

# ISSA Proceedings 2002 - Critical Thinking: Two Views



I will briefly describe critical thinking in terms of two views. The first view, and most commonly held view, is that critical thinking consists of dispositions and skills, where the role of non-cognitive factors or dispositions are emphasized or considered primary to the exercise of critical thinking skills. I will refer to this as the 'dispositions plus skills' view, one which is held by Robert H. Ennis, Richard Paul and Harvey Siegel. When defining and describing critical thinking activity, these theorists include descriptions of what they consider to be an ideal critical thinker. The second view, one which I will refer to as the Askills' view, is that critical thinking is the exercise of cognitive skills or abilities – particularly the skills associated with the interpretation and evaluation of arguments. Fisher and Scriven clearly hold such a view as they define critical thinking specifically in terms of such skills, and so do not focus on what are considered to be the non-cognitive aspects that may or may not be necessary to any critical thinking exercise deemed as such(i). In the first section of this paper, I will discuss critical thinking and curriculum. In part two, I provide reasons for defining critical thinking as a set of skills. In part three, I outline and assess Alec Fisher and Michael Scriven's conception of critical thinking in terms of an ideal curriculum. In part four I conclude with a proposal for curriculum development.

## *1. Critical Thinking and the Ontario High School Curriculum*

I examined both conceptions of critical thinking in terms of the implications they might have for curriculum development and the teaching of critical thinking based upon the learning objectives described in curriculum documents. Thus, I am not addressing here philosophical issues with respect to critical thinking, but practical ones. The main point of this paper is to illustrate how the theoretical content implied by the conceptions I examine may or may not inform the practice of teaching critical thinking in Ontario high schools. I think a skills-based definition and the content implied by that definition is consistent with Ontario curriculum objectives and course descriptions, and also with the primary aim of teaching critical thinking skills. My conclusion is that in order to find a common

vocabulary among teachers of specific subjects, and teachers of philosophy, reasoning, critical thinking, informal logic – however it is verbally clothed in curriculum documents and in textbooks – is that a skills based definition would be most useful to secondary school teachers. Importantly, a skills-based definition is a less complicated basis from which teachers can develop their course content. I think that the skills-based definition and the assessment of that definition given by Scriven and Fisher provide this basis – a coherent and specific focus for teachers of all subjects working within the guidelines of the New Ontario Curriculum.

Although I will argue for the skills view, I must make clear that I am not rejecting the dispositional accounts given by Ennis, Paul, or Siegel or the value of them in arguing for critical thinking as a central educational objective. In other words, trying to instil in students the value of learning generally, and in this case the value of learning critical thinking skills, is a primary aim for all teachers. However, I do not think that the aim of instilling a critical attitude or spirit so to speak is one that curriculum guidelines and objectives specifically address, and therefore trying to incorporate such an aim into conceptions of critical thinking complicates the development of curriculum appropriate content and successful completion of board assessment requirements. How content is geared to instill such dispositions or attitudes is vague, as when one looks in the content of critical thinking textbooks, ways that students might develop or learn the appropriate character traits, values, dispositions, attitudes etc. argued for in dispositions plus skills accounts is conspicuously absent. For example, in his article ‘Critical Thinking: A Streamlined Conception’, Ennis gives an account of critical thinking with an emphasis on the importance of teaching dispositions<sup>(ii)</sup>. Yet, in twelve of the fourteen Chapters in his textbook, he outlines the knowledge and skills associated with the critical interpretation and evaluation of arguments<sup>(iii)</sup>. Placing importance on such an aim as teaching dispositions and values, and then teaching critical thinking as primarily a set of skills, brings us then to that all too familiar and frustrating gap between theory and practice.

The further problem of distinguishing between skills and dispositions obscures the ways in which teachers might make the goal of teaching attitudes or dispositions a classroom reality. What students do with newly learned skills is beyond the control of the teacher, and so arguing for a disposition that purports the proper use of such skills frustrates the already complicated decision of

determining the content which would complement the ultimate goal of developing critical thinkers. Nevertheless, the majority of critical thinking theorists give a dispositional plus skills account with an emphasis on modeling critical thinking dispositions and some suggestions for content, such as the suggestion that teachers focus on issues and problems which might reflect the interests of the students. These considerations are valuable in deciding teaching style, and developing the kind of classroom atmosphere or design that would encourage students to exercise critical thinking skills. However, such pedagogical considerations do not help to precisely define what dispositions and attitudes are or how they are to be effectively assessed, and teachers working within the secondary system need such definitions and assessment tools, especially if they are to model critical thinking dispositions. What is the difference then, if any, between modeling critical thinking skills and modeling dispositions? To answer this question, a deep exploration of expert views of critical thinking is necessary. Since there are no clear answers in dispositional accounts, then I think a practical move would be to search for consistency between curriculum dictates and what is currently being taught in critical thinking courses.

