Three Perspectives on Critical Thinking: Theory, Research, and Teaching

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There is concern today about the effects of widespread exposure to unsubstantiated information. Electronic print sources like the Internet are not peer reviewed or subject to verification, nor do school textbook authors always provide evidence regarding their sources. While one response to this concern is an increased effort to teach critical thinking, there is evidence that the goal of teaching students to be critical readers is elusive. For example, one line of inquiry has been to have students read multiple text sources to study history. The intent is that students will confront multiple sources and think critically to find and use information that is relevant, valid, and significant for answering questions and satisfying their learning demands. Recent research studied 5th graders’ use of multiple sources to study American history (Vansledright & Kelly, 1998) to see how they respond, evaluate, and use information from differing sources. While the students preferred the alternative multiple sources to their class textbook, they did not note differences in form and content between the two types of text and did not attempt to read them differently. Nor did the students have concerns about the validity or historical significance of their sources. Without having a record of where text authors obtained their evidence the students could not assess text sources. Instead, students tended to base their validity judgments on an information-quantity criterion. That is, validity was based on the frequency of detailed information such as dates, names, facts, and figures.
A related finding was reported for tenth grade students who used multiple sources to study history (Stahl, Hynd, Britton, McNish, & Bosquet, 1996). Students in that study relied mainly on the first source they read, and tended to ignore conflicting information in later readings. The authors concluded that unless high school students have received specific instruction in how to evaluate and integrate information from different texts, they might not benefit from studying multiple historical sources.

The evidence of a lack of critical thinking on the part of fifth and tenth graders suggests that teachers need to do more to help students evaluate information from multiple sources. However, another way to understand the lack of critical thinking is to consider that providing students with tools for deciding what to believe and do with information is counterproductive to providing students with strategies for learning and remembering information from a single source. Traditionally, students are supposed to read and remember the information they encounter in school, they are not expected to think critically, raise validity questions, or suggest alternative explanations. School information is supposed to be the truth, and once we open the critical thinking toolbox where do we stop? What school information are students to accept without question and what information are they to critique and possibly reject? Students expect to believe what they read in school so it’s no wonder they have trouble when teachers tell them to challenge and not accept everything they read.

With this concern in mind this paper presents information on critical thinking from theorists, researchers, and classroom teachers. First, Marie Cheak presents a hopeful historical overview of instructional theories that support the teaching and assessing of critical thinking. Next, Nancy Douglas presents a review of social
psychology research that uncovers several significant problems humans encounter with critical thinking. Last, Rick Erickson presents some examples of recent classroom observations that describe critical thinking teaching activities and strategies that teachers find useful. There seems to be no argument that teaching students to think critically about the information they encounter in and out of school is an important educational endeavor. However, the evidence suggests that teachers and students will continue to find the task elusive and challenging.

**Theoretical Perspectives on Teaching and Assessing Critical Thinking**

*Marie Cheak*

Improving students' critical thinking is currently a focus of educational reform as evidenced in recently drafted national and state educational standards (NCTE, 1996). The rationale is that critical thinking skills are necessary if responsible citizens are to make informed decisions in a democracy. Critical thinking is a challenge for teachers and students that has raised questions and concerns like the following (Ogle, 1998): Will the integration of the English language arts into other content areas support students' attainment of critical thinking goals? Will assessment measures to gauge student attainment of critical thinking standards be general or content specific? I will address these questions from several theoretical perspectives.

**Curriculum Integration and Critical Thinking**

One way we arrange for critical thinking in school is curriculum integration where literacy skills are integrated with content area learning tied to real world problems. The
integration of literacy learning within a content area allows purpose to drive learning and increases both literacy ability and knowledge in the content area (Guthrie, Alao, & Rinehart, 1997). Integration of the curriculum is also consistent with a view that “knowing and understanding” should focus on the learner and the processes of learning rather than some discrete body of knowledge (Tierney & Pearson, 1994). Although current reading theory supports an integrated curriculum to foster critical thinking and augment content area learning, the need for direction in the facilitation of integrating literacy with other disciplines, like science, is great. This begs the question of how such integration can be accomplished in an already burgeoning and demanding school curricula. One idea that accomplishes integration is inquiry-based learning.

