

**CONSIDERING CRITICAL THINKING AND HISTORY 12: ONE  
TEACHER'S STORY**

by

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## ABSTRACT

This thesis uses analytic philosophical inquiry and autobiographical narrative inquiry to identify a conception of critical thinking (CT) that is “most adaptable” for teaching History 12, and then discusses the strengths and limitations.

The CT literature includes several conflicting conceptions of CT, and I use two specific types of analytic philosophical inquiry, (conceptual analysis and conceptual structure assessment), to identify which conception is “most adaptable” for teaching History 12. After considering the degree to which each conception meets the criteria developed for the “most adaptable” conception of CT, I conclude that the Critical Thinking Consortium’s (TC<sup>2</sup>) conception is the most adaptable. Of all the conceptions developed thus far, the TC<sup>2</sup> approach is unique because it is designed solely as a pedagogical model for embedding CT throughout the curriculum of each subject and grade level.

In the second section of the thesis, I use autobiographical narrative inquiry to reflect on the strengths and limitations of the TC<sup>2</sup> model after using the model to teach History 12 for a year. One of the foundational principles of the TC<sup>2</sup> conception is the notion that embedding CT throughout the curriculum is a powerful way of improving understanding. I determine that this contention is accurate because students improved their knowledge of the curriculum, the epistemology of history, and the adoption of CT in their everyday lives. Furthermore, use of the TC<sup>2</sup> conception helped improve my planning and assessment practices, and initiated a positive change of my role in the classroom.

Use of the TC<sup>2</sup> method is not without its drawbacks; it requires more planning and instructional time, and successful implementation assumes that teachers have an in-depth knowledge of the epistemology of the discipline and the curriculum. At the end of the study, I draw upon my experiences and conclusions to offer several recommendations aimed at making the TC<sup>2</sup> model more practicable for classroom teachers.

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## **LIST OF ABBREVIATIONS AND ACRONYMS**

CT: Critical Thinking

COT: Community of Thinkers

FFCT: The Foundation for Critical Thinking

TC<sup>2</sup>: The Critical Thinking Consortium

## GLOSSARY

**Algorithm:** One of the thinking strategies identified by TC<sup>2</sup>. Describes a step-by-step procedure for reaching a decision or making a conclusion.

**Background Knowledge:** One of the five categories of CT tools identified by TC<sup>2</sup>.  
Students cannot think deeply about a topic if they know little about it. Background knowledge is essentially the required information one needs to know about a subject before thoughtfully thinking about it (Case & Daniels, 2002).

**Conception:** Something originated in the mind; a design, plan; an original idea (as of a work of art, etc.); a mental product of the inventive faculty. The forming of a concept or general notion; the faculty of forming such. (The Oxford English Dictionary, 1989).

**Community of Inquiry:** The “community of inquiry” is a term that Matthew Lipman (2003) claims Charles Sanders Peirce invented. It describes the belief that education is best served if it advocates a mode of instruction in which groups use inquiry to investigate a topic or problem within a specific subject area. This method improves the understanding of the content and epistemology of a subject by facilitating groups working together to monitor their own logic and reasoning.

**Criteria for Judgment:** One of the five categories of CT tools identified by TC<sup>2</sup>.  
CT is essentially a matter of judging which alternative is sensible or reasonable. Criteria for judgment are the standards, considerations or grounds for deciding which of the alternatives is the most sensible or appropriate.

**Critical Challenges:** A term used by TC<sup>2</sup> to describe problematic situations or activities that invite students to think critically. The question or task must meet several criteria to be considered a critical challenge. The question or task requires judgment, is meaningful to students, addresses key aspects of the curriculum, and can be reasonably performed by the students with the tools they have, or can learn (Case & Daniels, 2002).

**Critical Thinking Abilities:** also referred to as competencies. Describes the various abilities a critical thinker possesses or performs. Inclusion of abilities differs from theorist to theorist, but frequently includes the ability to infer, detect bias, use deductive and inductive reasoning among others.

**Critical Thinking Vocabulary:** TC<sup>2</sup> terminology used to describe the knowledge of the concepts and vocabulary needed by students to make important distinctions among the various issues and thinking tasks facing them (Case, 2005). TC<sup>2</sup> includes 33 different terms or concepts in their list of critical thinking vocabulary.

**Didactic Instruction:** In education it refers to the method of teaching where an instructor attempts to transfer knowledge to the students via lecture or direct instruction. Having the character or manner of a teacher or instructor; characterized by giving instruction; having the giving of instruction as its aim or object; instructive, perceptive (The Oxford English Dictionary, 1989).

**Discipline (Subject):** A branch of instruction or education; a department of learning or knowledge; a science or art in its educational aspect (The Oxford English Dictionary, 1989).

**Disposition:** The state or quality of being disposed, inclined, or ‘in the mind’ (*to* something, or *to do* something); inclination (sometimes = desire, intention, purpose). Aptness or capacity for doing something; aptitude, skill (The Oxford English Dictionary, 1989). In CT a disposition refers to a variety of affects including attitudes, inclinations and sensitivities that make it likely that a person will act in a certain way. At the core of critical thinking dispositions are commitments or convictions to principles of rationality. Dispositions do not refer to individual competencies of a critical thinker; rather CT dispositions are tendencies that help foster CT. In order to arrive at a reasonable solution it is important that an individual is open-minded about all of the possible solutions, otherwise helpful solutions may be ignored or dismissed.

**Embedded Approach:** Refers to the belief that CT is the method for teaching the curriculum, and should be “embedded” in the curriculum. Proponents of embedding CT in the curriculum believe that content and thinking are not separate processes, and CT is not a set of generic skills that can be transferred to any subject area. Advocates also believe that embedding CT in the curriculum will promote improved understanding of content and mastery of the skills (Bailin, Case, Daniels & Coombs, 1999; Case, 2005).

**Epistemology:** The theory or science of the method or grounds of knowledge (The Oxford English Dictionary, 1989).

**General Skills or Mixed Approach:** The belief held by Ennis, Sternberg and Nickerson that CT is a set of generic skills, abilities and dispositions that should be taught in a separate CT course, or in a separate course and within a subject specific curriculum (Ennis, 1989).

**Habits of Mind:** Term used by TC<sup>2</sup> to describe 20 intellectual virtues or ideals that orient and motivate thinkers in habitual ways that are conducive to careful and conscientious thinking (Case, 2005). Different from a disposition in that a habit of mind is intentional and habitual, while being disposed to an ideal does not guarantee that the ideal or virtue is consciously followed. An individual can be disposed to being fair-minded without making the conscious decision (Case, 2007).

**Heuristic:** A method, set of rules, guide, or technique that may be useful in making progress toward the solution of a problem. For example, a set of steps or questions that help students analyze historical political cartoons.

**Inquiry:** The action of seeking, esp. (now always) for truth, knowledge, or information concerning something; search, research, investigation, examination (The Oxford English Dictionary, 1989). In education it refers to a style of instruction where students search for knowledge or answers in the problem area they are facing. The teacher poses a question or problem and then aids students in the quest to find solutions.

**Modes of Thinking:** A term used by Richard Paul to describe the various disciplines, like history, literature, or mathematics. Paul believes that the disciplines should be taught as modes of thought where teachers lead students to think about fundamental problems and questions in each discipline.

**Procedures:** The steps, stages or phases designed to foster critical thinking.

**Subject-Specific Approach:** Also referred to as the infusion or immersion approach

Refers to the belief held by critical thinking theorists, like John E. McPeck, that the most preferable way to teach CT is through deep, thoughtful, well-understood subject-matter instruction in which students are encouraged to think critically in the subject, and in which general principles of CT abilities and dispositions are taught (Ennis, 1989).

**Systematic:** Arranged or conducted according to a system, plan, or organized method; involving or observing a system; (of a person) acting according to system, regular and methodical (The Oxford English Dictionary, 1989).

**Thinking Strategies:** One of the five categories of tools for CT identified by TC<sup>2</sup>.

Although CT is never simply a matter of following procedures or steps, there are numerous strategies that are useful for aiding one in thinking critically. Refers to the repertoire of heuristics, organizing devices, models and algorithms that may be useful when thinking through a CT problem (Case & Daniels, 2002).

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## **DEDICATION**

I dedicate this thesis to the two girls in my life, Meghan and Tenille, for their never-ending support, encouragement and patience throughout the countless hours I was in my office working away. I could never have done this without you.

I also dedicate this to my parents for accentuating the importance of learning throughout my life, and to the many History 12 students I have taught throughout my teaching career; I am certain that I have learned more from you, then you have from me.

# CHAPTER ONE: INTRODUCTION TO THE THESIS

## Background

Critical thinking is not a new concept; its origins can be traced back thousands of years to Ancient Greece and Rome. The origins of critical thinking (hereafter CT) are not just rooted in the ancient world; John Dewey (1991) mentioned CT as a goal of education in his 1910 book *How We Think*. In the last twenty years, the support for CT as an important goal for education has achieved almost unanimous approval (Lipman, 2003). Despite mainstream acknowledgement, CT is not being used in our classrooms any more than it was when it was first identified as a goal for North American educators twenty years ago (Lipman, 2003). CT is a term that almost everyone in the educational field believes they know the meaning of, yet few people can either define it or agree on a true definition. For example, in Richard Paul's 1997 study on the prevalence of CT in university and college courses, he determined that 89% of the 140 university and college professors interviewed claimed CT was a primary objective of their instruction, but only 19% could give a clear explanation of what CT was (Paul, Elder, & Bartell, 1997).

The problem extends to British Columbia schools as well. A 1989 survey of 1,700 social studies teachers in British Columbia revealed that 88% of teachers supported the teaching of CT in their classes, and 79% judged CT to be a major emphasis in their teaching (Bognar, Cassidy, Manley-Casimir, & Lewis, 1991). This claim is at odds with findings from the 1989 provincial assessment involving social studies teachers of over 100,000 British Columbia students in Grades 4, 7, and 10. In his assessment of the study, Case (1992) concluded that the lack of teaching strategies which support the development

of critical thinking at the secondary level, suggest that students are not being supported in the development of critical thinking.

The above studies indicate that although teachers often think they are accentuating CT in their classroom instruction, the majority of teachers cannot articulate what CT is. Teachers are not solely culpable—part of the problem is the lack of agreement amongst CT theorists about what CT is, and how it should be taught. The array of definitions, theories and conceptions of CT in existence cause dissonance amongst teachers trying to implement CT in the classroom. CT theorists cannot expect classroom teachers to improve CT in our schools when they cannot agree on a standard definition. A second explanation for the lack of CT in schools is the lack of practical *conceptions* (see glossary for italicized words) of CT that can be adapted into every grade level and subject area. Many of the theories of CT that have been developed are not pedagogical models for teaching CT, instead they are concerned with describing the various aspects and processes that constitute CT. With this background in mind, the following two questions guide this thesis:

1. “Which conception of CT is most adaptable for teaching History 12?”
2. “After identifying the most adaptable conception, what are the strengths and limitations of the model when implementing it in History 12 classes?”

In order to answer the first question, I conducted an analytic philosophical inquiry of CT conceptions developed by theorists Ennis, McPeck, Siegel, Lipman, the Foundation for Critical Thinking (FFCT), and the Critical Thinking Consortium (TC<sup>2</sup>). It is important to note that I am not deciding which theory of CT is the best theoretical

model. Instead, I determine which conception is most adaptable to teaching History 12 from the perspective of a practicing teacher. After deciding which conception is the most adaptable, I implement the model in five History 12 classes and use autobiographical narrative inquiry to aid me in reflecting on the strengths and limitations of the model. My findings may not be applicable to every history teacher in British Columbia because they represent only my perspectives on embedding CT in History 12. However, by the end of the study I identify a model of teaching CT that I argue will increase students' knowledge of the curriculum, their CT abilities, and their interest in history. Hopefully, my findings, recommendations and conclusions about the adaptability of CT conceptions can be used by CT theorists to make their conceptions more practicable for teachers.

## **Importance of Critical Thinking**

Identifying an adaptable conception of CT that aids students in understanding curriculum and develops CT abilities in students is an issue of great importance to our schools and our society. Educational academics, government educational departments, school administrators and teachers are unanimous that the creation of critical thinkers is one of the important goals of our education system. Lipman (1998), and Wright (1992) believe that CT is a key component in the development of a higher quality democracy because a society of critical thinkers embraces representative government, due process, protection of human rights and civil liberties, and the cultivation of rational social institutions, while a non-CT society is built upon elitism, wealth, power or intelligence.

Paul (1992) points out that the world is changing, and the damage caused by prejudice and narrow-mindedness is mounting. Over the last decade, information

acquisition via the Internet has become more accessible and faster. It makes no sense that we are teaching students to memorize simple information that can be accessed electronically in seconds. Forming conclusions, recognizing bias and point of view, and studying issues from multiple perspectives are tools that students will need in the future. Paul argues that schools need to help students thrive in the next century by teaching them to be adaptable, and to develop the capacity to learn on the job and in their civic and social lives. Paul believes that in our current system students go through their school careers inculcated with understood procedures and undisciplined beliefs, but lack knowledge and insight. In other words, they are trained, but not educated. Educating students cannot be achieved by rote learning and memorization; it can only be accomplished by using a method of teaching that multiplies comprehension and insight, and stimulates and empowers students. CT represents the future for our education system. It should not only serve as a goal for our students, but as a method for teaching our students the entire curricula from kindergarten through university. A populace that does not utilize CT will lack the ability to adapt itself to the social, political, environmental and economic problems that developed and undeveloped countries are currently facing. Mass media and politicians constantly feed the demand for simple answers, but these problems cannot be solved unless significant intellectual development occurs (Paul, 1992). This point further illustrates the importance of CT protecting us from believing what the powerful in society want us to believe without inquiring for ourselves.

Before I introduce and analyze CT conceptions, I provide selected autobiographical background to outline my beliefs about the importance of change, my

teaching philosophy and methods, and my interest in history. After these sections I unpack my assumptions about teaching history and the History 12 course.

## **Autobiographical Background**

My inquiry into alternate methods of history instruction began in my sixth year teaching secondary school when I realized that my current instructional methods were not meeting students' or my needs. I observed students who were completely disinterested in history, and could not see the importance of what they saw as a string of seemingly unimportant events that they were expected to memorize. As a result I entered into a Master's program in search of methods that would help me improve students' understanding and enjoyment of history. In the early months of my Master's program I was introduced to CT, which I realized could help me improve how I taught history, and also improve students' ability to critically think in history and other areas of their lives. Like many teachers, I believed that CT was an important goal of teaching, but I was unsure exactly what it was, and how I could teach students to improve their ability to think critically. Although I was excited to discover what I felt was a solution to my problems, I still needed to answer several important questions. These unanswered questions served as the beginning of my thesis topic.

