Taking seriously the teaching of critical thinking

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The state of affairs in social studies

Teaching students to think well has been a goal of social studies since the inception of the subject in 1916. At that time, the U.S. National Education Association identified promoting "good judgment" in making decisions as a central element of social studies (Barr, Barth & Shermis, 1977). This notion of "good judgment" mirrors contemporary accounts of critical thinking. In the intervening years, the call to improve students' thinking in social studies has been made countless times. Few educators—teachers and teacher educators alike—oppose the idea of getting students to think more critically.

Yet the rhetoric outstrips practice. There is a rather depressing irony: thinking critically is much valued and yet inadequately addressed in classrooms. This dichotomy was recognized in the *1942 Yearbook for the National Council for the Social Studies* which observed that American social studies teachers had "accepted critical thinking in principle without bothering to define the term precisely or to do much by way of direct instruction to see this goal was achieved" (Anderson, cited in Parker, 1991, p. 345). Fifty-years later, in his introduction to a special issue on higher order thinking, the editor of *Theory and Research in Social Education* remarked that as long as he could remember critical thinking had been a goal of social studies, yet with a few notable exceptions it had remained just that—a goal and not a classroom reality (Fraenkel, 1991, p. 323). Or, as Parker puts it, the teaching of thinking in social studies remains "more wish than practice" (1991, p. 354). Research in the U.S. supports these observations. For example, Su's (1990) study, based on interviews with 112 educators, found that although teachers stated that they valued critical thinking they did not implement it in their classrooms. Similarly, in her study of a three-year project to foster critical thinking in social studies, McKee (1988) found that teachers spent only four percent of class time on reasoning activities.

This predicament appears to extend to Canadian schools. A survey of over 1,700 elementary and secondary teachers of social studies in British Columbia (Case, 1993) found that almost 88 percent supported the teaching of critical thinking (79 percent judged it to be a major emphasis in their teaching), yet the 1989 provincial assessment involving social studies teachers of over
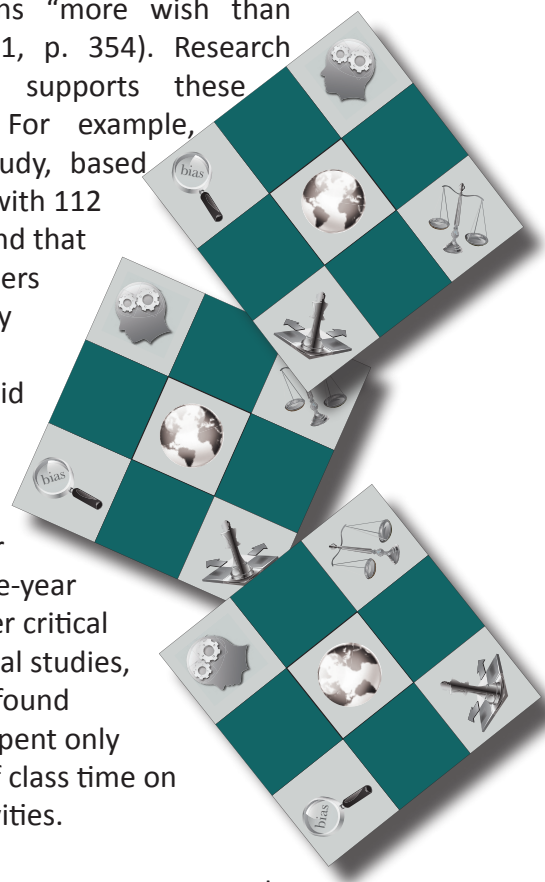
100,000 British Columbia students in grades 4, 7 and 10 concluded: "The relative lack of teaching strategies which support the development of critical thinking, particularly at the secondary level, suggests that students are not being supported in the development of critical thinking" (Bognar & Cassidy, 1991, p. 82).

At the risk of being trite, taking seriously the challenge of teaching students to think critically is long overdue. Many of the studies cited above identify factors responsible for this depressing state of affairs. The explanations often focus on a lack of pre-service and in-service preparation both in critical thinking and in the teaching of critical thinking, a paucity of suitable teaching methodology and resources and the demands of too much curricular content to cover. We agree that these factors are crucial to the problem, but believe there is a more fundamental impediment, namely widespread confusion or, at least, "haziness" about (1) what critical thinking really means and (2) what is involved in promoting it (Bognar et al., 1991, p. 105; Fraenkel, 1991, p. 323; Parker, 1991, p. 345). Little will be gained by altering training, resources and curriculum if teacher educators, curriculum developers and classroom teachers remain unclear about what this would require. Before we can begin to turn the tide of neglect, educators need a richer, more concrete understanding of critical thinking and of how it is promoted.

We propose to characterize the prevailing views on the nature and pedagogy of critical thinking, and point out their inadequacies. In the process, we lay the foundations for what we regard as a more promising understanding of and approach to teaching students to think critically.

The nature of critical thinking

According to the prevailing view—and by "prevailing" we mean what is typically found in professional journals and student textbooks—learning to think critically is widely viewed as mastery of a series of discrete skills or operations which can be generalized across a variety of contexts. These generic operations often include interpreting, predicting, analyzing, evaluating and so on. This view is frequently predicated on a distinction between knowledge, skills and attitudes. Since critical thinking is seen to fall with the skill domain of

educational objectives, the teaching of knowledge is separated from the teaching of critical thinking which, perhaps, explains why many teachers complain that critical thinking detracts from teaching content. As a result, when pressured to teach the content—judged by many teachers to be the core of the curriculum—critical thinking is overlooked or downplayed, becoming an add-on or an enhancement if and when the subject matter of the curriculum or in the textbook has been covered. Notice how consistently, despite the rhetoric about its centrality and importance, critical thinking activities are attached to the end of a chapter or a unit.