## *2. The Skills View: Why Take It?*

With respect to the high school curriculum, there is a educational need to reach a consensus as to what critical thinking is. Critical thinking is often conceived as a general educational aim for post-secondary education, however, reaching consensus on the nature of critical thinking is not necessitated by post-secondary institutional structuring(iv). On the other hand, the Ontario Program Planning and Assessment guide which complements curriculum policy documents provides 'essential information' and aspects of policy relating specifically to the standard knowledge and skills students are expected to learn and demonstrate(v). Since Ministry policy and curriculum documents are produced with the aim of achieving consistency in teaching practices, assessment, and evaluation of students' work across high schools, and critical thinking is an integral part of past and present curriculum developments, it is very important that teachers have a common working definition of critical thinking. Further, the use of the terms 'critical' and 'critical thinking', shrouded as they are in curriculum generality, necessitates deferment to education theorists, philosophers of education, developmental and cognitive psychologists, and critical thinking theorists from a number of disciplines. Therefore, one must attempt to find some theoretical common ground consistent with the content delivered in current critical thinking courses.

Given that there are diverse positions taken and issues surrounding the nature of dispositions, attitudes, values, tendencies, etc., what relationship they have to cognitive skills, what level is necessary to achieve the proper exercise of skills, and how to instill and measure attitude or values, I think a more productive route to reaching any consensus is to take the skills view. The skills view is more productive because there is a general consensus that the core feature of critical thinking is the careful or reflective analysis/interpretation and evaluation of knowledge and/or arguments. Given that this core feature is a consistent focus across subjects described in the curriculum, critical thinking textbooks(vi) and tests, and is emphasized in the practical application of theories of critical thinking, the Skills view appears to me to be a much less ambiguous view to take(vii).

### *3. Alec Fisher and Michael Scriven: A Skills-Based Definition*

In *Critical Thinking: Its Definition and Assessment*, Alec Fisher and Michael Scriven define critical thinking as the 'skilled and active interpretation and evaluation of observations and communications information and argumentation' (Fisher and Scriven 1997: 21). One of their reasons for having this skills-based definition, is that they think critical thinking is an intellectual or 'cognitive' character trait which speaks to the critical thinking teacher's primary task 'to teach critical thinking skills' (Fisher and Scriven 1997: 46). These skills, for Fisher and Scriven, are primarily the skills associated with the construction, analysis, interpretation and evaluation of arguments. What they consider to be higher order critical thinking skills are directly related to argumentation, as such skills involve the acquiring of a technical informal logic vocabulary, mainly fallacy labels (Fisher and Scriven 1997: 106 - 107). Also, the list of 'common tools for a logical toolbox' is entirely comprised of distinctions applicable to argument or related to argument. Since this toolbox is considered to be a 'standard English vocabulary for critical interpretation and appraisal' the vast majority of essential critical thinking skills included in their list of competencies are learned through the analysis of arguments and the process of argumentation, argument construction, the communication of arguments, and argument interpretation and evaluation (Fisher and Scriven 1997: 104 - 106).

As well, almost all of the content of critical thinking tests reflect the content implied in the above definition given by Scriven and Fisher. In an 'An Annotated List of Critical Thinking Tests' prepared by Ennis, there is only one of twenty-two

tests that 'attempts to assess critical thinking dispositions', a test developed by Peter Facione(viii). All of the remaining tests are exercises in the critical interpretation and evaluation of reasoning, arguments, and other aspects of argumentation such as the identification of conclusions, types of argument, and assumptions. Further, Peter Facione's Delphi report produced the six most common 'cognitive skills' involved in critical thinking - Interpretation, Analysis, Evaluation, Inference, Explanation and Self-Regulation (Fisher and Scriven 1997: 81). These skills, including Self-Regulation which is often referred to as metacognition or self-reflection (both which are thinking about one's own thinking processes) are consistently found in the content of critical thinking texts. Since a common problem with dispositions plus skills conceptions is the conflation of what is considered to be the critical spirit and what are considered to be critical thinking skills(ix), a promising route to consistency across specific subjects and high schools would be to eliminate the confusion surrounding dispositions by removing the language of dispositions and ethical considerations (such as the maintenance of a true democracy) from conceptions of critical thinking. This is precisely what Fisher and Scriven suggest and do when they clarify what critical thinking is.