Below I “unpack” my experiences as a student and as a teacher in order to understand how these experiences affected my motives and interpretation of this study, and my beliefs about history teaching methods.

## **Reflections on the Importance of Change**

In my life the one thing that is consistent is change. Throughout my elementary and high school career, my family moved to new towns throughout British Columbia three times. Adapting to new environments and people was a necessity, but also a benefit, because I learned to cope with change at an early age. As a boy I loved changing the furniture in my room around, or when teachers insisted on new seating plans in class because seeing things from new and different perspectives was invigorating for me. Throughout my teaching career I have continued to look for new methods, routines or resources that change the way my classes' operate. For this reason I have always associated following the same procedures, habits and traditions with monotony and boredom. Change for the sake of change is not the best option either. People must be reflective and realistic about the situations that require change, and the situations that should remain the same.

When I first began my teaching practicum I was assigned to a suburban 850 student, grade 8-12 school located in an upper-middle class area of a medium sized city. From the beginning, I loved the students and staff at the school, and was hired to teach at the school after completing my practicum. It was an exciting time to be at the school as I was part of a group of six first-time teachers hired at the same time. We were full of idealism and energy about how to improve the school and after five years at the school I ended up growing both personally and as a history teacher.

After six years at the school, I decided that it was time to move to a different school. I transferred to an 1800 student grade 10-12 school, located in a more urban part of the same city that featured a larger mix of socio-economic and ethnic groups. Due to

its large size, history and reputation, the school attracted many students to its specialty academic, music, drama and athletic programs. Many of my colleagues at my previous school were angry at my transfer, and treated my departure as a betrayal of the positive momentum, great learning environment and collegial atmosphere we had established. I explained that my transfer was necessitated by my need for change and different challenges. I had only experienced one school in my career, and I wanted to teach a different group of students in a different environment. I was aware that my decision could end up being a poor one but I felt I had to do something different to keep myself positive and fresh. Weeks after my arrival I realized that the new school had as many issues with change as the previous one. It was the oldest school in our city and had a tradition of academic, artistic, musical and athletic accomplishment. Many of the teachers viewed change as a threat to the established “tradition” of the school. In many cases, their attitude towards change was, “If it isn’t broken, don’t fix it.” The problem was that they were so fixated on the tradition of excellence in the traditional areas that they failed to recognize the areas that required wholesale changes. I recognized that any change I initiated would have to be gradual in order to avoid any conflict with staff members.

All of these experiences with change help me understand that because of my personal history I view change as something progressive, natural, and important for personal and professional growth. The recognition of these attitudes helps me understand why I have attempted to initiate CT in my teaching practices, and why it is a struggle for CT to gain acceptance amongst a wider community of educators.

## **Reflections on Teaching Methods and Beliefs**

It might seem surprising that I became a teacher because no one in my family from great-grandparents to parents were ever teachers. However, the role of a teacher was not foreign to me. My mother was a registered nurse, who later became a teacher of practical nurses at the college level, while my father was a policeman with the Royal Canadian Mounted Police, and frequently mentored rookie police officers. I cannot say that I was determined to become a teacher, although by the end of high school I had an inclination that I would eventually become involved in some area of education.

I believe that previous experiences and events shape our future actions. As a child I was frustrated by my parents' refusal to let my brothers and I play in the neighbourhood after dinner when we had school the next day. I hated getting ready for bed when I could hear my friends playing games in the field that bordered our house. I told my parents that when I was a parent, my children would be allowed to play outside after dinner. Similarly, there have been several experiences from my career as a student and as a teacher that have shaped my teaching philosophy and methods.

In secondary school I was a well-rounded student who generally enjoyed school. I had an active social life, achieved a strong "B" average in my classes, and was recognized for being a top athlete in a variety of sports. In the classroom, I found the methods used by the majority of teachers to be uninspiring. Teachers lectured, gave notes, or assigned readings with questions or worksheets. I always completed my work, but rarely put anything extra into learning because the methods of instruction used did not require much thought or commitment. My mother came home from parent-teacher conferences once, and told me that the teachers all had nice things to say about my

personality and character, but they wished I would put a little more effort into my studies because I was very capable of achieving “A’s” instead of “B’s.” I remember telling my mother that I was perfectly satisfied with the grades I was achieving, especially considering the more interesting pastimes that occupied my time. I knew I could get straight A’s if I desired, all it would take was more effort memorizing my notes or the textbook. Even then, I understood that my teachers did not reward creative and divergent thinkers. Instead, school deified students who followed the rules, never challenged the system, and answered their homework questions in full sentence answers. By the end of my grade twelve year, I swore that if I ever became a teacher, I would use teaching methods that presented the curriculum in ways that captured students’ interest and made them think in more meaningful ways. My negative experiences with my teachers’ teaching methods shaped my aversion to *didactic instruction* (see glossary for italicized words), and helps explain my determination to find instructional methods that engage students in learning.

My third year university history courses were divided into weekly two-hour lectures and two-hour tutorials. For each tutorial our class of twenty students was assigned a document or reading to discuss with the professor. I assumed that university professors had little interest in the perspectives and ideas of lowly undergrads on a subject they had been through multiple times. Instead, the professor listened to students’ responses, congratulated them for enlightened thinking, and sincerely thanked students for furthering his understanding of the subject. The quality of tutorial discussions increased as the semester went on, which I attribute to the atmosphere the professor created in the classroom. I remember wishing that other teachers and professors

understood how to create a similar atmosphere in their classes. Only since my introduction to CT could I accurately categorize the classroom atmosphere I encountered as a *community of inquiry* (see glossary for italicized words). This approach has stayed with me, and serves as a model for the type of environment I try to establish in my classes.

The event that really motivated me to learn was based on experiences with two different teachers. In high school, I had a fabulous history teacher whose class and teaching style I enjoyed. He was very knowledgeable, had a great sense of humour and told phenomenal stories about each historical period we studied. Alongside his love of history, he had passion for the school debate team. In history class, he favoured students on the debate team, and since I had no interest in debate, I never joined. One day in class, he privately told me that he was pleased with my progress and my “B” grade. The implication was that because I was a “jock” who played so many sports I was incapable of achieving “A’s.” I was taken aback; I had always admired him and felt that he respected my academic and intellectual abilities. What he did not realize was that I had never been “pushed” academically by any teachers, and was getting a “B” by doing very little work. This comment had several effects: it was hurtful, made my self-esteem plummet, and soured my opinion and future relationship with him. Although some of his history teaching methods are still an inspiration to me, his biased categorization of me still stings. The worse part was that his comment made me wonder if I was nothing more than a jock.

Luckily, my self-perception was rebuilt by a professor I had in my third year of university. In my first two years at university I was somewhat of an aimless student. I

achieved solid “B+’s” in history, english, sociology and political science courses, but no subject really captivated my interest, and I had not declared a major. I was a scholarship athlete on the varsity golf team, but after my experience with my high school history teacher I did not want anyone to know about my athletic pursuits for fear of being judged. In my third year, I took a British history course that changed the course of my academic career. My professor was a Canadian born Anglophile like me, and was a fabulous teacher because of his passion for history, and his personable nature. After several lectures and tutorials I had a conversation with him, and soon we began to have short chats about all things British. My initial written assignments for the course were decent, but not up to “A” grade undergraduate standards. He told me that my insights from tutorials and conversations were extremely perceptive, but my writing did not match the same level of thought and oral articulation. Recognizing this, he worked with me to improve my writing. With guidance and someone pushing me, I responded with higher quality assignments. For the first time I felt inspired, and I attribute it to the fact that a professor had recognized a spark of intelligence and ability and attempted to develop it. On each assignment I wrote draft after draft until it was written in the historical style that my professor expected. After the course was finished I declared history as my major, focused on British history and graduated with “A’s” for the rest of my third and fourth years.

My experiences with my high school history teacher and university history professor shaped many attitudes towards teaching that are still with me today. I realized the importance of teacher-student relationships. Had I not established a personal connection with my professor, I would not have been motivated to improve. I try to

recognize students who are coasting along (like I was), and attempt to help them improve with extra encouragement and attention. Without my professor's encouragement, my writing and self-confidence in my abilities would not have improved. I understand the importance of never stereotyping students based on my perceptions and I reserve judgment on students' academic abilities until I have collected enough evidence to inform my judgment. Furthermore, I realize the importance of establishing high standards for students, and doing whatever necessary to help them achieve those goals. In my experience, the most rewarding learning experiences occur when something is achieved that was believed to be impossible.

### **My Interest in History**

From an early age I was interested in history; in elementary school my class would go on a weekly visit to the library where we were permitted to take out a book on any subject that interested us. I always requested a book on a historical subject, one week it would be Vikings, the next week General Custer and the Battle at Little Big Horn. I remember the librarian telling me that my requests were different than the other students and always required him to search throughout the library to find a book on my desired topic—which of course made me very proud. At home I was enthralled with my father's collection of TimeLife books about North American explorers, gunfighters of the West, voyageurs and fur traders. I distinctly remember holding the padded covers of the books in my hands and spending hours reading the captions and staring at the photographs and artists' recreated pictures. Historical artefacts also fascinated me; my grandparents travelled to Texas and brought home a souvenir lead musket ball from the Alamo. I

remember holding the small ball in my hand and being amazed at its weight. I imagined a worker at the Alamo picking the musket ball out of a hole in the Alamo wall and selling it to my grandfather, as I did not fully understand the idea of replica souvenirs. My real first historical infatuation came in grade three when I became interested in the American Civil War. I do not know what spurred this interest, but I was soon reading everything I could get my hands on, collecting lead Civil War figurines, and marching around the neighbourhood with my Union Civil War hat and replica cap gun musket.

Students have often asked me why I am so passionate about history, and for some time I could not answer the question because I had never considered it. After reflecting, I have come up with two possible answers; a basic curiosity and imagination about life in previous times, and a love of stories. I still love to imagine what life was like in previous times. A good friend of mine in London often pokes fun at me for something I said when visiting him in 1997. We were walking along the Thames River and I said, "I would love to go back one hundred years to see what life in Victorian London was like." He laughed because he thought my maudlin love of the past was amusing. It is this type of curiosity and imagination about the past that is important to foster in students. The second thing I love about history is the stories. I love to hear about strange idiosyncrasies of great leaders, or the unusual occurrences that shaped the past. I will never forget my History 12 teacher's stories about his experience as a British soldier in Berlin in the 1950's, his retelling of an anecdote about Stalin's paranoia, and the tale of his mother's chance encounter with Winston Churchill on a train in wartime Britain. It is a love of historical stories that really "hooked" me on history, and I try to do the same by passing on stories and anecdotes to my students. My passion and curiosity about history is not fostered by

memorization, testing and textbooks—it is cultivated by stories, books, pictures, replicas, souvenirs and travel. The experiences that ignited my passion for history have shaped the belief that students will enjoy history if it is taught with the purpose of stimulated interest and capturing imagination.

As part of my narrative inquiry, I uncover some of my basic beliefs and assumptions about best practice in history teaching, and the History 12 course and provincial exam in the next section. These assumptions shape my belief about adapting CT to the History 12 curriculum.

### **Assumptions About Teaching History**

When I first began teaching history, I taught history as an informational<sup>1</sup> subject where I transmitted historical information to students and expected them to learn and accept this account as the “true” story of what happened. All assignments, quizzes and tests centered on the ability of students to learn a body of knowledge and display their understanding of the information. I often overhear students say how much they dislike history; to them history is about memorizing disconnected details about events that are of little importance to their lives. Frequently, I went home at the end of the day frustrated by many students’ lack of interest in what I felt was a fascinating subject. I began to ask myself important and philosophical questions about history teaching: What was historical knowledge? What are the purposes and aims of teaching history in schools? I questioned my teaching methods because I realized I was indoctrinating students with curriculum that enforced historical conclusions determined by outside groups such as textbook

writers, historians, government bureaucrats and teachers. After going through this philosophical morass, I began to change the way I taught history. I developed lessons and activities that attempted to change students' negative view of history by getting them more involved in "doing" history. Although these lessons had varying degrees of success, I noticed that the successful activities had several commonalities. They presented multiple perspectives on the causes, consequences and significance of historical events, focused on events that were interesting and important to students, and required students to debate and make judgments about what really happened, or whose perspective of historical events were most plausible. At the same time that I was experimenting with new history teaching methods, I was introduced to Denos and Case's (2006) book that presented a model of teaching history based on Peter Seixas' concepts of historical consciousness<sup>2</sup> that underpin our ability to think historically. This theory outlined an alternative to the informational model I had been using to teach history. Although I did not implement Seixas' theories completely, they informed the ways that I began to teach history. Students were still expected to understand the basic facts of historical events, but knowing historical details only served to help students form judgments. The successful activities initiated excellent class discussions about how history is written and the perspective history is written from. In short, students began to understand the "nature"<sup>3</sup> of the *discipline*. This was an important awakening for me because I realized that content was equal in importance to learning how to think

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<sup>1</sup> Denos & Case (2006) use the term "informational" to describe history teaching methods in which teachers present accounts of historical events as the "true" story, which they expect students to learn.

<sup>2</sup> Seixas' (2006) six concepts include historical significance, evidence, continuity and change, cause and consequences, historical perspective and moral judgment.

<sup>3</sup> The "nature" of history describes the ability to understand that history is constructed for specific purposes, it provides a limited picture of events because events or details were selected by someone with a specific perspective, and historical knowledge is shaped by current morals and values (Denos & Case, 2006).

historically and make historical judgments. Lipman (2003) supports this conclusion when he argues that, “If we understand that we are teaching them history critically in order to improve their historical judgment and not merely to provide them with grounds for patriotism, then content assumes its rightful place alongside method, neither inferior to it nor superior to it” (p. 48). In short, history courses should help students understand the nature of the discipline and how to think historically, not just learn a bevy of historical details.

In the next section, I describe the structure of the History 12 curriculum and provincial exam, and uncover my assumptions and biases about its design and implementation.

## **Overview of History 12**

The purpose of this section is to provide an overview of the History 12 course in British Columbia, and to explain the beliefs I have developed about the curriculum and the year-end provincial exam after teaching it for five years.