Not only does this positioning relegate critical thinking to a low status, but it reinforces the dangerous impression that critical thinking is a task that is undertaken from time to time, if teachers have the time. To make the point in a slightly different way, consider the lists below. On the left-hand side is a list of tasks or operations, on the right-hand side is a list of qualities or characteristics:

Task/operation	Quality/characteristic
• interpreting a passage	• superficially or in-depth
• writing a report	• discerningly or blindly
• predicting a result	• rashly or cautiously
• preparing a talk	• carefully or hurriedly
• analysing an issue	• seriously or frivolously

As we see it, the prevailing view would locate critical thinking in the left-hand column, as a label for a range of activities or operations that students undertake—if students are interpreting, analyzing or evaluating they are, by definition, "doing" critical thinking. We believe this to be a serious mistake—critical thinking is more appropriately located in the right-hand list, as a quality or characteristic that may or may not be present in virtually any task students undertake. Just as students may read a passage slowly or quickly, or superficially or in-depth, so too they can read a passage in a critically thoughtful way, or not. This point applies equally to analyzing, predicting and evaluating. The mere fact that someone is analysing an issue does not mean that they are doing it critically. In fact, the consequences of our collective failure to teach critical thinking are student analyses that fail to detect dubious assumptions, contain many fallacious and unsupported statements and reveal close-minded, prejudicial attitudes.

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We believe that critical thinking refers to the thinking through of any "problematic" situation where the thinker seeks to make a judgment about what it would be sensible or reasonable to believe or do. The need to reach reasoned judgments—to think critically—arises in countless kinds of situations from problem solving, decision making, issue analysis, inquiry and other so-called "processes," to reading, writing, speaking and listening. All of these are occasions for critical thinking, since there is limited value in undertaking these tasks in an uncritical manner. Thus critical thinking is not usefully viewed as a unique type of operation or "process," but as a particular set of qualities of thinking regardless of the task or operation. This emphasis on the quality of thinking focusses teachers' attention on the crucial dimension in promoting critical thinking. Students develop as critical thinkers as their judgments come to embody the qualities of good thinking. Thus, in deciding whether or not students' cooperative planning of a field trip was critically thoughtful we would consider, among other qualities, the accuracy and adequacy of their ideas, the extent to which they seriously considered the ideas of others and the degree of respect they showed for the ideas of those with whom they disagree.

The implications of conceptualizing critical thinking as a quality, not an activity, are profound. Critical thinking need not be treated as an "add-on" activity, but as an orientation that guides any task students undertake, including such "rote" tasks as taking notes and reading the textbook. Students can be encouraged to think critically as they learn to take notes by making the task problematic. Consider the following scenario: "Suppose the premier has asked for concise notes on the day's front page news. Your notes must be less than one-half page in length, focus on the important issues and clearly summarize the main points." In responding in a critical thoughtful manner to this task, students must judge what to report on the basis of importance, coverage of main points and conciseness. So too, the learning of content can and should be approached in a critically thoughtful manner. For example, in a teaching resource building on our model (Case, Daniels & Schwartz, 1996), students are invited to critique the opening page of a popular grade nine textbook which offers the following account of the Battle of Bunker Hill: "The heroic stand of American patriots in this battle inspired the colonists in their struggle for

independence" (Beers, 1983, p. 1). To complete the task, students first identify those words which suggest a pro-American bias in the statement (e.g., "heroic," "inspired"), then students recast the sentence in a blatantly pro-British bent and finally they rewrite the account from a more fair-minded perspective. In the process, content (in the textbook) is made problematic, as opposed to being transmitted as non controversial facts to be accepted unquestioningly. To do otherwise is to discourage a "critical" disposition in students.

This last point raises a final major deficiency in the prevailing view of critical thinking. By identifying critical thinking as a skill, distinct not only from knowledge but from also attitudes, we overlook the crucial role of attitudes in the formation of critical thinkers. Developing the dispositions of a careful and conscientious thinker are crucial—no amount of "skill" will overcome the limitations of closed-minded, prejudicial thinking. This omission is particularly alarming since the desired attitudes are unlikely to develop through occasional exercises—they typically require more sustained and concerted attention. All of this highlights the inadequacy of the add-on, discrete activity view of critical thinking.

Let us now look more closely at the prevailing view of how critical thinking is to be developed.

The pedagogy of critical thinking

In effect, the prevailing view of the way to promote thinking is to provide students with opportunities to practise thinking. This assumption, that the mere practising of thinking will improve students' critical competence, is replete in social studies textbooks. Rarely do we find textbooks that do more in their so-called critical thinking sections than pose questions or present items (e.g., a picture or a passage) for students to consider. Of course, students need opportunities to think, but the mere practice may do very little to help them get better at what they do. Of what value towards becoming a better thinker is there in asking students to assess the pro and con arguments on an issue if they are profoundly unaware of the standards they should use in critiquing competing pieces of evidence? Ironically, it may be counter productive to present such tasks without instruction since they may reinforce bad habits, such as closed-mindedness,

ethnocentrism and hasty generalizations. Thinking critically is, in effect, responding thoughtfully to a particular challenge by making appropriate use of intellectual resources—or what we call "intellectual tools." In this respect, arriving at a thoughtful answer is akin to constructing a house. Repeated attempts at either endeavour are unlikely to be fruitful unless the "builder" possesses the requisite tools—in one case, the appropriate cutting and mending tools (e.g., saw- and hammer-like devices) and, in the other case, the relevant critical concepts, standards of good reasoning, and dispositions of thoughtful reflection. Proponents of a "pedagogy of practice" have been deaf to the calls of notable writers (e.g., Paul, n.d.; Lipman, 1992) to provide students with the standards of reasoning and other requisite intellectual resources. Only as students acquire these tools do they learn to competently think through the tasks that teachers put before them.