One conceptual difficulty arising from Scriven and Fisher's assessment of their definition and their aim of clarifying what critical thinking is, relates to sum of their positions regarding approaches to teaching, an ideal curriculum, the skills-based content implied by their definition, and the idea that 'teachers are driven by their own *conception* of critical thinking' (Fisher and Scriven 1997: 2). Their ideal curriculum is a combination of a stand-alone critical thinking course or module, and an 'infusion approach' (the infusion of critical thinking into standard subjects). They point out that this curriculum strategy will only work well 'when the teachers of the infusion courses co-ordinate their conceptions of critical thinking with the teachers of the stand-alone course' (or unit, or module, etc.) (Fisher and Scriven 1997: 4) and that 'the use of a common vocabulary is helpful for across-the-curriculum generalization' (Fisher and Scriven 1997: 61). Keeping their ideal curriculum in mind, let us now explore a position Fisher and Scriven take with respect to the nature of critical thinking in relation to teaching approaches and aims.

In order to clarify the concept of critical thinking to better serve teachers at the secondary level, I think that what needs to be addressed is the tension between

Fisher and Scriven's skills definition and assessment, and their statement that 'despite the way we emphasize the content of critical thinking courses here 'because we want to contest the idea that they do not have any content' and their statement that 'great success in teaching critical thinking consists of content combined with something quite different but probably of equal importance, which is conveying' perhaps inspiring is a better term 'the spirit of critical thinking' (Fisher and Scriven: 59). If there is no standard content, content which is derived from comprehensive definitions of critical thinking and learning objectives listed in government documents, how would one begin to assess students' learning? One cannot judge in the short duration of a term, if at all, whether or not students have formed such a spirit, or what motivated their thinking, especially since they are required to exercise certain skills in order to pass the course(x). So, if one wants to avoid this significant problem with evaluation and assessment, one should use, strictly, a skills based definition.

More importantly, if teachers are using different conceptions of critical thinking, how would success in terms of content consistency across Ontario high schools be achieved and/or measured? To answer the above questions, one would need to know what the meaning of critical thinking is in terms of cognitive skills, that at least can be evaluated. Defining the critical thinker with undetermined or disputed criteria of how to objectively judge a critical thinker as such, would make evaluation an incredibly difficult task, if not an impossible one. Even testing for critical thinking skills is difficult, but without standard content, evaluations and assessments at the secondary level would be arbitrary. Fisher and Scriven's suggestion to have a stand-alone critical thinking course as a 'headquarters' where teachers of subject specific courses and critical thinking instructors might find a common vocabulary is a good suggestion; however, they need to clarify what they mean by the statement that critical thinking courses do not have any content before they can argue that such a common vocabulary is achievable, or that their proposals for a curriculum might help to build such a vocabulary.

Despite this conceptual difficulty, Fisher and Scriven's book would serve teachers well as a guide to understanding what critical thinking is, and how to develop their course content. However, I think achieving a common vocabulary requires more than a module where teachers of specific subjects can consult the teacher of a critical thinking course for technical expertise, as Fisher and Scriven suggest.

What I think is that a new kind of textbook for both teachers and students should

be developed which would incorporate the generalizable skills involved in the interpretation and evaluation of arguments, knowledge, media etc., but does so by containing chapters which focus on specific subjects and contain exercises related to those specific subjects. Such a textbook would complement the work done in the stand-alone course, where the instructor would have more time to get students to consistently engage in critical dialogues in order to practice their critical thinking skills, and where he could stress the ethical dimensions and implications of thinking critically.

#### *4. Conclusion*

Since the New Ontario Curriculum has opened up class time for philosophy, such a stand-alone course could be included there – where the focus of study is philosophical methods (argumentation), ethics, epistemology (informal logic as applied epistemology) and/or social and political philosophy (Plato and the Socratic method). This would allow for teachers of subject-specific courses to achieve heavy curriculum demands in terms of subject-specific skills and knowledge. With this type of curriculum structure, therefore, teachers of standard courses would not get bogged down by trying to develop and incorporate, most likely outside of their area of expertise, training and class time, course content which would help students develop higher-order thinking skills – namely, critical thinking skills. Given the emphasis on critical thinking in both subject-specific courses, and the heavy emphasis on critical thinking in philosophy courses described in the New Ontario Curriculum, I think this proposal is one that is not overly idealistic.