History 12 is a four-credit elective course that is equivalent to 120 hours of class time. It is offered to those having completed Social Studies 11, Civics 11 or First Nations 12. The History 12 curriculum is designed to give students a range of experiences and opportunities to develop skills that increase their understanding of their lives as Canadians and as global citizens, and prepare them for further study in history and related disciplines (Ministry of Education, Skills and Training, Province of British Columbia, 1997). History 12 is a history of world events in the 20th century; it concentrates on the West and its relationship with world affairs between 1919 and 1991. In order to expand

students' historical awareness of global affairs in the 20th century, the curriculum incorporates a global perspective where appropriate (Ministry of Education). Students' final marks for the course are based on a 60% School Mark, and a 40% Provincial Exam mark that is marked by a provincial exam marking team. The school mark is determined by the teacher, and is designed to be an accurate measure of students' abilities to meet the Prescribed Learning Outcomes<sup>4</sup> (PLO) designated for the course. The History 12 exam is worth 40% of students' final grade and features fifty-one multiple-choice questions (55% of the exam), one one-page written response questions (9% of the exam), one one-page written response document-based question (9% of the exam) and one thematic essay question (27% of the exam) (Achievement and Assessment Department, Ministry of Education, Province of British Columbia, 2007).

In my opinion, the curriculum includes too much specific content knowledge, and too little focus on helping students understand the nature of the discipline. The curriculum includes 45 PLO's, but only 120 hours to complete the course. This is far too little time because many of the PLO's are too complex to be "adequately taught" in the time provided. "Adequately taught" refers to teaching activities that require students to think and make judgments about concepts, rather than expecting students to understand concepts after teachers have merely introduced, explained or mentioned concepts.

For example, the PLO "explain the social, economic, and political effects of World War I on the post-war world" is far too complex to be covered in the small amount of time in which this PLO is to be covered (Ministry of Education, Skills and Training, Province of British Columbia, 1997, p. 12). By my estimates, this PLO requires at least

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<sup>4</sup> Prescribed Learning Outcomes are the legally required content standards that define the required attitudes, skills and knowledge for each course in the B.C. provincial education system (Ministry of Education, Skills

five hours of class time to help students fully comprehend the effects World War I had on different countries around the world. If I spend even three hours teaching each PLO in the curriculum, the course would require 135 hours of class time, 15 hours more than the allotted time to complete the course. The course includes far too much content to get through in 120 hours, and as a result I and other teachers race through the course using *didactic* methods focused on “getting through” the material, rather than having students think deeply about historical issues. Due to this overemphasis on content, History 12 does not accentuate<sup>5</sup> critical thinking in the curriculum or assess it on the provincial exam.

### **Embedding Critical Thinking in History 12**

To be effective, any conception of CT that can be adapted to History 12 would have to be *embedded* within the content, because it would be impossible to teach a CT conception in addition to the overloaded content that already exists. Furthermore, the CT conception must be adaptable to most required curriculum content and skills so that the History 12 PLO’s are satisfactorily met. If CT cannot be adapted to all PLO’s then students will be unprepared for the end of year provincial exam. This is a difficult issue because the History 12 exam does not emphasize CT; instead it focuses on content knowledge and understanding. For example, 55% of the exam features multiple-choice questions that require students to find the correct answer, not provide evidence of CT. The multiple-choice questions do not allow students to reasonably explain why they selected one answer over another, even if the question is ambiguous. The three written

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and Training, Province of British Columbia, 1997).

response questions do not measure CT, instead they are designed to measure three cognitive levels of each student: knowledge, understanding and application, and higher-mental processes<sup>6</sup> (Ministry of Education, Province of British Columbia, 2005). CT is not mentioned in any of the definitions for the three cognitive levels, and it is safe to conclude that CT is not an important goal for any of the questions on the exam.

Often times CT and content knowledge are seen as separate entities because many teachers believe that CT can only be taught after content knowledge is mastered. An adaptable CT conception helps students improve their CT abilities while increasing their knowledge of course content at the same time. I assume that it is possible for a conception of CT to improve students' content knowledge and skills for the exam, while also improving their CT abilities. If this contention is true, then CT is not only an important goal for education, but also a method to increase student comprehension of course content. For example, if students' are taught to use CT to help them judge if Mao's period of rule was positive or negative for China, they might improve both their ability to critically think and also their understanding of Mao's China which is an important part of the curriculum.

## **Structure of the Thesis**

The thesis is organized into five chapters: introduction, literature review, methodology and limitations, discussion of experiences, and conclusion. When analyzing the literature in Chapter Two, I use Coombs and Daniels (1991) theory of

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<sup>5</sup> Although the Integrated Resource Package (government curriculum document) mentions critical thinking, no specific models of critical thinking are described in the curriculum document or the exam specifications.

analytic philosophical inquiry, which aims to understand and improve sets of concepts or conceptual structures. In Section One of the Chapter Two literature review, I utilize Coombs and Daniels (1991) mode of conceptual analysis to analyze the diverse definitions of CT developed by theorists in order to clarify what a “useful” definition of CT is. Conceptual analysis is used to arrive at a sound understanding of CT, and to establish what serious users of CT mean when they use the term. In Section Two of the literature review, I rely on Coombs and Daniel’s (1991) description of conceptual structure assessment inquiry to determine which of the six conceptions of CT is the most “adaptable” method for teaching History 12. Conceptual structure assessment inquiry is comparative and is used to measure whether a conceptual structure is an improvement over previous conceptions, or if a conception is adequate for curriculum development. In my case, I develop criteria for comparing each of the conceptions in order to determine which conception is most adaptable for teaching History 12.

In Chapter Three, I describe the “blended approach” of methodologies used in Chapter Two and Chapter Four and justify the reasons for their usage. “Blended approach” refers to the use of two different methodologies in the thesis, analytic philosophical inquiry in Chapter Two, and autobiographical narrative inquiry in Chapter Four. After describing the details of the chosen methodologies, I outline the limitations of using these methodologies, and explain how these limitations were addressed.

In Chapter Four, I use autobiographical narrative inquiry to discuss the strengths and limitations of the “most adaptable” conception of CT for teaching History 12.

Autobiographical narrative inquiry utilizes autobiographical details and personal

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<sup>6</sup> The definitions for knowledge, understanding and application and higher mental processes are based on Bloom’s taxonomy, higher mental processes refer to the abilities of analysis, synthesis and evaluation.

experience as the empirical evidence to understand central issues related to teaching and learning through the telling, and retelling of teacher's stories. Autobiographical narrative inquiry is shaped by my recollections and documented field texts using the most adaptable model of CT in five History 12 classes, plus reflections on field notes, written assignments and journals written during the time period.

In Chapter Five I discuss the inferences drawn from my experiences implementing the most adaptable model of CT to History 12, focus on the contributions to knowledge, and the prospects and recommendations for future research.

Below, I conduct a review of relevant literature in order to uncover a "useful" definition of CT, which provides me with the understanding of the important parts of CT. Once I understand what CT is, I develop criteria to help determine which conception of CT is the most "adaptable" for teaching History 12.

## **CHAPTER TWO: LITERATURE REVIEW**

The guiding question for this literature review is what conception of CT is most adaptable for teaching History 12 in British Columbia? Below I outline criteria for an “adaptable conception” of CT, and then use the criteria to assess the adaptability of conceptions promoted by various CT theorists over the past forty years. I critique the various theories of CT from my perspective, as a practicing high school history teacher.

It is important to establish a definition of CT before determining what an “adaptable” conception of CT is. To do this I analyze various definitions of CT in order to gain an understanding of what a “useful” definition of CT is. A “useful” definition is used to inform the analysis of various conceptions of CT in order to determine their adaptability to History 12.

### **Section One: Defining Critical Thinking**

One of the largest problems within the CT community is that there is little agreement about a universal definition of CT. A definition is an important part of any CT conception because it determines the view of CT being used and how it can be achieved—it is the foundation upon which conceptions of CT are built. Many theorists have created definitions that attempt to accurately explain CT. Unfortunately, there are many differences in terminology usage, what the constituent parts of CT are, and the different types of activities that can be considered CT. Despite the difficulty in creating a universal definition, there are many definitions of CT that have contributed to an increased understanding of CT over the past forty years.

I have developed criteria for determining “useful” CT definitions after studying various CT theories and developing an understanding of the basics and important characteristics of CT. My criteria includes characteristics that are common to the majority of CT definitions that I analyzed, as well as the qualities that most clearly describe CT and how it can be adapted to teaching practice. Characteristics that are common to the majority of CT definitions are important because they have achieved agreement amongst theorists as being an important part of CT. A “useful”<sup>7</sup> definition of CT meets the following criteria:

- Defines CT using language that can be easily understood by practitioners. If a CT definition is unclear, or uses terms that are ill-defined, the definition loses clarity and unity of purpose. Language that is ambiguous or vague may also detract from the usefulness of the definition.
- Identifies the purpose for CT; to produce quality thinking that meets criteria or standards (Bailin, Case, Coombs and Daniels, 1999). CT differs from regular thinking because it ascribes to standards of quality thought and reasoning (Bailin et al.; McPeck, 1990; Lipman, 1988; Paul, 1992). CT includes activities such as assessing the logic of statements, making judgments about actions or beliefs, answering questions or designing a creative project. McPeck (1988) points out that there must always be a purpose for CT because, “thinking is always thinking about something” (p. 3).

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<sup>7</sup> In this case a useful definition of CT is one that contains the parts of CT that are important because they have been commonly agreed upon, and they are described in a way that is understandable to a practitioner.

- Mentions *abilities* and *dispositions*<sup>8</sup> that promote CT. An example of a CT ability is using inference to draw a conclusion from a primary historical source.

However, the ability to perform a CT task does not guarantee that CT has taken place. If critical thinkers do not possess essential dispositions then CT abilities may not be performed in an adequate manner (Siegel, 1988). One common disposition is being attentive to detail. If a thinker has the ability to use inference, but is not disposed to be attentive to detail then mistakes in thinking will occur.

In this next section, I use the criteria outlined above to analyze the CT definitions developed by Ennis, McPeck, Lipman, Siegel, The Foundation for Critical Thinking (FFCT) and the Critical Thinking Consortium (TC<sup>2</sup>) to determine which definitions can be considered “useful.” The identification of useful definitions is the initial step in determining an adaptable conception of CT. Once it is understood exactly what CT is, criteria can be developed for determining what an “adaptable” conception of CT is, and then each conception will be analyzed in order to determine the most adaptable conception.

### **Assessing Statements: Ennis’ 1962 Definition**

Ennis has directly and indirectly influenced the development of critical thinking as an important educational concept over the past six decades. In his 1962 paper “*A Concept of Critical Thinking*”, he developed a definition of CT that states, “Critical thinking is the correct assessing of statements”(p. 83). Ennis’ original definition does not include sufficient characteristics of CT to be considered a useful description of what CT

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<sup>8</sup> CT theorists often use the terms dispositions, habits, and character traits to describe the attitudes, inclinations, sensitivities and tendencies that help foster critical thinking. I will use the term disposition to

is. According to Siegel (1988) Ennis makes the faulty assumption that individuals who correctly assess statements are thinking critically. If CT is limited to just the assessing of statements, then anyone who assesses a statement is a critical thinker. This definition is too narrow to include all of the component parts that are included in CT. CT is also about what to believe, or how to act in a certain situation. For example, which is the best explanation for why Hitler came to power? One must use CT to develop criteria for determining which historian's theory is most plausible.

According to Lipman (2003) the "correct" assessing of statements does not necessarily guarantee that thinking will be of high quality because he believes the term "correct" implies passivity and compliance with societal norms, and ensures that individuals will do what society believes is right. I agree with this criticism because the idea of what is, or is not correct is sometimes relative—it may be interpreted in many ways depending on the cultural, political or religious beliefs of a society. It also implies that there is only one correct assessment of each statement. I concur with Lipman's (2003) argument that CT is a defensive mindset that empowers people to inquire into topics they do not understand in order to protect themselves from believing what others in society want them to believe. This interpretation of Lipman's gets at the crux of what I believe CT is, and what Ennis does not include in his definition.

Ennis' definition mentions "assessing statements" and does not include the important task of making judgments. Assessing statements describes how an individual makes decisions on the logic or truth of a statement, but CT is not just about assessing statements (Siegel, 1988). Ennis does not consider that CT can take place in a variety of

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describe all of these terms in the meantime. For further clarification see the glossary.

contexts, whether answering a question, designing a model or making judgments about one's beliefs or actions.

### **Ennis' "Streamlined" 1991 Definition**

By 1991 Ennis's initial definition of CT evolved many times because he realized that his original definition was, "as vague as Bloom's taxonomy" (Ennis, 1993, p. 180). Bloom's taxonomy created a hierarchical model for categorizing the levels of questions that are often asked in educational settings. It is based on two incorrect assumptions. First, that students can only answer higher levels of questions after mastering the more basic levels of questioning, and second, that all of the steps in the hierarchy are separate from each other. Ennis realized that, like Bloom, his original definition was limited and could be widely interpreted to encompass activities that cannot be considered good examples of CT. By 1991 Ennis knew that his original definition was not well organized. It had many redundancies and omissions, and was not easily grasped. Ennis (1991) offered a "streamlined" definition where he stated that, "Critical thinking is reasonable reflective thinking focused on deciding what to believe or do" (p. 6). This definition offers several improvements on the 1962 definition, but is also flawed because it fails to mention the habits of mind crucial to CT.

Ennis' 1991 definition expands on the previous definition by stating that CT is not just about correctly assessing statements, it also includes decisions about belief or action. This change highlights Ennis's awareness that CT is more than assessing the logic of statements, it also includes conclusions about appropriate beliefs and responses.

The definition uses terms to describe CT that are easy to understand for a practicing teacher new to the concept. Ennis' inclusion of the words "reasonable" and "reflective" are also important improvements because they reveal an expanded understanding of what constitutes CT. The use of "reasonable" accentuates Ennis' belief that critical thinkers focus on making their thinking meet important standards of quality, and the necessity for all thinking to be supported by reasons. Thus, Ennis is stating that a major difference between CT and non-CT is the "quality" of the thinking and soundness of the judgments that are reached. The word "reflective", among other things, marks Ennis' awareness that critical thinkers must be aware of the strengths and weaknesses of their own thinking in order to prevent poor quality thinking.