Even when some "tools" of critical thought are introduced in curriculum materials, they are typically inadequate and crudely done. Standards of good thinking, if mentioned at all, are often described in the vaguest of terms, for example, "Decide if this interpretation is reasonable? or "Judge whether or not the argument is logical?" Terms such as "reasonable" and "logical" offer little direction to someone who does not already have a clear grasp of sound thinking. Dull tools make for dull distinctions. Providing the requisite tools demands a more careful unpacking of the implied standards of good reasoning. For example, students need to learn that reasonable may be judged in terms of consistency with the body of relevant and credible evidence. In mastering these concepts, students will need help in learning to distinguish relevant from irrelevant reasons and to recognize and apply the more specific criteria for assessing credibility.

A final common impediment to promoting critical thinking stems from the tasks or questions put to students. Many "thinking" assignments may not actually invite critical judgment. Requests such as "Which option do you like the most?" and "Take a position for or against this issue" may simply illicit students' ruminations about their tastes or prejudices, but not require that students critically assess these matters. In addition, many "higher-order" questions pose unhelpfully vague challenges. For example, social studies teachers are frequently urged to provide two or more competing accounts of a historical event and invite students to write their own history. Yet the tools for critically addressing this task are profoundly contextual. At least, three underlying issues may be at stake, each requiring different tools. Perhaps, the "problematic" issue is the credibility of the authors of the documents. In this case students need to employ criteria for judging appeals to authority (e.g., the author has studied the topic, is a recognized expert in the field, is not in a position of bias). Alternatively, the issue may hinge on the reliability of individual observations described in the documents. If so, students need to employ criteria for assessing observational accounts (e.g., the observer is not in conflict of interest, is functioning at a moderate level of emotional arousal, has a reputation for being honest and correct, has no preconceived notions of how the observation will turn out, made the report close to the time of observing). Or, the underlying issue may be a matter of deciding upon the most plausible inferences based on the body of accepted facts. This requires that students be able to distinguish inferences from direct observations, and learn to assess inferences for their consistency with the body of evidence. Our experience is that many professional resources—especially those recommending generic problem solving or decision making models—neglect the significant differences in requisite tools that vary with the type of problem or decision that students confront.

In response to the prevailing pedagogy of critical thinking we recommend that teachers work on three fronts:
• directly and systematically teaching, in context, the range of intellectual tools, that include background knowledge, criteria for judgment, critical thinking vocabulary, thinking strategies and habits of mind
• scrutinizing the questions and tasks asked of students to ensure that students frequently engage with bona fide critical challenges—rich invitations to think critically
• developing communities of thinkers where critical reflection is valued and reinforced by infusing expectations and routines to think critically in every aspect of students' school lives.

Teaching the intellectual tools

Neither the hand nor the mind alone would amount to much without aids and tools to perfect them.
— Francis Bacon, Novum Organum (1623)

In this second part we describe five types of intellectual resources or "tools" for thinking:
• possession of relevant *background knowledge*—the information about a topic that is required for thoughtful reflection
• understanding of appropriate *criteria for judgment*—the criteria or grounds for deciding which of the alternatives is the most sensible or appropriate
• possession of key *critical thinking vocabulary*—the range of concepts and distinctions that are helpful when thinking critically
• fluency with relevant *thinking strategies*—the repertoire of strategies, heuristics, organizing devices, models and "tricks" that may be useful when thinking through a critical thinking problem
• possession of essential *habits of mind*—the values and habits of a careful and conscientious thinker.

Background knowledge

The most obvious and basic "tool" for critical thinking is background knowledge. Students cannot think critically about a topic if they know nothing about it. In fact, expecting students to speculate on matters about which they know very little may have the undesirable consequence of encouraging ill-informed conclusions. Because the requisite background knowledge will depend on the particular problem under consideration, there is no set body of information in a subject area that students must acquire. Rather background knowledge is best understood in the context of particular questions or tasks—by identifying what students would need to know about in order to make a well-informed judgment.

Criteria for judgment

Critical thinking is essentially a matter of judging the reasonableness of alternatives. Necessarily, all judgments are based on criteria of some sort or another. For example, people will judge a movie as "good" because it was funny or because it moved them emotionally—these are the criteria for their assessment of movies. Although we will not always share identical criteria when judging something, students need help in thinking more carefully about the criteria to use when judging various alternatives and when judging the adequacy of their own reasoning. As was suggested earlier, when interpreting historical documents, students may need to apply the criteria for judging the reliability of an observation statement. A reasoned judgment cannot competently be made without these criteria. Some of the criteria that are particularly relevant are general criteria of good reasoning. These include accuracy, reliability, logical coherence, weight of evidence, clarity, precision and relevancy. It is not essential that critical thinkers be able to name these standards, but they must be able to apply them appropriately in judging the reasoning and actions of others and in monitoring their own thinking and acting.

Critical thinking vocabulary

Critical thinking is possible only if we have a vocabulary or set of concepts that permits us to make important distinctions among the different kinds of issues and thinking tasks facing us. When interpreting historical documents, for example, students need to be able to distinguish the concepts of "direct observation" and "inference." Possession of these concepts is not essentially a matter of acquiring "correct" terminology, but a matter of understanding key distinctions that facilitate thinking critically about, in this case, interpretive matters. Other key critical thinking vocabulary includes:
• cause and effect
• factual, value and conceptual (definitional) statements
• premise and conclusion
• points of view (e.g., moral, aesthetic, environmental)
• necessary and sufficient conditions
• deduction and induction.