Inquiry-Based Learning

The conspicuous focus on critical thinking skills in educational reform movements in 2000 has raised the value of inquiry-based learning. While critical thinking skills are difficult to teach, the potential for their development is most effectively realized in instructional contexts that are student-driven and teacher facilitated. The ideal social context for the development of these skills allows for both individual and collaborative inquiry. Access to a variety of resources (print, technological and community) gives students opportunities to practice, experiment and master ways to synthesize information and apply knowledge to novel problems (Paul, Binker, Martin, Vetrano, & Kreklau, 1989). Inquiry into real-world problems and involvement in authentic tasks gives learning purpose and facilitates the transformation of knowledge to new contexts.
Current research supports the theory that inquiry-based instruction, which incorporates an integrative approach to instruction and provides the needed structure and guidance for students, is conducive to the development of critical thinking skills. It has been shown that theorists in critical thinking, text comprehension, and environmental education agree on how these abilities are developed and nurtured. The picture they present is a complex one that involves the kind of information students are given to explore, the support they are given in processing the information, the social structure of the learning environment, and the actions and consequences students foresee when they think critically.

**Action and Consequences**

It is not merely coincidental that common threads appear in the goals of general literacy (reading, writing, communicating), the components of critical thinking, and specific content areas such as environmental education. The common thread of an action element is of particular significance. Action refers to a learner’s deciding what to say and what to do. In school, action is often a report and a presentation to an audience. Ennis (1989) includes action in his definition of critical thinking and the standards and goals for the English language arts emphasize the communicative aspects of literacy. This definition of literacy includes the ability to actively communicate information to others in a variety of formats, to a variety of audiences and for a variety of purposes. Ennis (1989) stated that action, at least informed action, is precipitated by the use of critical thinking. Critical thinking is the ability to make good judgments, which is based on good reasons and reflective thought. Critical thinking involves serious consideration of the consequences of taking some action.
Assessing Critical Thinking: General or Content Specific?

The call for schools to develop student critical thinking creates the need for assessment measures of critical thinking skills to inform instruction and evaluate instructional procedures. Although critical thinking skills can be general abilities, it is known that critical thinking skills are domain specific. According to Ennis (1989), research is needed to determine how specific aspects of critical thinking apply to a specific content area and "the study and development of new approaches and instruments for evaluating critical thinking" (p. 9). Given the emphasis on the need for instructional contexts that support the development and use of critical thinking skills within specific domains, it seems warranted to develop a domain specific instrument for assessment of those abilities.

Domain Specific Assessment

One multi-dimensional curriculum area that lends itself to the testing of critical thinking is environmental education. The multi-dimensions of science, politics, and social concerns that mark environmental issues create ambiguity, conflict and dialogue among educators (Ramsey, Hungerford, & Volk, 1994). For example, There are different types of environmental education curricula. Some are episodic in nature and occur as add-ons at the end of another course. Other curricula are in-depth courses of study, which engage students in inquiry supported with much teacher modeling and explicit instruction in the tools of inquiry. In an exegetical essay on environmental education, Hungerford (1994) warns of a common myth, that "students are natural investigators and can, without special training, successfully engage in and bring closure to environmental issue investigations" (p. 51). It is his contention that students need explicit instruction in
and modeling of critical thinking skills in order to be successful problem solvers toward
the resolution of complex environmental issues. Hungerford's admonition that students
need to be challenged with explicit instruction designed to encourage and foster the
development of critical thinking skills while maintaining an equilibrium in instructional
flexibility, is echoed both in the literature on reading comprehension and critical thinking.

Kintsch (1994) has contributed much to our understanding of readers' comprehension of text and the effects of readers' knowledge on the readers' ability to learn from text as opposed to the memorization of text. Memory of text is a low-level cognitive function. Readers may be able to memorize facts from text or recall details, but be unable to construct new knowledge by synthesizing new information with existing knowledge or knowledge from other texts. Extant domain knowledge also affects how readers process texts. Texts with simple rhetorical structures that fill in the gaps of knowledge for readers with high domain knowledge force the reader to process at the surface (literal) level of the text. These readers perform poorly on synthesis tasks. High domain knowledge readers perform better when given texts with less finely tuned rhetorical structures that require the reader to fill in gaps by cognitively processing the information at deep levels of cognitive processing than with the simpler texts. There comes a point with respect to the completeness of a student’s background knowledge, where big trade-offs are made. Explicit teaching of skills is needed especially in the beginning of the acquisition of knowledge in a certain domain. As students gain knowledge, challenge becomes the catalyst for critical thinking, while independence and flexibility support the use of higher cognitive processes.
Ennis (1989) makes the same distinction as Hungerford and Kintsch when he speaks of the relationship between critical thinking and domain specificity. He states, "An experienced person can become in a way so well informed about and embedded in an area that he or she stops thinking, becoming inflexible and, for example, unable to conceive of and consider alternatives" (p. 6). He warns that subject-specific knowledge often consists of rote- memorization of fragmented facts and information is not understood deeply enough to enable processing at deep levels by the learner. Hence, both the structure and delivery of the content compromise the development of critical thinking abilities and dispositions.

