once or twice per year, needing assistance completing forms, articles, letters, or dealing with consume problems. Although statistics suppo the reasoning that those participant with more education performed be ter at higher levels, barely two thirc of each client group felt they could g a better job with additional training reading and writing.

The ramifications of this assessment are not limited to adult and workplace education. School systems could use these results for (a) reviewing core courses that constitute attainment of a high school diploma, (b) deliberating how the value of literacy can be instilled and practiced to a much greater degree than currently, and (c) ensuring that curriculum models for reading include approaches to content area instruction with deliberate incorporation of common documents.

Beyond school doors, serious reexamination of instructional models must be conducted. Current successful workplace programs base instruction by and large on materials relevant to employees' specific job performance. The results of this assessment suggest that such instruction restricts many workers to low-level jobs, with little encouragement or exposure to the type of education that would enable them to progress to higher literacy proficiency levels and thus to better job opportunities.

The best hope for business leaders, policymakers, and adult education professionals may be to establish nationally what the authors refer to as an "integrated information system" (p. 9), enabling widespread use of this analysis and other research data to better address U.S. literacy practices.

Critical Thinking Across the Curriculum: Building the Analytical Classroom. *Victor P. Maiorana.* 1992. ERIC *Clearinghouse on Reading and Communication Skills and* EDINFO *Press* (2805 *East 10th Street, Suite* 150, *Bloomington* IN 47408-2698, USA). ISBN 0-927516-35-7. *Softcover* 176 *pp.* US$14.95.

Reviewed by Joan Ruddiman, Reading Specialist, G & T and Mass Media teacher, West Windsor Plainsboro Middle School, Plainsboro, New Jersey.

At first glance, this book seems to be just more of the same, but it isn't. Maiorana does have a new methodology to offer.

For over 20 years, critical thinking has been the watchword in American education. In the 1970s, content area reading was a concept promoted by the International Reading Association, university professors, and school administrators in order to infuse higher order thinking skills into subject areas. Maiorana addresses this issue and others in an analysis of the history of educational methodologies and their limitations as he establishes the need for and logic of using his MECA/SM or Means-End Critical Analysis of Subject Matter.

The clarity of Maiorana's concept is apparent as the chapters unfold. This slim volume is very readable. The chapter titles and subheadings clearly organize the contents and engage the reader.

Maiorana's voice joins the chorus of professionals who advocate teaching critical thinking as part of all content curriculum. He rails against the lecture/rote method of teaching, offering new methodology to counteract the negative effects of older methods. Lecture is still, as he points out, the method most used even by those who teach students preparing to be teachers.

From the opening paragraph, the author articulates the "teaching and learning paradox undermining American Education. Students are expected to develop and demonstrate critical skills while in school, and subsequently in the workplace. Yet teachers deliver subject matter in an absolute, crystallized manner that promotes rote memorization rather than critical learning" (p. 1). The case Maiorana builds in Chapter 1 will be applauded by advocates of critical thinking practices; they will find much is quotable in support of their cause.

Chapters 2 and 3 expand on "What Is the Purpose" and "Why We Normally Fail to Teach" critical thinking. The author cites a wide variety of researchers in the field, including those who have defined critical thinking (Brookfield, 1987; Smith, 1990; etc.) and the taxonomic viewpoints (Bloom et al., 1956; Guilford, 1977; etc.) as well as seeing how Piaget, Dewey, and even Socrates fit into this analysis.

Maiorana's background includes an undergraduate degree in electrical engineering and a master's in business administration. His connection to the world of education comes with a doctorate in curriculum and instruction. His award-winning dissertation addressed teaching for critical thinking and led to his origination of MECA/SM. The organization and his attention to detail in building a solid case and then in the design of MECA/SM reflect a linear, left-brained approach to his subject. Indeed, this is the strength of his method as he develops it in Chapters 4-8 and is what makes this approach to an old topic worth examining.

Maiorana's primary concern is that critical thinking skills should be taught as part of the course content (subject matter), just as lifelong learners integrate content and analysis. This attribute he calls "simultaneity," and he notes that it allows for "transferability" (application of classroom learning to the real world).

These are two of the eight "Attributes of an Effective Methodology for Teaching Critical Thinking" delineated in Chapter 4. Another is "focus," meaning that the subject matter rather than the teacher should be the center of the class. Too often, he contends, teachers use lecture rather than allowing the learner an active role, termed "involvement" in which students engage subject matter directly and take responsibility for their own learning.

