This bibliography contains 23 annotations of resources in the ERIC database (ranging from 1985 to 1989) on helping students develop higher level and analytical skills, such as critical reading and thinking. The citations include instructional strategies for teaching visual literacy, religion, spelling, reading, semiotics, problem solving, literature and composition, metaphorical thinking, and home economics. Some references focus on particular groups, such as adolescents or at-risk students. (MS)
Critical Reading and Thinking: Instructional Strategies

by Michael Shermis

Helping students develop higher-level and analytical skills, such as critical reading and thinking, can be a challenging undertaking. This FAST Bib provides a number of resources to help with that endeavor. A search of the ERIC database produced the following references from the period 1985 to 1989. The citations include instructional strategies for teaching visual literacy, religion, spelling, reading, semiotics, problem solving, literature and composition, metaphorical thinking, and home economics. Some focus on particular groups, such as adolescents or at-risk students.

Abstracts for some of the articles cited here have been abbreviated to conform to the FAST Bib format. The ED number for sources included in Resources in Education have been included to enable the user to go directly to microfiche collections, to order from the ERIC Document Reproduction Service (EDRS), or to go to RIE for the full abstract on those sources not available through EDRS. If a document has a CS number rather than an ED number, look in RIE or the ERIC database to find the corresponding ED number. The citations to journals are from the Current Index to Journals in Education, and these articles can be acquired most economically from library collections or through interlibrary loans. Reprint services are also available from University Microfilms International (UMI) and from the Original Article Tearsheet Service (OATS) of the Institute for Scientific Information.

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Outlines ways to teach literature and composition that engage the students in such thinking processes as inferring, sequencing, predicting, classifying, problem solving, and synthesizing. The activities are divided into categories for composition, speaking and listening, literature study, additional creative and critical thinking activities, and speaking and writing across the curriculum.


Asserts that an important task for literature teachers is to develop students' capacity for abstract thinking so that it can be employed on problems at will and by choice. The first process of abstract thinking is one which enables a person to see a connection between A and B, including processes of cause/effect, making analogies or making comparisons. Another type of abstract thinking is that which enables a person to see a relationship between A and B that yields C, which uses inductive and deductive reasoning, and produces inferences and conclusions. The third and final type of abstract thinking is the process that enables a person to understand A so that what is learned can be applied elsewhere, enabling a person to generalize. The study of literature is particularly well-suited to teach this cognitive skill, because the purpose of literature is to transcend the narrow boundaries of the story and find some essential meaning for all of humanity. Teachers need to break down the concept of cognition into its component parts, in order to develop more effective strategies for teaching abstract thinking.

States that the principles of synergy, the process by which one need or person combines optimally with another, can be applied to critical thinking in television broadcasting. Analysis of what one sees and hears on television, through questioning the abstract and concrete aspects of information, establishes a way to make the media problematic to students.


Explores some alternative ways to think about critical thinking in the study of literature in the elementary grades. Addresses the following topics: (1) the major factors influencing the trends in the literature curriculm in the elementary grades within the past 30 years; (2) substantive research focusing on critical thinking about children's literature, selection of materials for use in the teaching of critical thinking about literature, especially critical thinking about literature as art; and (3) literature programs originating from various sources, i.e., children's literature textbooks developed in colleges, or by state departments of education, and commercial children's literature programs. Argues that critical thinking about literature as art, particularly in the teaching of critical thinking about literature, especially critical thinking about literature as art, and (3) literature programs originating from various sources, i.e., children's literature textbooks developed in colleges, or by state departments of education, and commercial children's literature programs. Argues that critical thinking about literature, especially critical thinking about literature as art, is necessary and natural in the study of literature because writers often use comparison and contrast in their writing, while readers must compare and contrast their understanding against the criterion of the text's assumed coherence. To help students enjoy literature's resonances (the relationships of such elements as images, characters, and circumstances), teachers must foster their critical perceptions and contrastive powers through recognizing and applying contrastive thought. Such critical thought can be taught by example, guided discussion, and independent writing, particularly through use of a divided reader's journal in which students paraphrase and quote contrastive parts of literature texts.


Examines how visual literacy (the ability to interpret the visual images of advertisements, illustrations, television, and other visual media) can promote creative and analytic thinking. Provides several instructional strategies to teach visual literacy through book illustrations. Notes that visual literacy is essential in a world increasingly dominated by visual messages.


Presents a formula for writing critical thinking assignments on different academic levels which professors can use in training elementary and secondary educators and in developing critical thinkers. Includes lists of terminology, instructional materials, and assignments (at various academic levels) which may be combined into a variety of assignments.

"Higher Order Thinking Skills: A Catalog of Products, Publications, and Services." Southeastern

Presents a model for working with students at risk, helping them develop critical thinking, listening, reading, and writing skills.