**Approaches to Teaching/Assessing**

Ennis (1989) has classified the approaches to instruction in critical thinking into four types. These are the general, infusion, immersion and mixed approaches. General approaches have the primary purpose of teaching critical thinking skills and are not taught within a content area. General approaches to teaching critical thinking are those which might be taught as an add-on to a course in school. Infusion is deep, thoughtful subject matter instruction in which students are explicitly taught critical thinking skills and are given a content and context in which to use them. Immersion differs from the infusion approach, in that, while students are offered the same rich content and context, they are not explicitly taught critical thinking principles. The mixed approach, favored by Ennis, consists of a combination of the general approach with either the infusion or the immersion approach. In this approach, students are involved in subject-specific critical thinking instruction and are explicitly taught critical thinking principles. The main difference between the mixed and infusion approaches, according to Ennis (1989) is that
the mixed approach uses standard subject matter content and other content in combination. The infusion approach only uses standard subject matter content. There is need then, to broaden our understanding of students' development of critical thinking skills which use a mixed approach which explicitly teaches students to use critical thinking skills.

There is an abundance of theoretical support for integrating literacy skills with content areas, for using student driven inquiry approaches, and using a mixture of general and content specific teaching and assessment approaches. While the call to teach critical thinking is challenging and the knowledge about how to proceed appears to exist, there is a body of research evidence that indicates people find critical thinking both elusive and difficult. The next section describes some interesting social psychology research that is important to anyone who endeavors to teach critical thinking.

**Enemies of Critical Thinking from Two Lines of Social Psychology Research**

*Nancy Douglas*

Two lines of social psychology research indicate that critical thinking is neither natural nor easy. One is the notion of human credulity, or, to put it more plainly, human gullibility (Gilbert, 1993). The other is the human tendency to stubbornly resist new information (Nisbitt & Ross, 1980). Interestingly, these two seemingly opposite proclivities seem to operate in all of us at one time or another (Douglas, 2000).

Epistemologists have repeatedly surmised that humans have a tendency to believe
any idea which comes before them, unless they have good reason not to. Gilbert (1993) provides a theoretical explanation of human credulity based on the ideas of the 15th century philosopher Baruch Spinoza, who asserted that ideas are not inert substances, but belief-like states (Bennett, 1984; Gilbert, 1993). Spinoza argued that comprehension entails belief and that ideas are rejected secondarily, but only if one expends the necessary cognitive effort.

A growing line of research supports Gilbert’s theory of belief. It seems that in absence of prior beliefs, people have a tendency to initially believe newly encountered information. Gilbert (1993) sought to determine if comprehension entails belief and belief-based decisions. In one experiment college students (71) read a pair of crime reports from a computer screen that contained both true and false information. The readers were told that false information would be colored red. One report contained false statements that intensified the severity of the crime and the other diminished the severity. Some of the readers were distracted by performing a digit-search task as they read the false statements. After reading the statements readers recommended the length of prison term for each criminal, rated the criminal on several related dimensions, and took a recognition memory test for some of the statements contained in the reports. The data revealed that the distracted readers’ sentences for the criminals were nearly twice as long than the sentences given by the undistracted readers. The interrupted participants were unable to exert the cognitive effort required to reject the false information. Distraction caused them to act as though false information was true.

In a related experiment, college students (161) read brief biographies of two hypothetical people, Bob and Jack. They then read descriptions of Bob and Jack
performing likable, dislikable, or neutral actions. Some readers were forced to read everything as fast as possible while others were allowed more time and asked to assess the truthfulness of the statements. The data revealed that the statements that were inconsistent with the biographical information influenced those who were forced to read fast, whereas those who had time to assess the truthfulness of the statements were not. The hurried readers did not have time to reject information that they would have rejected without time constraints. These and other similar experiments lead Gilbert to conclude that people are unable to comprehend assertions without initially believing them. The studies lend support to the notion that ideas are not simply candidates for beliefs, but are represented as beliefs. In other words people find it much easier to believe than to disbelieve in that it takes more psychic energy to refute an idea and less psychic energy to believe the idea.