Despite the improvements, the major flaw with Ennis' 1991 definition is that he does not mention important dispositions that competent critical thinkers possess. CT relies upon the important abilities, and dispositions thinkers possess or develop (Siegel, 1988; McPeck, 1981). Ennis' definition describes CT as reflective thinking, but being reflective about one's thinking is only one disposition, and does not encompass all the dispositions required for quality CT.<sup>9</sup> The omission of these key components weakens the overall strength of Ennis' definition.

It is worth noting that Ennis is one of the most influential figures in the CT movement, and his 1962 definition articulated a theory of CT before many others had even considered the notion. His theories of CT were often the first introduction many people had to the concept, and informed many other theorists' considerations. Despite his influence, the definitions of CT he developed do not meet all of the criteria outlined

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<sup>9</sup> Ennis further describes eleven of the dispositions for thinking in the 1991 article "*Critical Thinking: A Streamlined Approach*", but

previously because they offer a limited view of CT, or do not address important aspects of CT.

### **McPeck's "Reflective Scepticism"**

McPeck is a controversial figure in the CT movement because he was a vocal critic of many other theories and conceptions that gained momentum in the 1980's and 1990's (Ennis, 1989). In 1981, he published a book entitled "Critical Thinking and Education" where he was among the first people to consider the role of CT in the education system. In this book, he defined CT as "the appropriate use of reflective scepticism within the problem area under consideration" (McPeck, 1981, p. 8). He also added to the notion that CT is, "the propensity and skill to engage in an activity with reflective scepticism" (McPeck, p. 9). Like Ennis's definitions, McPeck's definition has several strengths, and also several flaws that diminish its quality when compared to other definitions.

McPeck's definition is important because it pinpoints an important disposition that is crucial to critical thinkers, scepticism. He carefully explains that scepticism is not questioning the truth of everything. In his view, questioning everything is in direct opposition to the nature of CT because it is irrational and uncritical. Instead, "reflective scepticism" refers to the judicious use of scepticism in which truth is not taken for granted unless there are sufficient reasons to believe something is true (McPeck, 1981). McPeck's description of scepticism does not include all of the dispositions necessary for CT, but it is an example of one of them. The dispositions of a critical thinker are also highlighted in the second part of McPeck's (1981) definition when he refers to critical

thinkers having the, “propensity and skill to engage in reflective scepticism” (p. 9). This means that proficient critical thinkers have the tendency—or can develop the tendency—to use reflective scepticism when required. Critical thinkers not only possess certain dispositions, but they know when to apply the dispositions to appropriate situations. Both of these points stress McPeck’s belief that dispositions are as important as the actual abilities of a critical thinker.

Another positive aspect of McPeck’s definition is his explanation of the context and purpose for CT. McPeck (1981) refers to the situations for CT as “problem areas under consideration” meaning that CT is instigated when a thinker is faced with a problematic situation. This statement is important to McPeck because of his belief that, “Critical thinking always manifests itself in connection with some identifiable activity or subject area and never in isolation (p. 5). Both of these descriptions explain that CT takes place when thinkers are faced with problematic situations that require an individual to rationally think through a situation. Like Ennis’s 1991 definition, McPeck argues that CT includes more than analysis of statements; it also includes situations where an individual must decide what to believe or how to act.

There are some significant flaws with McPeck’s definition. There is nothing in the term “reflective scepticism” that describes the standards of quality thinking required in CT. Furthermore, Harvey Siegel (1988) argues that scepticism is not the same as CT. One can be reflectively sceptical without doing any CT. Scepticism is an unclear term because there are many different meanings—some believe sceptical means the same as cynical, while others believe it describes a questioning attitude. Moreover, McPeck uses reflective scepticism to describe CT, yet he ignores the specific abilities used by a critical

thinker to make a judgment. Reflective scepticism does not cover all of the abilities an individual must perform in order to think critically.

McPeck's definition is not useful because it excludes any mention of the specific abilities of a critical thinker, and the quality of thinking required for quality CT.

### **Lipman's "Skillful Responsible Thinking"**

Lipman created the Philosophy for Children program at Montclair State University in the 1970's with the purpose of developing children's CT abilities. He criticizes other definitions because he believes they are too narrowly focused on producing outcomes, and too vague in defining the essential characteristics of CT (Lipman, 1988). Lipman sees an important connection between CT, criteria and judgment. He states that, "making judgments is a skill, critical thinking is skillful thinking and skills cannot be defined without criteria to judge skillful performances" (p. 40). Lipman (1988) defines CT as "skillful, responsible thinking, that facilitates good judgment because it (a) relies on criteria, (b) is self-correcting, and (c) is sensitive to context" (p. 3). Lipman's definition includes several important elements that Ennis and McPeck do not, but it misses several important pieces that their definitions include.

Making good judgments is central to Lipman's entire definition, while the purposes or situations that provoke a thinker to make judgments are not clearly defined. His definition does not stipulate if CT requires a problematic situation, nor does it articulate if the judgments can be about beliefs and actions. His definition does highlight two important aspects of CT: quality and criteria. Lipman uses words like "skillful", "responsible" and "good" to support the idea that CT is separated from other types of

thinking by the quality of the thinking required. Lipman also reinforces the importance of establishing *criteria* in CT. In his view, the origin of CT can be traced to the word “criteria” and not from “critical.” This is an important distinction for Lipman because he believes that many people believe that CT is about being critical, whereas he believes the true nature of CT is establishing criteria that guide or help individuals make reasoned judgments.

Lipman’s definition focuses on the abilities of a critical thinker when it mentions “skillful thinking”, but his definition does not discuss the dispositions necessary for becoming a critical thinker. The term “responsible thinking” and “self-correcting” are mentioned, but these terms are problematic. Use of “responsible thinking” is problematic because it does not denote who the thinking is responsible to? Society? The individual thinker? Previously established standards? Self-correcting is a less troublesome choice because it is similar to Ennis’s use of “reflective” in his 1991 definition. “Self-correcting” refers to the meta-cognitive ability of a critical thinker to think about his or her own thinking.<sup>10</sup> While this ability is an important proficiency, it does not come close to encapsulating all of the necessary dispositions of a critical thinker, such as independent-minded, circumspect, curious or reflective. It is ironic that Lipman criticizes other CT definitions for being unclear when many of the terms he chooses are also imprecise.

### **Siegel: Appropriately Moved By Reasons**

Siegel is an educational philosopher at the University of Miami who has devoted part of his research interests towards promoting CT in education. He has not created one

definition of CT; instead he has created a variety of statements that describe the abilities of a critical thinker. By themselves, the statements describe limited aspects of CT, but when they are considered in their entirety, they adequately outline the important components of CT.

According to Siegel (1988), a critical thinker is “appropriately moved by reasons” aimed at fostering rationality and the development of rational individuals (p. 32).

Lipman argues that Siegel’s definition is “brief and elegant” because it uses only four words to touch on the major aspects of CT (Lipman, 2003, p. 61). Lipman believes Siegel’s use of “appropriate” describes the importance for CT to adapt to the context where the problematic situation occurs. “Moved,” specifies the emotions that are important to CT, and “reasons” highlights the importance of rationality and criteria to CT.

I disagree with Lipman’s assessment of Siegel’s definition. “Appropriately moved by reasons” does not adequately describe CT because it does not describe all of the important aspects of CT, and it is not clear what is meant by the term “appropriate.” Appropriate could describe the pressures of behaving properly in social situations, or understanding when or when not to question authority. Like Ennis’ use of the term “correct,” Siegel’s use of “appropriate” gives the impression that dominant forces in society determine the meaning of appropriate. I believe that one of the important aspects of CT is that it protects individuals from following ideas or values that society deems appropriate or correct, thus allowing individuals to decide for themselves. CT should therefore focus on the strength of reasons, not the fact that they are appropriate or correct.

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<sup>10</sup> The term thinking about one’s own thinking was previously described as meaning metacognition.

Siegel provides another definition that is more precise than the previous one because it focuses on the abilities a critical thinker should possess. He states that, “A critical thinker must be able to assess reasons and their ability to warrant beliefs, claims and actions properly” (Siegel, 1988, p. 34). In this statement Siegel identifies the necessity for a critical thinker to demonstrate an understanding of the principles that govern the assessment of reasons. The ability to assess reasons allows a thinker to properly decide what beliefs and actions are appropriate. Siegel (1988) includes assessing claims, making judgments, evaluating procedures or contemplating alternative actions as important abilities needed to initiate CT. This taxonomy of abilities provides a limited explication of the abilities of a critical thinker, and mentions the context that initiates CT. Siegel’s wording in the definition is problematic because he uses the word “properly” without providing any criteria that determines what the “proper” assessment of reasons is. He needs to be explicit about the use of “proper,” and who determines what proper assessment is.

The dispositions necessary for CT are an important part of Siegel’s definition. Siegel (1980) includes the dispositions required for CT when he explains that an individual must have, “certain attitudes, dispositions, habits, and character traits, which together may be labelled the “critical spirit or critical attitude” (p. 9). This is an important conclusion because Siegel’s description of “critical spirit” clearly acknowledges that CT is not just about having reasoning abilities or the ability to assess reasons, it also includes attitudes, dispositions, habits and character traits.

Another of Siegel’s (1980) notable descriptions of a critical thinker is, “a thinker who can assess claims and make judgments on the basis of reasons, and who understands

and conforms to principles governing the evaluation of the force of those reasons” (p. 8). This is his most useful definition because it uses clearer wording to describe CT and its important characteristics. According to this definition, CT judgments can only be evaluated by the strength of the reasoning, and the criteria and principles determined by the context of the subject. This definition accurately points out that each individual must understand and adapt reasoning to the principles of the context in which he or she is making decisions.

When taken together, Siegel’s multitude of CT definitions describe the important aspects and characteristics of a quality definition. The definitions describe a purpose for CT, include the aspects that produce quality thinking, and describe the important abilities and dispositions a CT definition must possess. The major flaw of Siegel’s definitions are the vague wording used in some of them, as well as the number of definitions provided. In order to develop an adaptable conception of CT, the multiple definitions must be narrowed into one definition that precisely describes what CT is, and what the important aspects are. By making these changes Siegel could establish the foundation for building a conception that identifies the important aspects of CT.

### **The Foundation for Critical Thinking**

The Center for Critical Thinking and Moral Critique and the Foundation For Critical Thinking—two sister educational non-profit organizations in Sonoma, California—work closely together to promote essential change in education and society through the cultivation of fair-minded CT (The critical thinking community: Our mission,

n.d.). The Center conducts advanced research and disseminates information on CT, while the Foundation integrates the Center's research and theoretical developments, and creates events and resources designed to help educators improve their instruction.

Richard Paul is the Director of Research and Professional Development at the Center for Critical Thinking and Chair of the National Council for Excellence in Critical Thinking. Paul is an internationally recognized authority on CT, and has published eight books and over 200 articles on the subject. Paul is the main developer of the definitions and conceptions of CT that the Foundation for Critical Thinking (referred to as the FFCT hereafter) forwards, although fellows of the FFCT, Elder, Nosich, Hale and Cosgrove also make contributions. Paul (1993) insists that CT can be defined in a number of different ways that should not be seen as mutually exclusive, which is opposed to my belief that CT should be defined succinctly. He has developed several definitions that constitute his understanding of CT including,

Critical thinking is that mode of thinking-about any subject, content, or problem-in which the thinker improves the quality of his or her thinking by skillfully analyzing, assessing, and reconstructing it. Critical thinking is self-directed, self-disciplined, self-monitored, and self-corrective thinking. It presupposes assent to rigorous standards of excellence and mindful command of their use. It entails effective communication and problem solving abilities, as well as a commitment to overcome our native egocentrism and sociocentrism (Paul, 2004, ¶ 2).

This definition describes and explains CT better than the previous definitions, and also includes all the criteria a useful definition should contain. It describes a purpose for CT to occur—within any subject, content, or problem that prompts a thinker to improve

the quality of his or her thinking. The definition explains that a critical thinker improves the quality of thinking by analyzing, assessing and reconstructing it. It uses the terms “quality of thinking” and “rigorous standards of excellence” to identify the features of CT that distinguishes it from ordinary thinking. Important dispositions and abilities required for CT are also identified in statements such as “self-directed, self-disciplined, self-monitored, and self-corrective thinking” and “effective communication and problem solving abilities.” The only criticism is that a definition of CT is meant to be a clear and succinct introduction to a theorist’s view of CT. The definition is more of an explanation of the major components of CT than a simple definition.

Paul has developed further definitions that describe other aspects of CT; the 1993 definition makes a clear distinction about the purposes and uses of CT and categorizes CT into “strong sense” and “weak sense” categories. Weak-sense thinkers use thinking skills to defend self-interest or the interests of another group by pointing out inadequacies in the reasoning of others (Paul, 1993). Weak-sense thinkers do not apply thinking skills as rigorously to their own arguments or assumptions, as they do to others’ arguments. Strong-sense critical thinkers strive to recognize their egocentric and ethnocentric biases, apply thinking skills to their own arguments, and seek truth or the morally preferred alternative. Paul’s “strong-sense” theory describes the characteristics of a critical thinker, and the qualities that all critical thinkers should strive to possess. Paul believes that critical thinkers value quality reasoning, self-reflection and the search for truth. When critical thinkers make decisions, they are guided by criteria that consider morality, and the interests of a wide-range of individuals and groups. Paul’s conception of CT is designed to build strong-sense CT by supporting the premise that CT includes self-

criticism and metacognition, or as Paul (1993) puts it, “thinking about your thinking while you’re thinking to make your thinking better” (p. 91).

Paul has provided the highest quality definitions of CT that have been analyzed thus far. He defines important terms in a clear manner, provides clear purposes for critical thinking, focuses on building quality thinking, and describes the important abilities and dispositions of a critical thinker. The only flaw is the dissonance caused by providing too many definitions that describe CT; it is difficult to grasp the meaning and purposes of all the definitions at the same time. Paul’s insistence that it is impossible to describe CT with one succinct definition is entirely plausible. Unfortunately, it is impossible to build a conception of CT that can be adapted to classrooms if there is not an accessible understanding of the definition.

### **The TC<sup>2</sup> Definition of Critical Thinking**

The Critical Thinking Consortium (TC<sup>2</sup>) is a non-profit association of institutional partners, school districts, faculties of education, teaching professionals, associations and other informal educational organizations. TC<sup>2</sup> was formed in 1993 by LeRoi Daniels and Jerrold Coombs of the University of British Columbia, and Roland Case and Sharon Bailin from Simon Fraser University who were interested in, “...promoting critical thinking from primary to post-secondary education through professional development, publications and research” (The Critical Thinking Consortium, n.d.).