#### **NOTES (LET OP: NOTEN 1,2,3 EN 10 WILLEN NIET GEKOPIEERD WORDEN!!)**

- i.**
- ii.**
- iii.**
- iv.** For example, Wayne State takes a formal approach, University of Windsor focuses on language and media, others take the fallacy approach or teach critical thinking via argumentation schemes. These differences do not pose a problem at the post-secondary level.
- v.** The 2000 Ontario Curriculum, Grades 9 to 12: Course Descriptions and Prerequisites, Program Planning and Assessment Guide, Curriculum Guideline for Ontario Philosophy Courses, Education Policies and related documents can be

accessed through the Ontario Ministry of Education's website at: <http://www.edu.gov.on.ca>

**vi.** I did not come to this conclusion through my own research. In his 2001 OSSA paper entitled 'Common Pedagogical Weaknesses in Critical Thinking Textbooks and Courses', Claude Gratton states that Almost critical thinking textbooks and courses present material in two stages. First there is the interpretation or analysis of an argument (or explanation), where one teaches how to do a number of important tasks: (1) use the principle of charity; (2) distinguish arguments from non-arguments (or explanations from non-explanation); (3) identify the reasons and conclusions; (4) identify expressions that need to be clarified, and then clarify them; (5) map out in a diagram the interconnections among premises and conclusions in one's reasoning. Secondly, there is the evaluation of an argument (or causal explanation), where one teaches the skills necessary to evaluate the truth and support (or strength of the causal connection) of the reasons represented by the diagram. (1) Gratton referenced 138 critical thinking/reasoning textbooks, which illustrates quite clearly that most critical thinking textbooks have, as a main focus, the interpretation and evaluation of arguments.

**vii.** Paul would most likely argue here that I am suggesting, dangerously, that teachers instill in their students only the weak-sense of critical thinking – critical thinking skills.

**viii.** An Annotated list of Critical Thinking Tests, Prepared by Robert H. Ennis, Professor Emeritus, University of Illinois, July, 2000.

**ix.** As noted above, it is very difficult to distinguish between dispositions and skills in the lists Ennis provides in his article 'Critical Thinking: Streamlined Conception'. Richard Paul, when outlining the 'theoretical underpinnings for a strong sense approach is concerned with how one might develop the critical thinker i.e. how a teacher would develop dispositions. He discusses how people are, and how they express themselves in thought and action. However, essentially he argues that an critical thinking instructor needs to teach students the skills of knowledge and argument analysis and evaluation. Included in these theoretical underpinnings are the following suggestions: that teachers get students to examine alternative positions, ferret out assumptions and bias, clearly articulate their positions and reasons for holding those positions, how to appropriately formulate questions, how to be objective in the analysis and evaluation of arguments, develop the 'ability to reason from more than one point of view', learn argument moves, and identify objections that might be raised against one's

position, recognize strengths and weaknesses in others' reasoning, seeing how arguments reflect persons' or groups' interests, identifying assumptions which reflect those interests and formulating alternative or competing assumptions (Paul 1995: 386 - 388).

**x.**

## REFERENCES

- Ennis, Robert. (1991). Critical Thinking: A Streamlined Conception. *Teaching Philosophy* 14:1, 5 - 24.
- Ennis, Robert H. (1996). *Critical Thinking*. New Jersey: Prentice-Hall, Inc.
- Ennis, Robert H. (2000). *An annotated list of critical thinking tests*. University of Illinois.
- Fisher, Alec & Scriven, Michael. (1997). *Critical Thinking: Its Definition and Assessment*. California: Edgepress.
- Gratton, Claude. (2001). Common pedagogical weaknesses in critical thinking textbooks and courses. In: H.V. Hansen and B. Bekic (Eds.), *Proceedings of the 4th Conference of the Ontario Society for the Study of Argumentation*, Windsor, ON (CD-Rom).
- Paul, Richard. (1995). *Critical Thinking: how to prepare students for a rapidly changing world*. Jane Willson & A.J.A. Binker (Eds.), California: Foundation for Critical Thinking.