If people have a tendency to believe things, as Gilbert and several philosophers have asserted, they will quickly acquire many beliefs. Obviously, people do not believe everything that they read, see, and hear. This is often due to the human tendency to resist changing acquired beliefs, a phenomenon referred to as “belief perseverance.” A vast amount of research in social and cognitive psychology indicates that beliefs are extremely resistant to change, and that when people have preexisting beliefs they reject refutational evidence and cling to their original beliefs (Anderson, Lepper, & Ross, 1980; Chambliss, 1994; Festinger, Riecken, & Schachter, 1956; Lord, Ross, & Lepper, 1979; Ross, Lepper, & Hubbard, 1975; Smith, 1982; Wegner, Coulton, & Wenzlaff, 1985). To study this researchers use a debriefing strategy. In a study by Anderson et al. college students (70) read fictitious information implying either a positive or a negative correlation between
risk taking behavior and success as a firefighter. Participants were told to discover the true relationship between success and risk taking and to write an explanation for it. Later the researchers debriefed half of the participants, telling them that the information they had received had been fabricated. Although the readers accepted the falsity of the data, debriefing had minimal effect on beliefs. Those who initially discovered a positive relationship between risk taking and fire fighting success continued to believe this, likewise those who had initially discovered a negative relationship persisted with this belief.

More recently, educational researchers conducted studies dealing with genuine beliefs participants hold before they engage (read) in an experiment. To explore whether persuasive text changes preexisting beliefs Garner and Alexander (cited in Chambliss, 1994) had 62 college students read an article on the extermination of the Pacific Northwest rain forest. The article blamed scientists, loggers, government officials, timber industry executives, and environmental activists. Using prereading and post reading tests, readers varied as to which participants they blamed. Most readers (71%) seemingly ignored the text, consistently choosing the same group regardless of the text content. Others (18%) appeared initially to accept all evidence as true; they chose groups according to the evidence they had just read. But they reverted to their original choice in the post reading task. Two weeks later they were tested and their recall of the information was poor.

In a similar study Garner and Chambliss (cited in Dole & Sinatra, 1994) gave readers a text presenting both sides of the effects of logging operations in the Pacific Northwest. Most readers did not change their beliefs, instead they became more certain
of their original positions. Readers seem to use initial beliefs as a filter for understanding what they read and this filter is used to reinforce what they already believe rather than examining and rethinking their position. When asked to support their position after reading, the participants used the same segments of text as evidence to support their very different positions. In other words the readers modified text arguments in order to support their positions even when the arguments were not written to support their positions.

If the belief perseverance evidence supports the view that humans are not rational, consider the alternative. If humans did not have a mechanism for holding onto beliefs they would be unable to cope with all of the detailed and conflicting information that bombards the brain every conscious instant. Neuroscientist V.S. Ramachandran has an interesting perspective on how the left and right hemisphere work together to help us cope with all of the detailed information the brain receives. If we didn’t have a way to sift through the information and make some sense of it by fitting it into our preexisting belief system we would always be revising our worldview and the chaos would drive us mad. What Ramachandran suggests, in an admittedly oversimplified fashion, is that the left hemisphere works to preserve our existing schema by either ignoring new information that doesn’t fit, or by distorting it and squeezing it to make it fit. Meanwhile, the right hemisphere’s function “is to play ‘Devil’s Advocate,’ to question the status quo and look for global inconsistencies” (Ramachandran & Blakeslee, 1998, p. 136). We deny the sweepstakes offer if our stable belief system says that the odds are so against us it is silly to play. On the other hand if our stable belief system is that we have a chance we fill out all the forms, return them, and wait for our prize. Either way, the left
hemisphere is at work keeping us consistent, and everyday we effortlessly either deny or accept new information and act in a way to remain stable. However, what if our stable belief system is challenged by new information that is difficult to deny or squeeze in to make it fit? When the new information reaches “a certain threshold, the right hemisphere decides it is time to force a complete revision of the entire model and start from scratch” (p. 136). For example, suppose we are predisposed against gambling, but new “inside” information is introduced that is very convincing. In this instance the right hemisphere can force a paradigm shift that leads us to alter our belief system and place our bet.