TC<sup>2</sup> defines CT as follows: “Critical thinking involves thinking through problematic situations about what to believe or how to act where the thinker makes reasoned judgments that embody the qualities of a competent thinker” (Case & Daniels,

2002, ¶ 1). The definition asserts that CT occurs when an individual faces a “problematic situation”, which is defined as an event that presents an individual with conflicting possibilities for belief or action. Problematic situations provide meaningful contexts in which thinkers create possible solutions and consider their positive and negative consequences. If a situation is not sufficiently problematic or important, individuals will not care to consider the positive and negative consequences of the decision.

One of the important criteria for a useful CT definition is that it states the purpose for CT. The TC<sup>2</sup> definition states that critical thinkers make “judgments” about which belief or action is best to adopt. CT requires a situation where the individual must make a decision about belief or action and cannot be confined to the assessment of the logic of a statement or a belief. The definition uses “reasoned judgments” to describe the quality of thinking required. CT is different from regular thinking in that it requires higher quality thought. The use of “reasonable” implies a level of quality thinking, as compared to “unreasonable” thinking, which denotes lower quality thinking. The term “reasoned judgments” accentuates the idea that judgments made must meet standards or criteria for higher quality thought, which is similar to Paul’s description of weak and strong sense CT mentioned previously.

An important aspect of a critical thinker is the ability to critically think through a situation, and the dispositions that promote CT. The TC<sup>2</sup> definition states that critical thinkers possess the “qualities of a competent thinker.” The use of this term acknowledges that a competent thinker possesses certain abilities and dispositions that foster CT. A person cannot make a decision about which historical source is more biased unless he or she understands the concept of bias. Likewise, without certain dispositions

or “qualities of a competent thinker”, an individual cannot make reasoned judgments. If a person is closed-minded, they will make hasty judgments without considering all possible solutions or perspectives. Self-reflection (or metacognition) is another example of an important disposition TC<sup>2</sup> believes a critical thinker needs to exercise.

Like Paul’s definition, the TC<sup>2</sup> conception of CT is useful. It is clear and straightforward, and includes all of the important aspects of CT outlined in the criteria. The definition uses easy to understand language, it identifies standards for quality thinking and reasoning, and it mentions key CT abilities and dispositions.

Table 1 on the next page summarizes the categories for analyzing CT definitions and displays how the criteria related to each definition. The criteria are listed on top, while the key definitions analyzed are listed in the column on the far left. Although the chart is meant to serve as a summary for the reader, it also helped clarify my conclusions about each definition. Only three definitions met the criteria for a useful definition: Siegel’s definitions, the Foundation for Critical Thinking’s definitions, and TC<sup>2</sup>’s definition.

<b><u>Criteria for Determining “Useful” Critical Thinking Definitions</u></b>			
<b><u>Theorists’ Definitions of Critical Thinking</u></b>	<b>Defines CT Using Clearly Understood Language</b>	<b>Provides a Purpose for CT: Produces Quality Thinking That Focuses on Criteria and Standards</b>	<b>Includes the Habits of Mind and Abilities of a Critical Thinker</b>
<b>Ennis 1962 Definition</b> (1962)	No, an extremely brief and vague definition is provided.	No, only mentions “correct”, which does not necessarily meet criteria or standards.	No mention of habits of mind or critical thinking abilities.
<b>Ennis 1991 Streamlined Definition</b> (1991)	Yes, detailed and clear.	Somewhat, CT includes belief and action and the use of the term “reflective.” No real mention of standards.	Somewhat, does mention “reflective”, one habit of mind.
<b>McPeck Definition</b> (McPeck, 1981)	Yes, detailed and clear language used.	Somewhat, CT occurs in problem area under consideration but, no standards or criteria are mentioned	Somewhat. Does mention reflective skepticism, but this is just one habit of mind.
<b>Lipman Definition</b> (1988)	Somewhat. Definition is understandable, but some words are ambiguous and unclear.	Somewhat. Mentions that thinking is sensitive to context, too unclear Yes, does mention criteria, and skillful thinking.	Not directly. Mentions self-corrective thinking, but this is not specific.
<b>Siegel Definitions</b> (1980; 1988)	Yes, but includes multiple overlapping definitions.	Yes, CT includes, actions, beliefs and reasons guided by the force of reasons.	Yes, includes abilities and habits of mind.
<b>Foundation for Critical Thinking</b> (1993; 2004)	Somewhat clear. Multiple overly descriptive definitions.	Yes, mentions many purposes for CT by discussing quality of thinking and standards of excellence.	Yes, discusses abilities and habits of mind.
<b>TC<sup>2</sup> Definition</b> (2004)	Yes, detailed and clear.	Yes, includes multiple purposes and describes the term “reasoned judgments.”	Yes, mentions the qualities of a competent thinker.

**Table 1: Summary of the Analysis of the Definitions of Critical Thinking**

Below I use the analysis of useful definitions of CT to determine which CT conception is “most adaptable” to teaching History 12. My goal is to identify an adaptable conception of CT that I can use as the method for teaching CT in my History 12 classes. After determining which conception is most adaptable, I use that model to teach five History 12 classes. In later chapters, I reflect on the use of the model and critique the strengths and weaknesses of the conception as it relates to my practice.

## **Section Two: Criteria for an Adaptable Conception of Critical Thinking**

The analysis of CT definitions in Section One of the literature review reveals the essential characteristics of useful CT definitions. I developed this understanding of the essential characteristics of CT over the past year and a half of comparing and contrasting various CT definitions. The criteria for determining an “adaptable” conception of CT is derived from the common characteristics of “useful” CT definitions, and from my assumptions about how CT is best utilized in teaching history. The criteria for determining an adaptable conception of CT is based on my perspective, a practicing history teacher, not from the perspective of an expert CT theorist. I am not reviewing the logical or theoretical strength of CT conceptions, rather I am judging which CT conception is most adaptable for teaching History 12.

**Criteria #1:** The conception must provide coherent and understandable methods and guidelines for implementing CT into the classroom.

Many theorists focus on explicating their theories of CT, but do not provide any concrete ideas or methods that assist teachers in implementing CT in their classrooms.

Theorists want to ensure that their conceptions provide logical and coherent descriptions that can withstand theoretical critiques from fellow CT theorists. Unfortunately, many CT theorists are not concerned about providing conceptual frameworks that are coherent and understandable enough to be practicable for classroom teachers. Although sufficient understanding of CT is a process that takes years, not months, a conception that requires years of study and training just to begin implementation is untenable. After introduction to a CT conception, teachers should be able to gain a basic understanding of the model's beliefs, methods and strategies, and should be able to implement them into their daily activities

**Criteria #2:** The CT conception uses an *inquiry* model of instruction, not a *didactic* style.

The style of teaching that features the teacher as the authority and possessor of knowledge who transfers this knowledge to students is called didactic teaching. Case and Denos (2006) argue that many teachers use didactic methods to explain their version of a historical event, and students are evaluated on their ability to understand the key information about the event. Paul and Elder (2000) believe that this method of instruction fails to consider the interpretive nature of history and the information learned becomes "inert." Although students believe they understand the information, they do not sufficiently think about it to transform it into something meaningful. Students do not play any role in making decisions about historical events, instead their only active role is making sure they understand the important parts of the story that have been passed on to them.

The “community of inquiry” is a term that Matthew Lipman (2003) claims Charles Sanders Peirce invented. It describes the belief that education is most effective when groups use inquiry to investigate a topic or problem within a specific subject area (Lipman, 2003). In my experience, this method improves understanding of the content and *epistemology* of a subject while facilitating groups working together to monitor their own logic and reasoning. Students who are part of a community of inquiry are more likely to understand that history is an interpretive and subjective discipline that requires evidence, logic and reasoning to be able to form conclusions on key issues in the curriculum.

In a didactic lesson, a teacher might lecture students about the reasons the United States government decided to drop two atom bombs on Japan in 1945, and then ask students to prove their understanding by explaining the reasons Harry S. Truman decided to drop the bombs on Hiroshima and Nagasaki. In an inquiry-style lesson, a teacher might design an activity where the class researched arguments on each side of the debate, and then discussed the strength and weaknesses of the arguments they uncovered. This inquiry approach provides students with knowledge of the basic details of the atom bomb attack, while helping them “understand” that historical conclusions are subjective and based on different historians’ assumptions.

**Criteria #3:** The CT conception can be *embedded*<sup>11</sup> throughout History 12, not as a separate course or an add-on to course content.

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<sup>11</sup> Embedded describes a critical thinking conception that is used as the method to teach the content of the curriculum. It differs from critical thinking conceptions that are designed to be taught separately from curriculum content.

The History 12 curriculum features large amounts of content. It would be difficult to teach CT in addition to the content in the History 12 curriculum. As a result, it must be possible to embed an adaptable conception of CT throughout the course, not added on to an already overburdened curriculum. Furthermore, CT is rarely taught in social studies courses in B.C. because it is viewed as a group of skills or tasks to be completed only after content knowledge has been mastered (Case, 1992). This type of instruction separates thinking processes and content, and ensures that much of the content is learned in a “detached and uninteresting way” (Bailin, Case, Coombs & Daniels, 1999). An adaptable CT conception must be embedded throughout the curriculum so that acquisition and understanding of content knowledge are not separate from each other. Many CT theorists believe that when CT is embedded in the curriculum, it deepens students’ understanding of the epistemology of history and the nature of historical thinking (McPeck 1981; Paul & Elder, 2000).

**Criteria #4:** The CT conception produces quality CT by developing the necessary characteristics, dispositions, and abilities of a critical thinker.

One of the most important aspects of a CT conception is that it produces quality CT. This may seem like an obvious statement, but many CT conceptions omit important abilities, qualities or characteristics of CT and as a result, they do not produce high quality CT. The important characteristics and abilities that critical thinkers possess is a topic of great disagreement amongst CT scholars. The criteria I have developed include the common statements, ideas and theories that emerged from useful definitions of CT analyzed in the previous section. It is assumed that if a CT conception does not include

these characteristics, it will not produce quality CT, and will not be adaptable to teaching History 12. If a CT conception develops quality CT it includes:

- The dispositions that foster CT.
- The use of criteria to make high quality judgments about the problem at hand (both actions and thoughts).
- The abilities and competencies required to make CT decisions (also referred to as skills like inference, bias, conclusions).
- The purposes for CT to occur. In other words, the events that instigate CT to occur.

**Criteria #5:** The CT conception promotes assessment of students' ability to think critically, not just find the correct answer.

Typically, history teachers assess whether students know the “right” answer. If a teacher is focusing on improving students' abilities to critically think about history, then assessment should measure their ability to think critically, not their ability to get the right answer. Correct information is not unimportant to CT because it enables students to make reasoned decisions. However, the process of making a decision is the important focus, not finding the right answer. A teacher cannot assess CT ability by the number of right answers students get on assignments or on tests. If I ask students to decide if Stalin's industrial policies were good for the Soviet Union, it is important that they have an accurate understanding of Stalin's various industrial policies. However, I would not just assess students' ability to understand Stalin's industrial policies. I would also assess how students developed criteria to determine what “good” meant, and I would ensure that

they considered several points of view before forming their conclusion. It would also be important that students supported their conclusions with solid reasoning and reliable evidence.

In the next section, I use the criteria discussed above to determine which of the six major conceptions of CT (developed by: Ennis, McPeck, Siegel, Lipman, the Foundation for Critical Thinking and TC<sup>2</sup>) are most adaptable for teaching History 12. By the end of the analysis I identify one conception of CT that is most adaptable for teaching History 12.

### **Ennis' Conception of Critical Thinking**

As previously discussed, Ennis was one of the first thinkers in the last forty years in North America to unearth a tangible theory of CT. He is undoubtedly a pioneer in the modern CT movement because his theories have had enormous influence on members of the CT community. Ennis believes that his 1991 conception is the best-organized and most easily grasped conception he created because it evolved from thirty years of revision and peer criticism. It may be his best-organized conception, but it is vague, complex and not adequately developed to be utilized for teaching History 12. His conception presents a clear definition and description of CT abilities and dispositions, but it does not explain how CT can be adequately developed, or put into practice at any educational level.

Ennis' 1991 conception outlines twelve *dispositions* and sixteen *abilities* that describe the abilities and characteristics critical thinkers possess. Although Ennis identifies the key dispositions and abilities, he is not clear about how to teach them. He

includes abilities that are too vague or complex to be embedded in a high school history classroom. For example, ability number eight is, “to deduce, and judge deductions”, while ability number nine is “to induce, and judge inductions” (Ennis, 1991, p. 9). I do not fully understand these concepts, and I know that students would have a difficult time learning to judge deductions and inductions. Ennis does not explain what an induction is, or how a teacher can judge if a student is using inductive reasoning correctly. A curriculum built around his conception would require enormous funding and in-service time to aid teachers in understanding and teaching the CT concepts Ennis includes in his conception.

In addition to this concern, fostering Ennis’ CT abilities would require too much curricular time, leaving little time for subject specific content in the curriculum. It would be unreasonable to expect that sixteen abilities and twelve dispositions be taught at the same time as specific history content. Even Ennis himself has admitted that this list of abilities is “perhaps overwhelming” (Siegel, 1988, p. 8).

Although Ennis clearly points out that the organization of his conception is only a content outline, the structure of his conception is too systematic to produce quality CT in History 12. His conception includes 16 abilities divided into four areas: clarification, basis for decision, inference and metacognitive abilities. These abilities are not meant to work in sequence, but Ennis believes that all of these abilities need to be achieved for CT to occur. Students would be frustrated by a system that advocates using sixteen different abilities in order to critically think, especially when many of the steps are far too complicated to perform for a History 12 student with little experience in CT. Ennis’ systematic approach is too focused on informal logic, “the branch of logic that concerns

itself with interpretation, evaluation, and construction of arguments and argumentation used in natural language” (Johnson, 1996, p. 46). Informal logic has greatly contributed to the theoretical foundation for CT, but in many cases, informal logic is only a small part of CT. Informal logic focuses on reasoning and argumentation but is not concerned with decisions about what to do in a given circumstance. Ennis’ model of CT is too focused on argument analysis and CT abilities, and does not consider other contexts for fostering CT in students.