Presents several issues as central themes for the analysis of possible constraints on critical thinking among adolescents. First is the degree to which such thinking can more usefully be considered as a general ability, instead of necessarily being tied to specific domains of content knowledge. Second is whether the metaphor of "skill" is in fact the most appropriate one. Third is whether it is helpful to regard the various aspects of thinking as relatively more independent (and perhaps hierarchical) or more interdependent, even unitary. A synthesis of research supports the belief that fundamental developmental limitations are not a significant source of performance limitations for adolescents. An evaluation of current research suggests that the source of the limitations is more likely to be found in our educational practices. For a truly open, critical discourse, the recognition that knowledge is "problematic and tentative" is essential. This viewpoint, however, runs counter to the socially appointed authoritarian role that is imposed on teachers. Thus, a host of factors conspire to limit discourse, and discourse seems essential to the development of critical thinking and reasoning. Two routes to meeting this challenge are to study teachers who are able to create an effective classroom climate for discourse, despite the constraints; and to examine more closely the organizational and systemic factors which reinforce the current framework.


Addresses two recurrent concerns in educational debate—how a discipline can contribute to students' analytical and critical thinking, and how to improve students' ability to express themselves orally and in writing. The Language of Critical Thinking course is designed to strengthen critical thinking skills by using a legal case study approach. This method allows students to concentrate on the analysis of issues, on the development, evaluation, and organization of arguments, and on perfecting a clear and effective style.


Reflects the growing agreement on a national and local level that direct instruction in higher order thinking skills should be a major educational focus. To satisfy this growing awareness and perceived need, a number of programs have been developed. Given the widespread interest in teaching thinking and the increasing number of programs to satisfy that interest, it could be assumed that the incidence of direct instruction in thinking at the classroom level would be rapidly increasing. However, the implementation of thinking skills programs appears to be a slow process, with many hurdles to overcome. A curriculum which included the teaching of thinking would necessarily have a balance among factual content objectives, metacognitive objectives, and cognitive objectives. Those in positions of authority at the local, state, and national levels should mandate that assessment techniques should not be comprised primarily of objective, quantitative measures. Instead, more holistic and qualitative measures must be legitimized within education. Finally, distinctions as to the domain of responsibility of educators versus non-educators must be established and articulated at all policy levels.

Neilsen, Allan R. Critical Thinking and Reading: Empowering Learners to Think and Act. Monograph on Critical Thinking Number 2. Monographs on Teaching Critical Thinking Series. ERIC Clearinghouse on Reading and Communication Skills, Bloomington, IN; National Council of Teachers of English, Urbana, IL, 1989. 54p. [CS 009 640]

Argues that the present educational system can do little to foster critical thought because it is rooted in a world view that sees thinking and reading as isolated "skills" that can be transmitted to learners via a teacher-centered pedagogy. Suggests that educators
consider a perspective from which reading and thinking are seen as critical attitudes or states-of-mind that help to shape one's daily life. Contends that this shift in perspective on thinking and reading must be accompanied by a shift to a more learner-centered pedagogy that provides students with opportunities and incentives to develop critical minds by engaging in projects that are of personal interest and consequence.


Describes a methodology for using verbal reports of thinking to develop and validate multiple-choice tests of critical thinking. These verbal reports of individuals' thinking on draft items of multiple-choice critical thinking tests can be used systematically to provide evidence of the thinking processes elicited by such tests, and in this case were used to develop and validate a test of observation appraisal.


Argues that while young children's problem-solving models are not as elaborate as those of older children, they share an important belief, namely, that writing and reading are fundamentally purposeful acts of communication. Focusing on the interpretation of process, in particular on writing and reading as forms of problem solving that are shaped by communicative purpose, three sets of vignettes show students at different stages of schooling as if alive and read. They illustrate the nature of problem solving in skilled reading and writing processes that are held as goals for college students; place these processes in context by considering some of the factors that influence students' problem solving as they write and read in response to typical class assignments; and explore the problemsolving skills that young students--children learning to write and read and adolescents expanding their writing and reading abilities--bring to their school assignments.


Presents a case study of a recently reconceptualized teacher education program which has a critical inquiry base and an emphasis on "language across the curriculum." Describes the program's rationale, organization and practice, along with a description of the ongoing process of program development.

Siegel, Marjorie; Carey, Robert P. Critical Thinking: A Semiotic Perspective. Monograph on Critical Thinking Number 1. Monographs on Teaching Series. ERIC Clearinghouse on Reading and Communication Skills, Bloomington, IN; National Council of Teachers of English, Urbana, IL, 1989. 55p. [CS 211 649]

Encourages teachers to consider the notion that thinking critically is a matter of reading signs, that it is the function of signs that makes reflective thinking possible. Contains the following chapters: (1) "Beyond a Literal Reading"; (2) "Current Thinking on Critical Thinking"; (3) "The Roots of a Semiotic Perspective: C. S. Peirce and Semiosis"; (4) "Critical Thinking in Semiotic Perspective: A Process of Inquiry"; (5) "The Practice of Critical Thinking"; and (6) "Classroom Contexts for Critical Thinking."


Discusses how teachers can provide classroom experiences that lead young readers to react critically to what they read. Suggests ways to focus attention and target evaluative responses to literature.


Presents current thinking, research, and practice in the area of higher order thinking skills with home economics educators, including teachers, supervisors, and teacher educators.


Examines whether writing in combination with reading prompts more critical thinking than either activity alone, or either activity combined with questions or with a knowledge activation activity. Finds that students who both wrote and read made more revisions (prompted by more critical thinking) than students in any other treatment group.