This social psychology research is important. Teachers need to know that when they try to teach critical thinking they are facing an uphill battle. What are some implications for teachers in the face of overwhelming evidence that says people find it much easier to believe than to disbelieve; and once beliefs are formed they are very difficult to change? One implication is that teachers need to show students how to expend effort to reject propositions and wait until ample evidence is gathered and multiple perspectives are considered. Another is that teachers need try to develop in students a willingness to reconsider one’s beliefs when they are discredited. Here is a how one researcher and a 7th grade teacher in Michigan tried to show students why they need to think critically (Douglas & Dobos, 2000).

The teacher and the researcher found two versions of history textbooks that presented noticeably different interpretations about a single issue, event, or person. They searched for old and new texts or different articles/editorials from magazines with two different ideologies. The differences were discernible enough so students’ could discover
them by themselves. They made enough copies so that about half of the students would read one version, half would read the other version.

Before they read and responded the class decided that people write to inform, to entertain, and to persuade. They brainstormed examples for each category:

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Before the passages were read the teacher provided background information, vocabulary, and a purpose for reading with the question: Did America do the right thing by becoming involved in the Spanish American War? Students read, highlighted the selection, and wrote an answer to the question. Responses were discussed when students were asked to raise hands if they thought America did the right thing.

In one 7th grade class students who read the positive version said America was justified. The other students did not agree. A heated discussion took place and the two versions were considered. Students asked to read the other selection and they could see that the two texts were different. When asked to look back at why people write they could see that these textbooks could be placed under the persuade category.

In this classroom activity all students did not draw the same conclusion nor did this lesson teach critical thinking. It only pointed out that texts might not be neutral sources of objective truth and that one needs to take the time and spend the effort to consider if the text is trying to inform, persuade, or entertain. This type of learning
activity helps students to see for themselves that history books contain interpretations of history, along with the facts. Clearly, this is an important first step in helping students develop a disposition to think critically when they read textbooks.

In conclusion, there is evidence that people find it easier to be gullible and harder to be skeptical, and once beliefs are formed people find them hard to change. One implication of this is that teachers need to arrange lessons that energize students to challenge the text because critical reading demands extra effort to overcome the natural tendency to accept textbook information. In the next section classroom observations and teacher interviews describe some guidelines and activities that teachers use to get students to actively engage in critical thinking.

What Teachers Do To Promote Critical Thinking

Rick Erickson

While the social psychology and reading research clearly point out the difficulties people encounter when they are asked to read and think critically about text, teachers continue to seek ways to help students think and read critically. The following information is based on literature reviews, classroom observations of critical thinking lessons, and conversations with teachers about what they do in their classrooms to promote critical thinking.

Teachers say that one thing that helps them is to agree on what is involved with critical thinking so they all can be working together with their students. For example, one school district used Goals 2000 funds to support teacher workshops on teaching critical thinking. At the workshops teachers read about critical thinking and worked together to reach consensus on definitions and assumptions to guide their planning,
reflection, and teaching. Here is a definition that teachers in Carbondale Illinois District 95 (1997) prepared to guide their development of a handbook of critical thinking teaching lessons:

Critical thinking involves reflection and a conscious effort by a person who uses “reasonable, reflective thinking that is focused on deciding what to believe and do” (Norris & Ennis, 1989). Critical thinking is contextual, situational, usually complex and always tied to some social setting where decisions about purpose, value, and outcome or consequences is related to a specific problem, task, or concern.

Another way teachers promote critical thinking is to use highly engaging teaching activities. Classroom observations and interviews with teachers reveal the following collection of instructional elements. While all students do not always exhibit critical thinking, teachers report that the following guidelines increase the chances that students will respond with reasoning and insight, ask better questions, and give multiple explanations.

**Challenge, Choices, Chums**

Student motivation and engagement are enhanced and critical thinking is present when students are challenged but not overwhelmed by the learning tasks. Moderately difficult work is a basic requirement for critical thinking. When learning tasks are challenging students more readily see signs of progress and feel they have accomplished something. Critical thinking involves making independent decisions, so giving students choices and control over planning, organizing, and evaluating academic tasks helps them feel more committed and they put forth their best efforts. Social collaboration and
interacting with peers also increases the chance that students engage in critical thinking because they have to share, discuss, debate, and negotiate the content and format of products and reports they produce. Critical thinking makes high demands on attention, engagement, and overall psychic effort. The social context of making choices and meeting challenges with chums is an important facet of critical thinking lessons (Turner, 1997).