One of the major flaws of Ennis’ 1991 conception is his belief in its purpose. He believes this conception could be used as a guide for implementing CT as an overall curriculum plan in various subject courses in secondary school or college, as the basis for a separate course in CT, or as a guide to the assessment of a CT course or curriculum that concentrates on CT (Ennis, 1991). He contradicts himself later in the article when he states that the 1991 conception “does not provide sufficient guidance for teaching and curriculum decisions” (p. 6). It is contradictory to claim that a conception is adequate for an overall curriculum plan, but does not provide guidance for teaching and curriculum decisions. If a conception can guide a curriculum, then it should be able to provide guidance for teaching.

In addition to this inconsistency, Ennis further purports that the 1991 conception includes more, “...explicit emphases on the importance of knowledge in the area where the thinking occurs” (p. 6). One of the major criticisms of Ennis’ earlier conceptions was that it was not adaptable to various subject areas (McPeck, 1981). By acknowledging the importance of context specific subject knowledge in his 1991 conception, Ennis appears

to be backing down from his theoretical disagreements with McPeck<sup>12</sup> by attempting to make his CT conception more adaptable to other subject areas. Ennis (1989) supports using a *mixed approach* for teaching CT, which recommends that CT should be taught as a separate course, and also embedded within different subject areas. This way, generic CT abilities and dispositions can be taught in one class, and then applied to different disciplines. This approach would not work for my History 12 classes because I cannot understand where Ennis has provided any emphasis on subject specific knowledge, historical or otherwise in the 1991 conception. Although some abilities and dispositions could be adapted for historical study, Ennis' lack of clarity creates confusion as to how this adaptation could be created.

Although Ennis is one of very few CT theorists to focus on CT assessment, his attempts are misguided and do not accurately measure students' ability to think critically. He developed the *Cornell Critical Thinking Test, Level X and Z* (1985), and the *Ennis-Weir Critical Thinking Essay Test* (1985) to measure students' ability to think critically. He believes that CT tests can be used to serve multiple purposes like diagnosing students' levels of CT ability, and informing teachers about the success of their efforts to teach students to think critically (Ennis, 1993). The main problem with Ennis' CT tests is that they test CT in a general-content-based area.<sup>13</sup> This means that the tests measure CT abilities on their own, without the context of a specific subject. This affects the validity of the CT tests because as McPeck (1981) and Lipman (2003) argue, quality CT in one subject may not necessarily be quality CT in another. If these tests are only measuring

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<sup>12</sup> For an understanding of the arguments between McPeck and Ennis see McPeck (1989) and Ennis (1989, 1990) in the references list.

<sup>13</sup> The term general-content-based area is used by Ennis to describe generic critical thinking abilities that do not require any specific content focus (Ennis, 1993, p. 182).

generic CT abilities, they cannot measure how well students are critically thinking in History 12. Ennis has lamented the lack of subject-specific CT tests that assess CT within one subject area, and because of the lack of accepted tests for history, Ennis' view of CT assessment cannot be successfully adapted to teaching History 12 (Ennis, 1993).

Furthermore, both the multiple-choice *Cornell Critical Thinking Test* and the essay-style *Ennis-Weir Critical Thinking Essay Test* do not accurately measure students' abilities to think critically. Both of these tests measure CT abilities like induction, deduction, credibility, fallacies and overgeneralization, but they do not measure the dispositions necessary for CT. Ennis has focused assessment of CT primarily on tests, which is misguided because assessment of students' CT ability can be measured using a variety of assessment methods other than tests, such as rubrics, debates, and online discussions.<sup>14</sup> His fixation on testing as the only method of assessing CT makes it less adaptable for teaching History 12.

Overall, Ennis' 1991 conception cannot be adapted to teaching History 12 because of its support of the mixed-approach, the systematic nature of his conception, and his views on assessment.

### **McPeck and Subject-Specific Critical Thinking**

John E. McPeck is an important figure in the CT movement because he proposed a conception of CT that challenged many of the accepted theories of what CT is, and how it can be achieved in educational institutions. His criticisms forced CT theorists to question some of their fundamental beliefs, and set the stage for the emergence of new

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<sup>14</sup> For further information on assessment see my description of assessment methods on page 102 in Chapter Four.

perspectives of CT. In the 1980's, Ennis and other theorists created conceptions of CT that focused on building the general skills of informal logic and argument analysis. They believed that critical thinkers possess a group of abilities and dispositions that could be transferred to any situation or subject where CT is required. McPeck contended that there are no "general thinking skills" that can be transferred across subject areas and disciplines because "thinking is always thinking about something" (McPeck, 1981, p. 3). To McPeck (1981), general thinking courses about thinking are impossible because CT is not a distinct subject—the "critical" in critical thinking refers to the way that something is thought about. McPeck's contentions led to voluminous and heated responses from the defenders of general CT abilities, but neither side were able to gain the upper hand. These debates have become irrelevant and counter-productive because the two positions do not have to be irreconcilable. CT theorists like Siegel (1988) believe that there are CT abilities and dispositions that are transferable across subject areas. Siegel labelled the abilities and dispositions that can be transferred from discipline to discipline "subject-neutral"; and the abilities and dispositions that cannot be transferred "subject-specific." For example, the disposition concerned with being accurate is transferable across many subject areas. A student concerned about being accurate can transfer this disposition in science, history or literature. Other theorists, like McPeck (1981, 1990) concede that the criteria for determining quality CT can only be measured by the standards and norms of the discipline in which the thinking takes place. To them, the criteria and subject-specific knowledge for determining the reliability of a historical source is very different from determining the reliability of a scientific experiment or theory.

McPeck's conception is not adaptable to teaching History 12 because it is a theoretical explication of his view of CT, and not concerned with how his conception can be practically implemented in the classroom. He does provide several purposeful hints that discuss what teaching CT in a high school history classroom might look like, but these hints do not constitute a fully explained model of adapting his method of CT to the classroom. McPeck's (1990) central argument is that CT should be taught as an "integral part" of many subjects because there is room for autonomous thought and CT within subject areas like history (p. 51). He states that CT should be embedded within a high school history curriculum, not as a separate course. According to McPeck, CT is best taught through the disciplines, and if the disciplines are taught correctly, they will produce students who think critically (McPeck, 1990).

His conception of CT also supports the use of inquiry style instruction rather than didactic instruction. McPeck thinks that didactic instruction and traditional modes of schooling have been seriously deficient at promoting independent thought (McPeck, 1990). He argues that didactic instruction is featured in secondary schools because it has been carried over from grade school. McPeck is critical of didactic instruction in secondary schools because he believes that, "secondary school is the place where discussion, argumentation, and the free exchange of ideas within a subject should be the major means of teaching and learning" (p. 50).

McPeck's (1990) theories on assessment are similar to the criteria I developed; he believes that assessment for CT should measure CT ability, not students' ability to find the right answer. He explains that students are not fools, if they are expected to reason and discuss things they will do it, however, if regurgitation and getting the right answer is

what garners high marks then that is what they will do. McPeck finds it ironic that teachers often blame students for not becoming critical thinkers, but the same teachers do not support CT in the subjects they teach. One of the fundamental cures McPeck suggests for this problem is replacing questions that have “right” answers with questions that demand reasoning and articulation. To adopt this style, he believes teachers must be willing to assess the quality of the reasoning and articulation, and not the answer that is provided. McPeck astutely points out that creating a classroom based on reasoning and argumentation is very difficult unless teachers open up their views and methods for reasonable disagreement, and instill students with the confidence that reasonable disagreement will be rewarded, not punished. In order to create a learning environment that encourages CT, McPeck believes that students need to be cut loose from their dependency on the teacher and the textbook.

A major weakness of McPeck’s views on assessment is that his theories do not consider the realities of teaching in classrooms today. For example, he states that teachers must open up their views and methods to reasonable disagreement from students (McPeck, 1990). I agree with McPeck’s position, but I also know several teachers who view disagreement from students as a sign of disobedience, or are fearful and anxious about inviting students to question their methods and views. This type of reasonable disagreement in a classroom needs to be fostered over time as a teacher builds a community of inquiry. It cannot be built overnight, as McPeck seems to expect.

Another example of McPeck’s lack of understanding of teaching reality is his view that students who do not produce reasonable thinking in their assignments should be failed. He believes that only failure will help students understand that having their own

thoughts about things is the “name of the game in school” (McPeck, 1990, p. 51). The overreaction recommended by McPeck would not be effective in any school I have worked in because many students do not engage in reasonable thinking and as a result, the majority would fail. Furthermore, failing a student for not using reasoning and autonomous thinking is an unreasonable, counter-productive and hypocritical response. It would be like a teacher using violence and physical threats to stop a student from bullying. Teachers need to create a classroom environment that teaches, embraces and values reasoning, rather than one that banishes students for not using reasoning.

The major reason McPeck’s conception of CT would not adapt well to teaching history in a secondary school is because he does not clearly explain how his conception actually produces CT. He is adamant that CT should only be taught as part of a specific subject and never in isolation as a generic, transferable group of abilities. McPeck (1981) outlines that teaching CT involves teaching students “how” to think (using procedures and skills) and also “teaching to”, which involves teaching students the dispositions, tendencies and proficiencies to critically think. Unfortunately, he never identifies the specific procedures, skills, and dispositions important to fostering CT. McPeck (1981) argues that CT requires a thorough knowledge of the epistemology of each field of study, and the standards and abilities required for CT differs according to the subject being discussed. McPeck (1990) would argue that he could not specify which CT abilities and dispositions should be learned in each subject because he is not an expert in each discipline. In his mind, the decisions about which CT abilities and dispositions are taught should be left up to curriculum specialists, epistemologists and experts from each discipline. These experts could meet together and establish central frameworks and

teaching methods for teachers to use. Although this argument is consistent with the central arguments McPeck makes, I cannot see how he expects CT to flourish in our schools if he leaves the skills and proficiencies that perpetuate CT up to non-CT experts to decide. These experts have considerable knowledge in their disciplines, but they have limited knowledge about the nature and requirements of what constitutes CT. McPeck (1990) mistakenly assumes that if teachers use the structure of their discipline as the core of the curriculum, they will foster CT. There is no guarantee that if a teacher understands the structure of his or her discipline, that he or she will automatically encourage CT amongst students. McPeck's inability to identify specific CT abilities, and concede that some general thinking abilities exist is a major flaw of his conception.

John E. McPeck's theories of CT have contributed a great deal to the understanding of what constitutes CT. His unshakeable belief that CT can only exist within the confines of each subject discipline has forced CT theorists to examine their beliefs about the transferability of CT abilities and dispositions. Although his conception is too vague to be adapted into teaching History 12, he has articulated many ideas that are important for embedding CT in my teaching.

### **Siegel's Conception of Critical Thinking**

Siegel developed a conception of CT called the "Reasons Conception" which focuses on developing both a theory of CT and a critical thinker at the same time (Siegel, 1988). Siegel's theories include many accurate understandings of the nature of CT, but they could not be adapted to teaching History 12 because the conception is more focused

on developing a comprehensive model of CT, not developing a practical framework that can be adapted into school classrooms.

The conception that he developed does not introduce any remarkable new ideas, but does piece together several important theories. It presents a wider view that CT is not just about assessing reasons, but also about making judgments, evaluating procedures and contemplating alternative actions (Siegel, 1988). Another keystone to Siegel's conception is his insistence that CT must meet standards and principles that govern the assessment of reasons. This statement underlines the belief that CT must meet specific criteria in order to qualify as quality thinking. Siegel is adamant that the ability to assess statements and make judgments is an important part of CT, but this ability alone does not guarantee CT. An individual must value good reasoning and be disposed to believe and act on the basis of reasons. Siegel (1988) describes the list of attitudes, character traits, dispositions, values, emotions and the general willingness to value good reasoning as the "critical attitude" (p. 40).

As previously mentioned, there is a debate about whether CT is subject-specific or a general set of abilities and dispositions that could be transferred between subject disciplines. Siegel takes a stance that the entire debate is irrelevant, which influenced my perspective on the issue. He argues that principles governing the assessment of reasons can be divided into two categories, subject-specific and subject-neutral. The subject-specific category refers to the principles that govern the assessment of reasons within a certain context or discipline, while subject-neutral describes general principles that apply across a wide variety of contexts (Siegel, 1988). He is saying that CT does not have to meet the standards within each discipline; there are several CT abilities and dispositions

that transfer across different subject areas. Rather than ask the question, “Is there a generalized skill (or set of skills) of CT?” Siegel (1988) believes that theorists need to ask themselves “How does CT manifest itself?” He believes that the answer to the question will be, “It manifests itself in both subject-specific and subject-neutral ways” (p. 35).

The main reason Siegel’s conception is not adaptable to teaching History 12 is because it focuses entirely on building a theory of CT and justifying why CT is an important educational ideal. It focuses on general philosophical explanations of education, and the importance of CT in developing rationality in schools. He does not discuss the practical issues that need to be explained in order for his conception to be adapted to the classroom. There is no mention of the abilities required to teach CT, the methods of teaching CT, how CT can fit into a subject curriculum, or how CT can be assessed. Siegel’s views on CT informed my knowledge of CT theory, and reinforced the philosophical importance of CT in our education system, but did not provide any practical understanding of how to adapt CT in the classroom.

### **Lipman’s Conception of Critical Thinking**

Like many of the previous thinkers, Lipman’s conception accentuates many important aspects of CT. It ascertains that all reasonable decisions are based on criteria and evidence, it supports the development of the dispositions of a critical thinker, and it espouses the idea that CT should be taught within subject disciplines (Lipman, 1988, 2003). Lipman focuses on the “community of inquiry” more than any other CT theorist, and he sees it as the basic methodology for teaching CT. Lipman (1988) describes the

community of inquiry as a collaborative group of individuals that pursue similar goals and foster critical, creative, and caring thinking, which leads to sounder reasoning, understanding, and judgment. A community of inquiry has several characteristics; it is focused on creating a product, settlement or judgment; the conversation has a sense of direction and structure, but the community goes where the argument takes it (Lipman, 2003). The central role of the community of inquiry is one of the strengths of Lipman's conception. It is difficult for individuals to recognize the errors in their own thinking, whereas in communities of inquiry (Lipman, 1988) believes members often become aware of their own thinking, and begin looking for and correcting each other's methods and procedures.