Thinking strategies

Although critical thinking is never simply a matter of following certain procedures or steps, there are strategies or heuristics that are useful for guiding performance of thinking tasks. The most useful

strategies tend to be those designed to guide thinking in particular areas or domains of knowledge. For example, making lists of the reasons for and against a value position may help many in deciding which side of an issue to support. Because of differences among students, some strategies will be more or less helpful to individual students. Examples of simple, but nevertheless potentially helpful, strategies include:

• when struggling or blocked, stand back from a situation to get the total picture
• talk through a problem or confusing issue with another person
• double check responses before deciding that the task is completed
• use models, metaphors, drawings and symbols to simplify problems
• use various graphic organizers (e.g., webbing diagrams, Euler circles, "T" charts) to represent information
• before deciding on a course of action that affects others, put oneself in their position and imagine how they might feel about the situation.

Habits of mind

Being able to apply relevant criteria and strategies is of little significance in promoting critical thinking unless students also have certain habits of mind. Without, for instance, the disposition to be careful and critical in approaching particular tasks, students are unlikely to be successful. Developing each student's resolve to think critically is vital if schools are to foster critical thinking. These habits, commitments and sensitivities

include such things as:
• open-mindedness—willingness to withhold judgment and seek new evidence or points of view when existing evidence is inadequate or contentious, and willingness to consider evidence against one's view and to revise one's view should the evidence warrant it
• fair-mindedness—willingness to give fair consideration to alternative points of view and commitment to open, critical discussion of theories, practices and policies where all views are given a fair hearing)
• independent-mindedness—the willingness and personal strength to stand up for one's firmly held beliefs
• an inquiring or "critical" attitude—an inclination to question the clarity and support for claims or actions
• respect for high quality products and performances—appreciation of good design and effective performance
• an intellectual work ethic—a commitment to carrying out relevant thinking tasks in a competent manner.

Although these tools are not generic—different kinds of each of the five types of tools will typically be required when thinking through any given critical challenge—over time students can develop a repertoire of tools which will empower them to critically address a wide range of problematic situations.

To illustrate this point, the charts on the following pages list the specific tools (of all five types) that secondary students might be expected to develop in order to address in a critically thoughtful manner three common social studies tasks: interpreting data, analysing issues and presenting information.

Tools for interpreting data

Background knowledge	Criteria for judgment	Vocabulary	Strategies	Habits of mind
understands that documents can be read beyond their surface meaning has knowledge of the range of symbols used in maps and other graphic representations understands that interpretations may be from different perspectives or lenses (e.g., from feminist perspective, employer/employee perspective) understands that the past is often different from the present in many subtle and undetected ways	is familiar with the following criteria: • justifies interpretations in light of consistency of evidence in text with other known beliefs and theories • recognizes ambiguity and vagueness • recognizes bias judges the reliability of observations in light of the following criteria: • first-hand and not hearsay • good access to event • no conflict of interest • corroborated • representative coverage of situation/population judges the credibility of an authority in light of the following criteria: • no conflict of interest • has solid reputation • is well-informed about the topic • there is general agreement among experts • used proper methods to research topic	understands the following concepts: • inference and direct observation • cause and effect • point of view • bias • stereotype • hypothesis • primary and secondary source • degrees, minutes, seconds • types of scale (i.e., rf, stated, linear) • global position index—six-figure coordinates • propoganda • deconstruction • cause versus correlation • impartial versus neutral. can distinguish the following forms of bias: • eurocentricism • egocentricism • national chauvinism • cultural chauvinism • presentism • anthrocentricism	looks to identify author's purpose or hidden intentions. summarizes ideas in one's own words. sequences or translates information into various forms to assist in interpretation	does not take everything at face value—is inclined to question when warranted is willing to consider alternative points of view/interpretations is willing to evaluate information when it is important to do so withholds reaching a conclusion when the evidence is inconclusive has historical empathy—the capacity to place oneself in the minds and times of historical persons

Tools for presenting information

Background knowledge	Criteria for judgment	Vocabulary	Strategies	Habits of mind
has a basic understanding of the following forms of presentation: • various types of graphic displays (e.g, collages, murals, overheads) • small and large group presentation approaches (e.g., debates, lectures) • the mechanics of formal written presentations (e.g., titles and headings, report structure) •the principles and techniques in making short video presentations understands that presentations serve different purposes (e.g., create awareness, inform, persuade) has some knowledge of audience needs and how to respond to different audiences can present on same topic from significantly different perspectives (e.g., victim/advocate) and for different purposes (to promote, to critique, to inform) knows the elements and principles of a formal debate	is familiar with the following criteria: • presentation is interesting and appropriate to the audience • oral and visual comunication is clear and accurate—does not distort the information • presentation is thoughtfully sequenced; • topic is focussed and keeps to the point • medium is suitable for the message • integrates various media within a presentation	understands the following concept: • media as "representation" • media as "construction	generates titles and sub-headings to classify/organize information uses rehearsal techniques and mock-ups to prepare presentations develops appropriate outlines to sequence presentations prepares speaking notes and other aides to support familiar presentation. uses graphics (e.g., timelines, charts, graphs) to present information carefully edits written reports makes use of relevant and illustrative examples in oral and written communication uses accepted bibliographic style to reference sources of ideas uses recognized techniques of persuasion (e.g., focus on the positive, appeal to authoritative figures)	considers needs of the audience is flexible in adjusting presentation as needed takes pride in preparing quality work is willing to engage respectfully in group discussion