The ideal methodology, he continues, is "multidisciplinary"—it can

be applied in all disciplines. He notes that reading, English, and language arts teachers have known and applied critical thinking skills within their subject areas and are receptive to metacognitive methods that allow for articulation across content areas. Moreover, the methodology should be able to apply to "all levels," from the neophyte to advanced stages. All information, whether new or not, would critically engage the learner—no need to lecture to provide background information first.

The attribute of "commonality" would eliminate textbooks. "Like an oil spill, the textbook format mentality has contaminated pristine technological areas and clogged imaginative approaches" (p. 40). Maiorana sees instead using a variety of methods and techniques to convey lessons, citing computer technology, for example, to animate the evolving interactions that occur in an engineering design (p. 41).

Finally, the ideal methodology provides both teacher and student a thoughtful and shared instrument by which to measure progress, which is the "assessability" attribute (p. 42).

With his criteria in place and other methodologies examined and found lacking, Maiorana lays out how Means-End Critical Analysis of Subject Matter works. PRAC (Purpose, Resources, Activities, Consequences) are the headings that organize the analysis of the material being read, or the problem to be solved. He gives several MECA/SM examples from a variety of disciplines as he unfolds the process in Chapter 5. Chapter 6 then examines the fundamentals, using diagrams of MECA/SM for a series of "how to" lessons.

The power of MECA/SM, as the author sees it, is "the ability to structure one's critical understanding of material as it is initially encountered and to lay the foundation for evaluating consequences" (p. 57). This is the integration of the subject matter itself with immediate critical analysis. The method encourages "analytical pathways" (p. 78) which go into more detail. Through exploration of analytical pathways, questions may be raised that require further research and involve more resources, primary and secondary.

This motivation to pursue information because of a desire to know is the true love-of-learning paradigm. As Maiorana notes, "these are the activities and experiences that help develop the cognitive skills of understanding, analysis, evaluation, and problem solving...what we use in school, in the university, in the workplace, and all our lives long" (p. 78).

Chapters 7 and 8 break down the method with explanations, many examples from all disciplines, and practical suggestions for use in the classroom. Samples from the author's students in Queensborough Community College are given with a directed reader analysis provided to spot weaknesses and strengths. The most common initial problem is a traditional "crystallized manner of rote learning" (p. 125), while the analysis deals dynamically with the subject matter, not the student's or textbooks' view.

While Maiorana's negative view of American education may be exaggerated, it is distressing that he perceives that critical thinking is still not understood in practice, even though (as the author quotes from Smith, 1990) "every school curriculum lists critical thinking and critical reading as a major performance objective" (p. 10).

The MECA/SM method may make critical thinking more accessible to the classroom teacher. Maiorana offers precise guides, and an extensive bibliography and index for reference. In Chapter 9, he issues an invitation for readers to write their own analysis, which I accepted. I found I went back to prior examples for guidance and checked the form of the analysis. Though I did feel the PRAC format helped me organize my thoughts, I was not confident that I had used the method effectively. I needed more immediate guidance.

Maiorana does offer in his Preface (p. viii) to comment on any analyses that are sent to him. Though it is an unusually generous offer, I do not think even this is enough to allow teachers to develop the degree of familiarity and comfort needed to use and promote this methodology. Perhaps this is one more example that he is correct when he says that textbooks can never be adequate. Modeling and support are needed, too.

Critical Thinking Across the Curriculum: Building the Analytical Classroom offers a valuable method to push critical thinking behaviors into all classrooms for all learners—teachers and students. But the book's best audience should be university/college professors who would support each other in mastering the principles and modeling them for their students, and school administrators, curriculum specialists, and principals who could offer training and encouragement to classroom teachers.

Women and Literacy Development in the Third World. *Eve Malmquist (Ed.). 1992. Linköping University, Department of Education and Psychology in cooperation with UNESCO and SIDA (Linköping University, S-581 83 Linköping, Sweden). ISBN 91-7870-972-5. Softcover. 362 pp. US$15.00.*

Reviewed by Joanne Umolu, Associate Professor, Department of Special Education, University of Jos, Nigeria.

This book grew out of an international seminar on the theme "Women and Literacy Development: Constraints and Prospects" held in Sweden in 1991. The book contains the presentations of literacy experts from 12 developing countries, 3 in Latin America, 5 in Africa, 3 in Asia, and 1 in the Caribbean, who were specially invited to present papers at the seminar. The purpose of the seminar, and subsequently the book, was to focus attention on gender inequalities and their