I could not adapt Lipman's conception of CT to my high school history classes because the practical applications of his theories are unclear. Originally Lipman's theories were focused entirely on supporting the development of CT through his Philosophy for Children program (P4C). He developed a definition of CT that said, "Critical thinking is thinking that (1) facilitates judgment (2) relies on criteria, (3) is self-correcting, and (4) sensitive to context (Lipman, 2003, p. 212). In his 2003 book *Thinking in Education* Lipman states that CT is only one dimension of thinking, and students must develop creative and caring thinking as well. This model advances the notion that all three dimensions of thinking rely on each other, and are not hierarchical; instead the three dimensions need to be taught in concert with each other (Lipman, 2003). Both caring and creative thinking are important areas of thought, but TC<sup>2</sup> contend that CT does not need to be divided from creative thinking because they are inextricably linked (Bailin, Case, Coombs & Daniels, 1999).

Lipman's conception includes too many disparate parts, and is unclear about how these parts join together to foster CT, or can be adapted into my practice. Diagrams of conceptual frameworks are supposed to aid in the understanding of a conception, but Lipman's many frameworks<sup>15</sup> are more confusing than they are helpful. To understand Lipman's community of inquiry, one must comprehend the fifteen descriptions of a community of inquiry, and the five stage, 31-step prototype explanation of how a philosophical community of inquiry is developed. Even Lipman (2003) is unsure how his community of inquiry prototype can be adapted to other disciplines. He also provides a list of the skills and dispositions that are encouraged and developed in the Community of Inquiry. There are six "General Inquiry Skills", three "Open Mindedness" dispositions, and eight "Reasoning Skills" (Lipman, 2003, p. 167). Thinking skills are divided into four categories including inquiry skills, reasoning skills, concept formation skills, and translation skills (Lipman, 2003). Lipman also includes a list and examples of the four aspects of CT (self-correction, acquiring sensitivity for context, being guided by criteria, judgment) (Lipman, 2003). The lists of dispositions, skills and inquiry skills are very complicated and confusing. Lipman developed a logical theory of CT, but his model for developing and fostering CT lacks cohesion amongst the disparate parts. I kept asking myself how all of these parts work together to facilitate CT? I never came up with a concrete solution. The conception includes too many aspects of CT, and they are not organized in a coherent enough manner to be useful for teaching CT in History 12.

Lipman does advocate embedding CT in subjects like history, but he also supports the creation of independent CT courses. He believes in creating courses that teach

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<sup>15</sup> Conceptual frameworks can be found on the following page numbers: figure 8.1 page 164, figure 9.2 page 204, figure 10.1 page 242 (Lipman, 2003).

generic CT skills, because it is his view that teachers in individual disciplines will find it difficult to convey why CT is important (Lipman, 2003, p. 230). This position is contradictory. How can Lipman advocate embedding CT throughout disciplines, but not believe that teachers can convey why CT is important? Is he trying to argue that only CT in its generic form can justify the importance of CT? This statement of Lipman's defies the purpose of embedding CT in disciplines. Embedding CT in disciplines helps students understand the importance of CT, and its adaptability to other subjects.

Lipman's (2003) conception reveals a clear bias about the importance of teaching philosophy to students. He places too much faith in the ability of philosophy to teach CT without considering how other disciplines might use his model. He believes that there is nothing in CT that is not included in a philosophy course that emphasizes dialogue, deliberation, and the strengthening of judgment and community (Lipman, 2003). The teaching style that he advocates for philosophy teaching would never work in my grade 12 classes. The basis of his model is that students learn the skills and dispositions of CT by reading fictional stories centred around characters who model desirable thinking skills, and encounter problematic situations that require students to think through. The community of inquiry established in the class would set about "unpacking" the story and discussing key issues and events (Lipman, 2003). This method of teaching would not work in my history class because it does not accept the realities of the amount of content in the curriculum, and it would be difficult to find narrative fictional texts that model historical thinking while meeting the needs of the curriculum at the same time. I cannot imagine reading a fictional story to grade 12 students, and then try to justify to them how the book relates to their studies in history. This method might work with elementary

aged students discussing philosophical issues, but I cannot see how this conception can be adapted to any history curriculum.

Lipman's conception of CT includes many attractive and adaptable elements, but when the theory is taken in its entirety it is not adaptable to teaching History 12.

### **The Foundation for Critical Thinking Conception**

Of the CT conceptions analyzed thus far, the Foundation for Critical Thinking (FFCT hereafter) conception is the first to bridge CT theory with practical methods for teachers to implement CT in the classroom. Throughout this section, I refer to the conception or theories as Paul's because he is the driving force behind the FFCT as the primary theorist and developer of their conception of CT. The FFCT aims to improve instruction in primary and secondary schools, colleges and universities by offering conferences and professional development programs that emphasize assessment, research, instructional strategies, Socratic questioning, critical reading and writing, higher order thinking, quality enhancement, and competency standards (The Critical Thinking Community, n.d.). Usage of the term "higher-order thinking" is problematic because it describes the FFCT belief that there is a clear hierarchy or order to thinking processes. In their view, CT is higher-order thinking that can only be performed after lower-level thinking like knowledge acquisition and understanding have been accomplished. I would argue that CT is a method used to acquire knowledge and understanding not something that happens after knowledge and understanding have been achieved. Other than the use of "higher-order thinking" I agree with the goals and objectives of the FFCT because they focus on improving the instruction of CT, not just the development of a CT theory.

Paul's conception advances CT in many useful ways, but it is not fully adaptable for teaching History 12.

One of the basic beliefs of the conception is that CT should be embedded in the delivery of all subjects. Paul supports a concept of CT that "organizes instruction in every subject area at every educational level, around it, and on it, and through it" (Critical Thinking in Every Field of Knowledge and Belief, n.d.). Embedded CT practices are important because Paul (1992) does not believe that there should be a separation of knowledge and thinking because one cannot exist without the other. Recall of information is not equivalent to knowledge; knowledge is the product of thinking and can only exist when it has been comprehended and constructed through thought (Paul, 2004).

Like McPeck (1981; 1990), Paul advocates the belief that understanding the epistemology of disciplines, or what they call the *modes of thinking* (like history, mathematics or biology), can only be accomplished through thinking (Paul, 2004). In many history classes students believe that they know history when they can recall facts about the past. Instead, Paul (2004) calls for disciplines to be taught as modes of thought. In history, students would not blindly memorize content; instead they would learn historical content by thinking about historical problems and questions. Students would learn that history is not a simple recounting of past events, but an interpretation of events selected and written from someone else's point of view (Paul, 2004). This method of teaching would help students understand historical perspective, relate the past to the present and master content through in-depth historical thought (Paul, 2004).

The conception developed by Paul also includes a discussion of instructional methodology that fosters CT. He believes that classrooms should feature an inquiry

approach, not traditional, didactic teaching. He criticizes didactic instruction and explains that teachers should speak less so that students learn more. Although he does not mention inquiry-based learning specifically, the classroom methods he outlines clearly describe the type of inquiry learning described previously. He states that all activities and assignments should be designed so students think their way through them. When new concepts are introduced, teachers should present problematic or significant situations that require students to use the concepts as tools to arrive at solutions (Paul & Elder, 2000). This is a description of inquiry learning, and Paul believes that it is only through inquiry learning that students can gain a deeper understanding of concepts.

According to Paul's conception of CT, assessment should measure how well a student meets the standards, elements and traits of CT, not the ability to find the right answer (Paul & Elder, 2000). He also recommends that teachers should outline the intellectual standards used to grade student work, and teachers should help students learn to assess their work using these standards (Paul & Elder, 2000). Paul also advocates the use of a variety of formative and summative tools to assess students' ability to think critically. In his view, students should be assessed formatively and provided with information on how they can improve their CT ability, and they should also be given summaries that indicate how well they are meeting the standards and qualities of CT (Paul & Elder, 2000).

Is the Foundation for Critical Thinking conception adaptable to History 12?

Paul has created a conceptual framework that breaks CT into three interdependent areas: intellectual standards, the elements of reasoning and intellectual traits. Intellectual

standards describe universal intellectual standards that critical thinkers internalize and apply to thinking in order to check the quality of their reasoning (Paul & Elder, 1996). Intellectual standards include ten qualities fundamental to good reasoning, including: clarity, accuracy, relevance, logicalness, breadth, precision, significance, completeness, fairness and depth. The elements of reasoning refer to eight “parts” of thinking (or abilities) a thinker must perform when thinking critically (Paul & Elder, 1997). The eight elements of reasoning describe the ability to understand the basic logic of reasoning. For example, one of the eight parts is, “a thinker must understand that all reasoning is based on assumptions” (Paul & Elder, 1997, ¶ 8). Intellectual traits are the last section of his conceptual framework, and describe eight dispositions that individuals need to acquire in order to become critical thinkers (Paul & Elder, 1996). The intellectual traits include dispositions such as intellectual humility, intellectual courage and intellectual empathy. Paul ties the conceptual framework together by explaining that, “critical thinkers routinely apply the intellectual standards to the elements of reasoning in order to develop intellectual traits” (Paul & Elder, 1997, ¶ 14). In other words, the important dispositions of a critical thinker are developed when individuals perform CT abilities in ways that meet the intellectual standards.

There is no doubt that the conception developed by Paul is a well thought-out and substantive model of CT. The conception stresses the importance of metacognition, and the dispositions necessary to foster CT. It promotes the idea that thinking needs to meet the criteria of quality thinking standards in order to be deemed “critical.” His position on teaching methodology, embedding CT in subject disciplines and assessment techniques also strengthen his conception considerably. However, Paul does not combine the

important aspects of CT in a model that makes his conception of CT clear enough for me to implement in History 12. Among the many conceptions of CT I have studied over the past two years, Paul's was the most difficult to understand. His articles and books do not explain how the CT components he identifies can be organized into any subject curriculum. The time required for academically gifted grade 12 students to understand Paul's CT concepts would be too great considering the amount of content in History 12, and the pressures of the provincial exam. It would take a great deal of classroom time to teach the three interdependent areas of his conception thoroughly enough for students to understand them well enough to put them into practice. The time required to teach the various parts of the conception would mean there would be little time left for teaching important content and skills in the curriculum.

Another limiting aspect of the model is the range of activities required to foster CT. The conception includes a list of 35 teaching strategies to help teachers know how to adapt the model into their lessons. The strategies highlight affective strategies (for example, exercising fair-mindedness), cognitive strategies: macro-abilities (like generating or assessing solutions) and cognitive strategies micro-skills (like exploring implications and consequences) (Paul, Martin & Adamson, 1989).<sup>16</sup> Paul also does not describe what macro-cognitive-abilities, or cognitive strategies micro-skills are. The 35 teaching strategies are not organized into specific enough categories that separate the diverse aims of the strategies. Intellectual traits, simple thinking strategies, critical thinking vocabulary, complex mental processes and difficult concepts are all lumped together into the three vague categories listed above. It would make sense if Paul created

a clearer method of categorizing these teaching strategies, and indicated how these various thinking strategies worked together to foster CT.

Paul provides examples of lessons that use his conception of CT (Paul, Martin & Adamson, 1989). The lesson I analyzed focuses on discussing and evaluating international trade decisions and policies by focusing on three affective strategies and two macro-abilities and one micro-skill. The lessons are not organized very well in that none of the lessons outline which instructional strategies are taught in different lessons, or the number of times a strategy is presented throughout a course. The strategies, abilities and skills that the international trade lesson focuses on appear to have been chosen at random. The model lesson includes little more than a series of eleven questions strung together in a logical sequence. There is no description of the amount of time required to complete the lesson, and no assessment strategies are included in the plan. Little idea is given in the lesson plan about the methods a teacher might use to teach CT. The lesson plan would not meet acceptable standards for a lesson plan in any pre-service teacher education program in British Columbia. Paul's presentation of the CT conception needs to be better organized if he expects that teachers can utilize his method of CT in their practice.

The conception designed by Paul requires too much focus on intellectual standards and elements of reasoning, which results in a lack of focus on subject-specific content. He loses sight of the importance of the subject-specific content, and instead concentrates on CT abilities and dispositions. Furthermore, Paul's conception approaches CT in a pedantic and systematic manner that weakens the quality of CT. Paul

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<sup>16</sup> For a more in-depth look at Paul's teaching strategies see *Critical Thinking Handbook: High School, A Guide for Redesigning Instruction* (1989) written by Richard W. Paul, Douglas Martin, Ken Adamson.

(1993) believes that thinkers should apply his conceptual framework to situations that require CT. In Paul's view, individuals should internalize and apply the ten intellectual standards and the eight elements of thinking to ensure that each situation or problem is properly analyzed (Paul, 1993). It is unreasonable to expect students to think through every situation that requires CT by going through a mental checklist of ten standards and eight elements of thinking. In my experience, students would find this process overly formulaic. I agree that CT is structured thinking, but too much structure will hinder the ability of an individual to think critically. Each individual needs to make decisions about which CT abilities and traits should be utilized in each situation, not go through a mental checklist of processes to follow. Paul expects that an individual will only become proficient at critical thinking once they have practiced his conception enough times to be able to internalize it. TC<sup>2</sup> contradicts Paul's conclusion when they state that "...all aspects of CT centrally involve judgment, and judgment cannot be made routine" (Bailin, Case, Coombs & Daniels, 1999, p. 280). CT should be free from overly systematic thought, not reinforce it as Paul's model does. This is not to say that an individual does not use thinking strategies, heuristics, algorithms and processes to help them make reasonable judgments, but it should be up to the individual to decide which strategies are most relevant for each scenario. A memorized (or internalized) systematic process contradicts the very nature of CT.

Despite a thorough and well-considered conception of CT, Paul's conception could not be fully adapted to my History 12 classes. Although it focuses on many important characteristics of CT, it does not combine all of the pieces together into a coherent conception that can be readily applied.

## **The TC<sup>2</sup> Conception of Critical Thinking**

Conceptions other than the TC<sup>2</sup> model have one common flaw. Their conceptions do not organize CT abilities and dispositions in a method that clearly helps teachers implement them in the classroom. TC<sup>2</sup> created a clearer conception because it organized all of the necessary aspects for CT into four interdependent categories that logically explain how CT may be taught.<sup>17</sup> According to TC<sup>2</sup>, CT is achieved by creating a community of thinkers, providing critical challenges throughout the curriculum, teaching the tools to enhance CT and assessing the tools of CT. These four categories provide a concise and clear model that explains how TC<sup>2</sup> conceptualizes CT, and how the four categories work together to produce CT. Although the TC<sup>2</sup> model is clear about how they believe CT occurs, teachers could not begin implementing CT practices in the classroom just by understanding the framework. In order to practice the TC<sup>2</sup> model of CT, teachers must comprehend each category, and understand how the individual pieces of the model work together.