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Tools for analysing issues

Background knowledge	Criteria for judgment	Vocabulary	Strategies	Habits of mind
has substantive knowledge about the issue at hand has some knowledge of the types of concerns that should be considered when defending a position on a social/ethical issue	is familiar with the following criteria: • avoids ambiguous language • supports arguments with reasons • uses evidence and examples to substantiate reasons • fairly considers all reasonable alternatives/ perspectives • judges whether an explanation is oversimplified • judges whether the evidence is sufficent to establish the claim avoids most basic informal fallacies • ad hominen • false appeal to tradition • false appeal to popularity • false dichotomy • slippery slope • straw person • begging the question • false appeal to authority • vagueness	understands the following concepts: • assumption • justification and evidence • argument, premise and conclusion • factual and value claims • generalization • pro and con • justice/fairness • eyewitness • fallacy • generalization and over-generalization • unstated assumptions • truth, validity and soundness • deductive and inductive reasoning	can follow a five-step issue analysis model: • define the issue and explain why it is important • research and explain several pro and con arguments • evaluate reasons from all sides of a debate • formulate a defensible position • offer counter-arguments to defend position thinks of counter-arguments creates pro and con charts uses role taking to understand other perspectives can follow a complex issue analysis model: • define the issue and explain why it is important • research and explain all major pro and con arguments • evaluate the comparative strength of competing reasons • formulate a defensible position that consider the interests of all who are affected • offer counter-arguments in defence of position uses diagrams to trace structure of arguments	is willing to tackle an issue is open to points of view other than one's own— especially those that are counter to one's own position is fair-minded—will judge ideas on their merits and not simply enforce personal interests and biases is independent minded—resists the pressures to adopt and espouse opinions merely because they are popular has an intellectual work ethic—is committed to thinking in a thorough and careful manner is tentative in one's belief until there is sufficent evidence to warrant a more definitive position

Infusing critical challenges

Critical challenges are the tasks or questions that provide the impetus and context for critical thinking.

If students are to improve in their ability to think critically they require numerous opportunities to think through problematic situations. Critical challenges may be extended assignments (e.g., undertaking case studies or class debates, producing elaborate displays or reports on controversial issues, and designing, administering and analyzing the results of surveys). They may also be very focussed tasks that take a few minutes only to work through (e.g., generating a few criteria to use in deciding which picture in the textbook is more representative of the historical period, or which of several possible titles of a student essay is the best). The use of critical challenges does not imply a particular pedagogical style, what is sometimes called an issue- or problem-centred approach. Critical challenges can be used with any approach to teaching: activity centres, textbook-based programs, cooperative groupings, self-directed study and so on, provided students are encouraged and assisted in assessing the reasonableness of what they are hearing, seeing, or doing. The teacher's job, regardless of the form of question or task, is to ensure that these approaches represent rich invitations to think critically.

Earlier we discussed weaknesses in many so-called thinking assignments put to students. In this part, we explore four criteria for judging a good critical challenge:
• *Does the question or task require judgment?*
• *Will the challenge be meaningful to students?*
• *Is the challenge embedded in the core of the curriculum?*
• *Is the challenge focussed so as to limit the requisite tools?*

Does the question or task require judgment?

Critical thinking occurs only in the context of a problematic situation. If an answer is simply there, waiting to be found, or if any and all answers are acceptable then there is no invitation to think critically. A question or task is a critical challenge only if it invites students to assess the reasonableness of plausible options or alternative conclusions—the assignment must require more than retrieval of information, rote application of a strategy or mere assertion of a preference.

One impediment to promoting critical thinking is the difficulty in distinguishing when a question or task explicitly invites critical thinking and when it does not. Critical challenges can be distinguished from two other types of questions—what we refer to as "Where's Waldo?" and "All answers are valid" questions.
• "Where's Waldo?" questions. This type of question requires the identification or retrieval of information. The label for these questions is based on a series of children's picture books called *Where's Waldo?* The books consist of sets of pictures containing hundreds of figures only one of whom is Waldo. Children are challenged to locate Waldo among the maze of other individuals in each picture. Although the correct answer can be very difficult, it is not a critical challenge because the task involves locating a pre-established, non-contentious answer. Often questions such as "What were the major causes of World War II?" and "How does electricity work?" may simply be Where's Waldo questions if students are expected to retrieve the answers from their class notes, their textbooks, the library, or from memory.
• "All answers are valid" questions. This type of question invites students to offer their opinions on matter where their answers are essentially personal preferences or mere guesses. Questions such as "Who is your favourite character in this period?", "What do you like best about Canada?" and "What will the world be like in two hundred years from now?" are not likely to be critical challenges because almost no answer could be said to be unacceptable. Who is to say that a student should like the heroine more than the villain in a historical episode? Or that someone can be faulted for liking Canada best for its cold or rainy weather?

Both "Where's Waldo?" and "All answers are valid" questions are valuable questions to ask of students. Our sole point in drawing attention to them is to make it clear that they are not critical challenges—these two types of questions do not explicitly invite critical reflection.

There is a further feature of posing critical challenges that deserves explanation. The point can be made by distinguishing reasoned judgments from what may be

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called rationalized judgments:

• A rationalized judgment is a position that is supported after the fact with reasons why it could be justifiable. These reasons may simply be excuses—attempts to justify a position that has not been arrived at through careful, open-minded scrutiny. A rationalized judgment occurs when students leap to conclusions or reiterate positions that they have heard others put forward and then after making the judgment think of reasons to support it.