**Direct Observation**

Direct observation and first-hand experience often creates a context where learners easily ask questions, try to resolve discrepancies, seek more information, and try to decide what to believe, and what to do. A rule of thumb is to go from concrete encounters to abstracted processes of assessing, categorizing, reasoning. Some formats for this are List-Group-Label, K-W-L and Compare-Contrast. For example, students watched a video of a herd of a dozen-white tail deer stripping the ivy leaves from the trees in the teacher’s back yard in the city. This direct observation of a local winter scene led to questions about why they were in the city instead of the surrounding forest and what other problems were created when wild animals move into communities to find food. This video and other information from direct student experiences with animals prompted students to ask many questions. The students concerns formed the basis for the teacher to conduct an environmental science inquiry unit called “Overlapping Habitats” (Erickson, 2000).

**Fat Questions-Yes, Skinny Question-No**

Skinny questions have simple answers that can be found in one source (Pappas, 2000). They are like the following: What do deer eat? How many deer car accidents
were reported last year?  On the other hand, fat questions have multiple answers that may vary across sources: How do we prevent deer from damaging plants and shrubs?  What is being done to prevent deer-car accidents?  What other animals are visiting the city and what problems does this create?  Fat questions require critical thinking because they have multiple answers.  Teachers take plenty of class time to help students generate lists of fat questions that are the basis for research activities.  One teacher said, “Without fat questions there is little chance for critical thinking.”

**Self-generated Questions**

Imposed questions are assigned to individuals by others.  For example, the teacher says, “Go to the library and find information on how to control deer.”  Or, “Based on this newspaper article can you infer what some peoples attitudes are about overlapping habitats?”  Self-generated questions arise out of a person’s own circumstances.  For example, the student says, “I don’t care about peoples’ attitudes and I am not interested in how deer are controlled, I want to know why there seem to be more deer now than in the past?”  Self-generated and “fat” questions are needed because students will spend more time and energy seeking information from different sources when their own questions have multiple answers (Gross, 1997).

**Public Production/Performance/Collaboration**

When teams of peers organize information and “go public” with a report or a performance the chances of engaging students in critical thinking are enhanced.  The challenge of producing a web page, creating a PowerPoint presentation, or presenting their own research to an authentic audience leads to decisions and choices that require
critical thinking. When students know they are “going public” with their information they are prompted to think harder because their choices have social consequences.

The picture that these guidelines suggest is that one context for promoting critical thinking is student-centered inquiry activities directed at issues and topics that students deem authentic. Students exhibit quasi and true critical thinking when they have ownership of topics, questions, and sources. And when they work with peers to report what they find they are prompted to think more critically about what they say, write, and do (Erickson, 2000).

Summary

The current flood of unconfirmed and often conflicting information makes critical thinking and critical reading a particularly timely and important educational issue. This paper examines educational theory that suggests that critical thinking is enhanced when we integrate content areas and literacy skills, and when we use inquiry approaches along with a mix of general and content specific teaching and assessment tactics. Next, research indicates that people find critical thinking difficult and only when extra psychic energy is used will people overcome the natural tendencies to either accept or resist new information. Last, instruction in critical thinking should promote (a) student control and ownership of topics and questions, (b) access to a variety of primary and secondary information sources, and (c) e collaboration with peers in the acquisition and presentation of information.

Finally, we cannot leave this three-part discussion of critical thinking without acknowledging a fourth line of inquiry called “the New Literacy Studies” (Gee, 2000). From this perspective there is no such thing as one general literacy. Instead there are
multiple literacies or discourses that people use to negotiate their way through life, work, and play. From a new literacies perspective critical thinking is in itself a special kind of discourse that one acquires and uses in particular educational, social, cultural, and political contexts. From a new literacy studies perspective all literacies occur in social situations. Raising questions about the authenticity, believability, or intent of information always has the potential to both help us and hurt us. There are plenty of situations where we sense the need for critical thinking. But whether or not we raise a question, ask for clarification, or challenge the source, depends on the perceived social consequences of our actions. From a new literacies perspective concerns about how to teach students to think critically are skinny questions we have tried to answer in this paper. A fat question remains that still needs an answer. Will schools and teachers allow students to experience both the social benefits as well as the dangers of critical thinking?
References


