning Maintenance Index (MMI)

The CRI includes a percentage that reflects the sheer accuracy of a child's reading, the extent to which the reading is free from miscues. This we have termed the Reading Accuracy Index (RAI). But we have also acknowledged the research that suggests that not all miscues are created equal (Goodman & Burke, 1972). That is, less serious miscues, although they may deviate from the text, still represent a successful attempt on the part of the reader to make the reading meaningful. For other miscues, however, the need to preserve meaning breaks down and these miscues may violate the sense and syntax of the text. A significant number of this type of miscue may indicate a distorted view of the nature of reading itself. To differentiate between the two types of miscues, we have included a percentage of the reader's attempts to maintain meaning during reading, called the Meaning Maintenance Index (MMI). The MMI provides at a glance an indicator of the extent to which the reader views reading as an active process of constructing meaning in response to text.

Scoring Aids

For those who opt not to use the ASII, the CRI examiner's materials include charts to facilitate the calculation of comprehension scores as well as the calculation of the RAI and MMI. Once the examiner has tallied the reader's responses, it is a simple matter to locate the appropriate percentages on the charts that accompany every passage.

Case Studies

Two complete sample case studies which represent detailed analyses of CRI data are available to users on the CRI web site at www.readinginventory.net.

Demonstration of Administration Procedures

The CRI web site includes two authentic demonstrations of the administration of the CRI, ranging from interviews and word lists to oral reading and retellings. Users who wish to become familiar with assessment techniques or professors who are preparing students to administer the CRI will find these demonstrations most helpful.

Potential Impact of the CRI

It is our hope that the publication and use of the CRI will help educators focus on the wisdom and efficacy of assessing and teaching the ability to think critically about one's reading. If it is true that we are tending toward the assessment of traits that we are not effectively teaching (Allington, 2001), then accurate assessment is one of our most effective means of establishing the facts and stressing the need for change. Thus we envision the CRI as a potential change agent in that it can provide evidence that thoughtful analysis of and response

to reading is not part of the view of reading held by a significant number of children. Without such data, it will be difficult to ask teachers to reassess the notion that literal recall is the central issue in reading assessment.

We acknowledge that teachers widely recognize the importance of critical reading and our hope is that the use of the CRI will add to that level of recognition. But if professional preparation programs have overemphasized a linear conceptualization of reading, that framework may hinder some teachers from addressing thoughtful literacy. That is, some theorists and researchers believe that the process of reading involves a kind of taxonomy. Within the confines of that taxonomy, children must master all the details of the text and acquire a baseline skill level before they can do any thinking about the text. Under these circumstances, many children may not progress to the point where they are required to engage in critical thought.

It appears that these concerns have invaded the realm of teacher preparation itself. In a study of nearly 400 sophomores who had declared elementary education as their major, researchers investigated reading habits and attitudes (Applegate & Applegate, 2004). The findings suggested that more than half of the would-be teachers who participated in the study could be euphemistically labeled as "lukewarm" readers. The authors concluded that many prospective teachers are being placed in situations where they are called upon to promote an enthusiasm for reading that they do not have themselves. It is our hope that the CRI will serve as an effective model for teachers of the kinds of questions that engage and challenge students and serve as an incentive for some teachers to examine their own view of reading.

We also hope to spark debate about the link between thinking about one's reading and one's ability to find rewards in reading itself. We believe that the CRI can ultimately help teachers distinguish between readers who can read and those who are likely to do so. Specifically, if children see reading as little more than storing and retrieving the details of text, they will have a very limited incentive to engage in the activity (Schraw & Bruning, 1999; Wigfield & Guthrie, 1997). Fortunately, a child's view of reading can be changed in response to effective instruction, but it must be identified first.

Ironically, the very tendency to read may well be at the heart of performance on reading tests. For example, research comparing the amount of reading that children do with their performance on achievement tests (Anderson et al., 1988) revealed that students who scored in the 90th percentile read on average for more than 40 minutes per day. Students who scored in the 50th percentile read on average less than 13 minutes per day. And although correlational studies do not establish causal links, few experts will minimize the logical link between motivation to read and growth in reading (Guthrie, Wigfield, Metsala, & Cox, 1999; Meece, Blumenfeld, & Hoyle, 1988).

Conclusions

We believe that the CRI can be an effective measure of a child's ability to think about text at a variety of levels, an ability that is measured widely in summative but much less so in formative assessments. And because it is formative assessments that are designed to have a more direct impact upon classroom practice, it is at this level that we believe the CRI can make its greatest contribution. If the CRI can provide evidence that significant numbers of children are not thinking about what they read, then teachers will have the opportunity to develop both the tools and the incentive they need to effectively address the problem in their classrooms. Conversely, and even more important, the CRI may help demonstrate to teachers that many of their children (about whom they may presumed otherwise) can effectively think about what they read. Once teachers recognize this potential on the part of their students, they may become more comfortable incorporating thoughtful literacy instruction on a regular basis in their classrooms.