• A reasoned judgment is a criteria-based (or reason-driven) position. It is a position that is defended because it meets the perceived requirements of a thoughtful answer.

Although we cannot guarantee which type of judgment students will make, there are ways of posing critical challenges that are more explicitly invitations for reasoned judgment:

• specify (some or all of) the criteria for judgment that students are to use in defending their answer (e.g., Provide an interpretation of this cartoon that is plausible, comprehensive and insightful)

• expect student to demonstrate that they have considered alternative positions (e.g., Argue with conviction both sides of the issue: Should Quebec separate from the rest of Canada?).

Will the challenge be meaningful to students?

Thinking critically is not an amusing mental game to be played, but an important feature of daily life. If students view a challenge as irrelevant and unimportant they are unlike to engage seriously in the activity and, over time, are likely to regard critical thinking as a boring or trivial exercise. Consequently critical challenges should arise within meaningful contexts. Often these contexts are real-life, but they need not be. It is sufficient that the thinker see the challenge to be interesting or stimulating (to some extent at least) and that the context provide an adequate grounding for deciding what would be reasonable. Critical challenges are likely to engage students to the extent that the challenges:

• create dissonance with students' pre-existing beliefs

• involve real (or, at least, realistic) problems

• have an obvious connection with a contemporary event, the local community or a personal concern of students

• provide a sufficiently rich context so that students can get fully into the situation

• when feasible, are chosen or suggested by students themselves.

Is the challenge embedded in the core of the curriculum?

As we have emphasized, critical thinking should not be an add-on, nor should it interrupt the pursuit of other curricular goals. Rather, we should encourage students to think critically about matters that are at the very core of the curriculum. The key to infusing critical thinking into the curriculum is to recast the core elements of the subject matter in the form of critical challenges. In this way students confront the material in the context of thinking critically about it, and not merely as a matter of retrieving information. For example, instead of asking students to learn "the five causes" of World War II invite them to judge which of a list of influences is the most significant factor in the outbreak of the war.

Critical challenges can be embedded into ongoing activities by connecting or infusing a challenge into the topic under consideration, for example, by focussing on a statement or picture in a textbook, on an event in a story or one that happened in the community, or on students' questions. Critical challenges need not be large scale undertakings, since these kinds of challenges may take considerable time. Although in-depth challenges are valuable, there are many opportunities to pose challenges "in passing."

Is the challenge focussed so as to limit the requisite tools?

We have stressed the role of "tools" in dealing competently with critical challenges. If students lack crucial background knowledge or are unaware of relevant criteria, and if they do not acquire these tools as they address the challenge, then the value of posing challenges may be lost. Students are less likely to develop their ability to think critically if they are fumbling in the dark. For this reason, it is important to anticipate the tools required by a challenge and to compensate for those tools that are not already in students' repertoires:

• provide instruction (e.g., teach any new concepts, introduce thinking strategies that students might use)

• provide support materials (e.g., supplement

background knowledge by including a data sheet or referring to pages in the textbook)
• offer reminders (e.g., encourage students to attend to specific habits of mind).

One way to increase the likelihood that students will already possess, or will be able to acquire, all the requisite tools is to narrow the focus of the challenge or "make it compact." Critical challenges must be sufficiently delimited so that students do not require encyclopedic background knowledge in order to do a competent job. For example, instead of asking "Assess the legacy of the Enlightenment thinkers"—a task that could fill volumes—it may be better to pose a more focussed challenge: "Based on the following two documents and your own knowledge, which Enlightenment philosopher—Hobbes or Locke—offers the more realistic theory of government for modern society?"

The following chart offers sample prompts for critical questions and tasks, with accompanying examples.

Critical challenges in social studies

Critical question prompts	*Example of question*
Who is more "x"?	• Whose suggestion for solving the problem is more realistic?
	• Who was the greater explorer—Vancouver or Cook?
Judge the character	• Is Simon Fraser a hero or a rogue?
Defend an interpretation	• What is the cartoonist really saying in this drawing?
Settle the dispute	• Should this recreational site be developed?
Is this really an "x ?"	• Is the term "Quiet Revolution" an oxymoron?
"The best of" award	• Which of the civilizations studied this semester has made the most significant political contribution to our society?
What's wrong with this?	• Has the author provided a fair and full account of what actually happened?

Critical task prompts	*Example of task*
Rewrite from point of view	• After reading a pro-European version of Simon Fraser's descent down the Fraser River, write a fair-minded account of what happened on this trip.
	• In 1876, The Yorkshire Post referred to the charge of the Light Brigade during the Battle of Balaclava as "That glorious blunder of which all Englishmen are justifiably proud." Write two editorials—one that supports this statement, and another that refutes it.
Make a memo	• Write a letter of reference on behalf of Thomas More to Henry VIII.
Realistic application	• The premier has asked for concise notes on the day's front page news. Your notes must be less than one-half page in length, focus on the important issues and clearly summarize the main points.
	• Your mother has been informed that she is being transferred to either Weyburn, Saskatchewan, or Prince George, British Columbia. She asks you to gather information and offer her your advice in deciding which would be a better place to live for your family.
Create a masterpiece	• Create a poster-size advertisement to discourage fellow students from smoking, effectively employing the techniques of persuasion without distorting the evidence.

Building a community of thinkers

A community of thinkers is a collection of individuals interacting in mutually supportive ways to nurture critical reflection.

If we are serious about critical thinking we must establish the conditions that are likely to nurture the required attributes. This involves infusing expectations and opportunities to think critically in all our students' school lives. If classroom and school routines do not consistently reinforce thoughtful reflection, then little or no lasting gains can be expected from occasional lessons on critical thinking. This point was affirmed by studies of the effects of educational programs on developing respect for others. Various researchers have found that the specifics of the curriculum have a marginal impact on this key attitude—the classroom climate is the determining factor (cf., Daniels & Case, 1992, pp. 19-23). If teachers solicit and value student opinions, and provide a healthy forum for student dialogue, then students are more likely to come to respect other's opinions.

Generally speaking, in promoting critical thinking the influence of the hidden curriculum—the latent norms and subtle messages that powerfully affect what students actually learn—has been underestimated or overlooked. Consider, for example, the tendency of many people to cast issues in dichotomous terms—as black or white, and right or wrong. This attitude is reinforced by the traditional classroom debate that has been the paradigm format for engaging students in issue discussion. In a two-sided debate the objective is to prove that the opposing side is without merit by refuting, belittling or ignoring opposing arguments. There is a tacit prohibition against changing one's mind part way through the debate. Crossing to the other side is like crossing the floor of the House of Commons—both are seen as betrayals. Increasingly teachers are replacing this adversarial, closed-minded format with more open-ended discussions where students are encouraged to see the merits of all sides and to recast binary options as extreme positions along a continuum. To facilitate this approach, class discussions may be configured in a "U" shape—students with polar views (either strongly agreeing or strongly disagreeing) locate themselves at either end, and students with mixed opinions sit along the rounded part. At varying stages in the discussion students are encouraged to move physically along the "U" as their intellectual position on the issue changes. In this way, less dogmatic attitudes are reinforced

Building a community of thinkers is vital for, at least, two reasons. First, critical thinking is not a set of abilities that one uses from time to time, such as learning how to cook or how to play basketball. Critical thinking is a way of approaching almost everything that one encounters. This mindset will not develop if classroom routines transmit inconsistent messages or fail to reinforce this expectation. Second, the classic image of the isolated thinker is a misleading one; we should not expect to be able to think through all of our "problems" by ourselves. Rather we should actively develop, supplement and test our ideas in conjunction with others—to put our heads together. But many students may be unwilling or unable to contribute to and benefit from collaborative reflection. Perhaps, they do not listen very well, or they cannot accept any form of criticism, or they do not know how to monitor what they say, or they have no confidence in their ability to add to the discussion. Students will acquire these tools only through participation as a member in a community of thinkers.

Nurturing the appropriate climate is an orientation that pervades all of our actions. We can transform our classrooms into communities of thinkers by working in the following ways:
• *setting appropriate classroom expectations*
• *implementing appropriate classroom routines and activities*
• *personally modeling the attributes of a good critical thinker*
• *employing effective group questioning techniques*
• *developing the tools for student participation in a reflective community.*

Classroom expectations

Teachers' expectations of their students are often self-fulfilling. Specific expectations that support a community of thinkers are:
• students are expected to make up their own minds—not simply take someone's word for things
• students and teacher are expected as a matter of course to provide reasons or examples in support of

their observations, conclusions and behaviour
• students and teacher are expected to seriously consider other perspectives on a issue and alternative approaches to a problem before reaching a firm conclusion
• all persons are to be treated respectfully by everyone, even if their ideas are wrong or silly
• disputes about ideas are encouraged, but they must never be directed personally or be mean-spirited
• it is not acceptable merely to criticize and complain—the pros of a position should always be examined as should possible solutions to problems
• the insincere use of critical techniques to show off or to be contrary is not tolerated (this does not mean that there is no place for well-intentioned devil's advocacy).

Classroom routines and activities

A community of thinkers can be supported by building into the daily classroom operation various routines and activities that habituate students to particular frames of mind. Some of the routines that support a critical community are:
• the vocabulary of critical thinking is used as a matter of course in classroom discussion (e.g., Asking "What can you infer from this picture about the individual's state of mind?" "What assumptions are you making?")
• assignments, including those that are for marks, consistently contain a non-trivial commitment to thinking critically
• students regularly scrutinize textbooks, news articles and reports and other "reputable" sources of information for bias, stereotyping, overgeneralization and inaccuracy
• student ideas and suggestions are regularly considered and (when appropriate) accepted in setting assignments, establishing rules for the class and establishing criteria for evaluation
• thoughtfully supported, insightful or empathic responses (even if flawed) are to be valued more than merely correctly recalled responses
• students regularly explore and defend positions from particular points of view, especially from perspectives that are not personally held by them
• students regularly identify and defend criteria to evaluate their classroom behaviour and work, and then apply these criteria to themselves and their peers
• the conditions for thoughtful reflection are respected—students are given adequate time to reflect and provided with the tools to address their tasks critically (e.g., students should not be expected merely to guess).

Teacher modelling

It has been said "Example is not the best way to influence people, it's the only way" (reported in Norman, 1989, p. 27). This principle applies to critical thinking. If we want our students to be good critical thinkers we must model these attributes ourselves. We may want to consider being a role model in the ways suggested below:
• not being dogmatic and not always having the answer—living with ambiguity—being satisfied with tentative conclusions until full review of complex issues can be carried out
• sincerely attempting to base all comments and decisions on careful and fair-minded consideration of all sides
• be willing (if asked) to provide "good" reasons for our decisions and actions (This does not mean that every time any student asks for a justification that the lesson must be interrupted)
• being careful to avoid making gross generalizations and stereotypical comments about individuals and groups and seeking to expose stereotypes in books, pictures, films and other learning resources
• being willing to change our mind or alter our plans when good reasons are presented
• always acknowledging the existence of different positions on an issue (e.g., looking at events from different cultural, gender and class perspectives)
• not being cynical—adopting, instead, a realistic but questioning attitude toward the world.

Questioning techniques

We can support a community of thinkers by being effective questioners. We must pose questions that go beyond recall or retrieval of information by inviting students to make reasoned judgments. We can further support critical thinking by consistently responding to student comments using non-threatening probing techniques such as those listed below (Saskatchewan Education, 1988, p. 34):

Seeking greater clarity
• Could you give me an example?

• Is your point "this" or "this"?

Probing for assumptions
• You seem to be assuming that . . .
• Is this always the case?

Probing for reasons and evidence
• Is there reason to doubt this evidence?
• How could we find out if this is true?

Exploring alternative perspectives
• How might other groups respond?
• What would people who disagree with your position say?

Probing consequences or implications
• What effect would this have?
• If this were the case, what else must also be true?

Tools for community participation

Just as students are taught to be good citizens, so too students need to be taught how to be effective contributors to and beneficiaries of a community of thinkers. Many of the tools employed in individual reflection apply here, however other tools are uniquely employed in collaborative deliberation. Some of these tools are suggested below.

Background knowledge
• knowledge that individuals may see things in significantly different ways
• knowledge of how individuals are likely to react in various situations

Criteria for judgment
• Are one's comments relevant to the discussion (on topic)?
• Are one's comments expressed in a manner that will

be clear to everyone?

Critical thinking vocabulary
• unanimous, consensus, minority positions

Thinking strategies
• group management strategies such as taking turns, assigning cooperative roles, active listening, and keeping a speaker's list
• strategies for critiquing in a non-threatening manner including putting the comment in the form of a question, preceding comment with a caveat, or preceding comment with positive remarks
• strategies for presenting information in group settings including limiting comments to a few points, speaking from notes, and connecting remarks to previous speaker's comments.

Habits of mind
• independent-minded—willingness to stand up for firmly held beliefs
• sensitivity to others—attention to the feelings of others
• self-monitoring—attention to how one's actions are affecting the group.

Concluding remarks

We are optimistic that the current state of affairs can be improved. As we have tried to illustrate, the prevailing view does little in the way of teaching for thinking. In this article we hope to combat the prevailing view by clarifying the nature of critical thinking and how to effectively promote critical thinking in social studies. Of course, greater clarity is not enough—extensive training, resources, and curriculum revision are required—but it represents a necessary and promising first step in taking seriously a challenge raised consistently since the very beginning of social studies.

References

Allen, R. (1975).*Values education series*.. Evanston, IL: McDougal, Little.

Bailin, S., Case, R., Coombs, J. & Daniels, L. (1993, September). A conception of critical thinking for curriculum, instruction and assessment. Unpublished report to Examinations Branch, Ministry of Education, Victoria, BC.

Bailin, S., Case, R., Coombs, J. & Daniels, L. (1994). A conception of critical thinking for curriculum, instruction and assessment. *Horizon*., 32(1), 5-16.

Barr, D., Barth, J. & Shermis, S. (1977). *Defining the social studies*.. Arlington, VA: National Council for the Social Studies.

Beer, B.F. (1983). *Patterns of civilization* (Volume 2). Scarborough, ON: Prentice-Hall.

Bognar, C., Cassidy, C., Lewis, W. & Manley-Casimir, M. (1991). *Social studies in British Columbia: Technical report of the 1989 social studies assessment*. Victoria, BC: Ministry of Education.

Case, R. (1993). *Summary of the 1992 social studies needs assessment*.. Victoria, BC: Queen's Printer.

Case, R., Daniels, L. & Schwartz P. (Eds.). (1996). *Critical challenges in Social Studies for Junior High students*. Burnaby, BC: Field Relations, Faculty of Education, Simon Fraser University.

Daniels, L. & Case, R. (1992, June). *Charter literacy and the administration of justice. Final report for the Department of Justice Canada*, Ottawa, Ontario

Engle, S. (1960). Decision-making: The heart of Social Studies. *Social Education*, 24(7), 301-309.

Evans, W. and Applegate, J. (1982). *Making rational decisions*.. Salt Lake City, UT: Prodec.

Fraenkel, J. (1991). Editorial. *Theory and Research in Social Education.*, 19(4), 323-325.

Hullfish, G. & Smith, P. (1961). *Reflective thinking: The method of education*.. New York: Dodd, Mead.

Lipman, M. (1992). Criteria and judgment in critical thinking. *Inquiry*, 9(2), 3-4.

Massialas, B. & Cox, C. (1966). *Inquiry in social studies.* San Francisco: McGraw-Hill.

McKee. S. (1988, October). Impediments to implementing critical thinking. *Social Education*., 444-446.

McPeck, J. (1981). *Critical thinking and education*. New York: St. Martins.

Norman, P. (1989).*The self-directed learning contract: A guide for learners and teachers*. Burnaby, BC: Faculty of Education, Simon Fraser University.

Parker, W. (1991). Achieving thinking and decision-making objectives in social studies. In J. Shaver (Ed.), *Handbook of research on social studies teaching and learning* (pp. 345-356). Toronto: Collier Macmillan.

Paul, R. (no date).*Using intellectual standards in the elements of thought*. Unpublished paper, Center Critical Thinking and Moral Critique, Sonoma State University, California.

Saskatchewan Education. (1988). *Understanding the common essential learning's: A handbook for teachers*. Regina, SK: Author.

Shaver, J. & Larkins, A. (1973). *The Analysis of Public Issues Program*. Boston: Allyn and Bacon.

Su, Zhixin. (1990). Exploring the moral socialization of teacher candidates. *Oxford Review of Education*, 16(3), 367-391.

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