Paul (1991) and Siegel (1988) discuss embedding CT in the curriculum, but their conceptions focus so much on CT skills and abilities that it would be impossible to get through the required History 12 curriculum and teach their models at the same time. The TC<sup>2</sup> model clearly states that CT is embedded in the core of the curriculum, and provides a clear picture of how content and CT support each other. TC<sup>2</sup> does not view CT as an “add-on” to the curriculum in which students complete activities only after achieving mastery of the content (Case, 2005). Foremost, TC<sup>2</sup>'s conception is designed to be a method of teaching, not an abstract theory or group of repeatable mechanistic tasks that

produce CT if practiced enough (Case, 2005). The purpose of the TC<sup>2</sup> model is to embed CT throughout the curricula of various subject areas and age groups, which enables students to learn content while engaging in CT. In the TC<sup>2</sup> model, content knowledge and CT are not separated because they are seen as mutually dependent. A CT task that asks students to decide if the Treaty of Versailles was fair to Germany must understand the important background about the Treaty of Versailles in order to make rational judgments about it. Knowledge about the Treaty does not have to be taught separately—instead students will learn the important content as they think their way through the task.

TC<sup>2</sup> clearly advocates an inquiry approach to instruction. They disapprove of teaching CT by focusing on step-by-step *procedures*, or by improving students' ability to critically think by practicing isolated CT abilities and techniques (Bailin, Case, Coombs and Daniels, 1999, p. 277). TC<sup>2</sup> dismisses didactic teaching because students receive information in a passive or transmissive manner that does not aid them in understanding the material (Case, 2005). Instead, they believe that students who make critical judgments about curriculum material will better understand the content, and master the skills required (Case, 2005). TC<sup>2</sup> supports the development of *critical challenges* to support the inquiry model of instruction. In critical challenges, teachers present questions or tasks that challenge students to reflect critically about required content and skills (Case, 1995). This manner of inquiry enables students to develop their own understanding of content in an active way, which increases their understanding.

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<sup>17</sup> See the Figure 1 of the model of the Four Fronts TC<sup>2</sup> conception on page 91 of Chapter Four.

TC<sup>2</sup>'s tools for critical thinking

All five of the CT theorists mentioned in the literature review, Ennis, Paul, Lipman, Siegel and McPeck have argued about the importance of various *tools*<sup>18</sup> that they believe are necessary to produce quality CT. Unfortunately, each thinker disagrees about the specific tools that are important for CT, and disagrees with the tools included in other CT conceptions. As a result the effectiveness of conceptions are compromised because important abilities are omitted. TC<sup>2</sup>'s model includes all of the tools that they believe have strong theoretical arguments supporting their inclusion in a CT model. The “tools for critical thinking” are one of four interdependent categories that TC<sup>2</sup> believes will enhance the CT abilities of students. The “tools for critical thinking” includes five sub-categories that outline and explain the essential tools, including: *background knowledge, criteria for judgment, critical thinking vocabulary, thinking strategies* and *habits of mind*.

One of the CT abilities TC<sup>2</sup> includes in their tools for CT is the importance of developing context-specific criteria that aid in making reasonable judgments (Case, 2005). Lipman (1988) also focuses on the importance of criteria for making CT judgments, when he points out that the word “critical” in CT is closer to the word “criteria.” Criteria refers to the standards on which a judgment or decision can be based (Lipman, 1988). The agreement on the importance of character traits, dispositions and values to CT is nearly unanimous amongst the major theorists. Ennis (1991), Siegel (1988), McPeck (1981) and Paul (1992) discuss the importance of certain character traits or dispositions that are necessary for making reasonable decisions. TC<sup>2</sup> also includes the

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<sup>18</sup> The term tools can also describe the critical thinking abilities, proficiencies or dispositions that support the ability to critically think.

dispositions important for CT in their conception and labels them “habits of mind” because they believe that the term “habits of mind” better describes the intentional usage of these intellectual commitments as opposed to the use of the term “dispositions” (Bailin, Case, Coombs & Daniels, 1999). A disposition refers to a variety of affects including attitudes, inclinations and sensitivities that make it likely that a person will act in a certain way. At the core of critical thinking dispositions are commitments or convictions to principles of rationality. Case (2007) explains that habits of mind are different from a disposition in that they are intentional and habitual, while being disposed to an ideal does not guarantee that the ideal or virtue is consciously followed. An individual can be disposed to being fair-minded without making the conscious decision.

As outlined previously, there have been vociferous disagreements regarding the issue of whether CT is subject-specific, or whether CT abilities can be transferred across various subject disciplines. TC<sup>2</sup> does not side with either side of the debate—their conception recognizes the importance of subject-specific knowledge, but also acknowledges that there are several generic CT abilities that transfer across subject-disciplines. McPeck (1981, 1990) argues that CT can only take place within a subject discipline because thinking can never be about nothing, it always has to be about something. TC<sup>2</sup> partially sides with McPeck because they include background knowledge as one of the essential tools for CT. Case (2005) points out that one cannot think critically about a topic if they do not know anything about it. Furthermore, he points out that many CT conceptions do not include background knowledge as an essential building block because they see thinking abilities as being separate from content knowledge (Case, 2005).

While in agreement with McPeck, TC<sup>2</sup> also accepts Ennis's (1989) argument that CT includes several abilities that can be transferred across subject disciplines. TC<sup>2</sup> includes *critical thinking vocabulary* and *thinking strategies* in their tools for CT and assumes that both these tools can be applied across subject disciplines. Consider two terms included in TC<sup>2</sup>'s CT vocabulary list: critique and perspective. Whether a student is trying to understand the perspective of a scientist or a historian, or a teacher asks students to critique an art piece or an English novel, these two terms can be transferred between both contexts. TC<sup>2</sup> further believes that there are thousands of thinking strategies in existence, and many of them are transferable across disciplines (Case, 2005). One example of a transferable thinking strategy is comparing similarities and differences. If a student is asked to compare the differences between two historical accounts, or the differences between two invertebrates, the same thinking strategy is used. The results would be different, and the criteria for comparing might be different, but they would be using the same strategy. The important ability for a critical thinker is to know which CT strategies will be useful to make the most reasonable judgment.

One of the four categories that TC<sup>2</sup> created to enhance CT is the assessment of the tools required for CT. The basis of the TC<sup>2</sup> philosophy of assessment is that teachers must measure students' ability to critically think and not their ability to find the right answer (Case, 2005). TC<sup>2</sup> believes that assessment must be designed to measure what the lesson focuses on (Case, 2005). If an activity is designed to improve students' abilities to consider historical perspectives and the habit of mind of open-mindedness, then assessment should focus on these two areas, not on finding the right answer. Using this method of assessment provides students with feedback on how well they are learning to

critically think. The TC<sup>2</sup> method of assessment works well with History 12 because I often create assignments that do not have right or wrong answers. For example, I ask students to determine which events in World War II were the most important in helping the Allies win the war. I do not have an answer key that provides a definitive ranking of the top ten most important events. Instead, I use a criterion based rubric that assesses the reasoning, accuracy of detail, evidence and logic students provide in their explanations of the events that they determine are most important. After their assignments are assessed students tend to understand how well they met the CT standards that were included in the assignment.

TC<sup>2</sup> combines their own theoretical understandings of CT with the commonly accepted ideas of other CT theorists, to create a conception of CT that is clear to teachers and academics. The TC<sup>2</sup> conception is different from the other models in that it is a “full” pedagogical model specifically designed to increase the presence and quality of CT in schools. After working with teachers, TC<sup>2</sup> realized that there were many good conceptions of CT in existence, but important developments needed to be made to help teachers work with CT (Bailin, Case, Daniels & Coombs, 1999). Paul (1997) recognizes the strength of the TC<sup>2</sup> conception when he states that, “this approach stands out as remarkable, refreshing, and exciting... anyone seriously using it will be encouraging critical thinking in deep and important ways” (p. 20). I agree with Paul and believe the TC<sup>2</sup> conception is the most adaptable conception of CT for teaching History 12 of all the conceptions analyzed. This is not to say that TC<sup>2</sup> is a flawless method of CT, or that there is nothing that can be done to improve it. A statement made by Churchill (1947) provides the context for a useful analogy.

Many forms of Government have been tried, and will be tried in this world of sin and woe. No one pretends that democracy is perfect or all-wise. Indeed, it has been said that democracy is the worst form of government except all those other forms that have been tried from time to time (p. 206).

TC<sup>2</sup>'s conception of CT can be seen in the same light as democracy. It is not the perfect system of teaching CT, but it is the most adaptable conception for teaching History 12 that has been developed thus far in the North American context.

In the last section of this chapter, I provide a table that summarizes the various conceptions of CT and the criteria for determining an adaptable conception for teaching History 12. This table is meant to help the reader clarify the arguments and descriptions provided in the above section.

<b>Criteria for Determining an “Adaptable” Conception of Critical Thinking</b>					
<b><u>Critical Thinking Theorist(s):</u></b>	<b>Conception provides clear, understandable methods for implementing CT in the classroom</b>	<b>Conception focuses on developing a community of inquiry, not a didactic style</b>	<b>Conception embeds critical thinking throughout the curriculum</b>	<b>Includes the abilities of a critical thinker that produces high quality CT</b>	<b>Assessment focuses on students’ ability to critically think</b>
<b>Robert H. Ennis:</b>	No, is not clear about precise methods for implementation	Does not discuss the style critical thinking should be delivered	No, favours specific courses, not embedding in curriculum	Yes, list and describes key abilities and dispositions	Yes, but assessment focuses on testing general CT abilities
<b>John E. McPeck:</b>	No, unclear about exact application to the classroom	Yes, inquiry very important	Yes, embedding in curriculum is important	Doesn’t include a thorough explanation of either	Yes, purpose of assessment is to measure student ability to CT
<b>The Foundation for Critical Thinking (Richard Paul)</b>	Attempts to focus on practical applications, but conception is difficult to understand	Yes, focuses on creating a community of inquiry	Yes, strongly believes in embedding CT in all disciplines	Yes, both abilities and dispositions are described	Yes, assessment focuses on CT abilities, dispositions not measured
<b>Harvey Siegel</b>	No, rarely discusses practical applications	Does not discuss method of teaching CT	Believes in embedding, and a separate CT course	Yes, describes both abilities and dispositions	Does not mention assessment
<b>Matthew Lipman</b>	No, provides complicated methods for implementation in the classroom	Yes, community of inquiry is one of the most important beliefs	Believes in embedding, and a separate CT course	Yes, describes abilities and dispositions, but very complicated	Does not mention assessment
<b>The Critical Thinking Consortium (TC<sup>2</sup>)</b>	Yes, practical applications are very important to this conception	Community of Inquiry is accentuated in this model	Yes, in every subject and age group	Yes, clear discussion of abilities and dispositions	Yes, assessment is aligned with each ability and habit of mind taught

**Table 2: Comparison of Various Critical Thinking Conceptions**

## Conclusions

After finishing the analysis of the adaptability of the six conceptions of CT it became apparent that the various conceptions of CT could be divided into three main categories that highlight the evolution of CT conceptions over time. The first grouping includes theorists Ennis, McPeck and Siegel who were among the first group of theorists who sought to understand CT by classifying and defining the abilities and dispositions a critical thinker possesses. This group was primarily concerned with developing theories that stipulated what CT is. The second category of CT theory includes Lipman, who moves beyond describing and defining CT and into the realm of improving individuals' CT abilities. Like Ennis and McPeck, his theory describes, defines and classifies CT, but he also develops a model that improves individual proficiency as critical thinkers. The last category of CT conceptions pushed the evolution of CT another step. Rather than focus on theoretical descriptions of CT, theorists in this category are concerned with developing full pedagogical models that can be implemented in all school subjects and grade levels to improve students' CT abilities and their understanding of curriculum content. Currently, TC<sup>2</sup> and the FFCT are the only groups of theorists that fit into this category. They have built on the theories and ideas of other CT theorists, but they also develop adaptable pedagogical models. Of the two organizations, the TC<sup>2</sup> model is better organized and strengthens students' CT abilities and dispositions more than the FFCT model. This explains why the TC<sup>2</sup> model is the most adaptable conception of CT for teaching History 12 of all the models analyzed in this chapter.

In Chapter Three, I discuss the structure, methodology and limitations of my chosen methods.

## **CHAPTER THREE: METHODOLOGY AND LIMITATIONS**

### **Theory of Analytic Philosophical Inquiry**

In essence, this thesis is the story of my attempt to investigate the nature of critical thinking (CT) and discover a conception of CT that might help improve me teach History 12 more effectively. Throughout the thesis I use various aspects of Coombs and Daniels (1991) theory of analytic philosophical inquiry to determine which conception of CT can best be implemented in my practice. Analytic philosophical inquiry as described by Coombs and Daniels (1991) aims to understand and improve sets of concepts or conceptual structures. Conceptions of thought that are frequently over-complicated, incoherent or based on false dichotomies are problematic because conceptions form the basis for future curricular policy reform, and research studies. Coombs and Daniels (1991) contend that the conduct of analytic philosophical inquiry cannot be identified with any specific methodology, but there are analytic questions, techniques and procedures included in the three main kinds of inquiry: concept interpretation (CI), concept development (CD) and conceptual structure assessment (CSA) that are helpful.

Below I discuss both methodologies utilized in Chapter Two of the literature review, conceptual analysis and conceptual structure assessment. In addition, I explain the method of analysis used for the narrative in Chapter Four, autobiographical narrative inquiry.

## Chapter Two

Chapter Two is divided into two sections, in Section One I analyze literature about CT to uncover the characteristics of “useful” definitions of CT, while in Section Two I devise criteria to analyze the six conceptions and determine which is the most “adaptable” conception of CT for teaching History 12. There is a large amount of literature devoted to CT theory, and how it can be adapted to diverse areas such as nursing, philosophy and education. I focus solely on the adaptations of CT theories and conceptions to teaching History 12.

I analyzed the conceptions of six major CT theories throughout Chapter Two: Ennis, McPeck, Siegel, Lipman, the Foundation for Critical Thinking (FFCT), and the Critical Thinking Consortium (TC<sup>2</sup>). I used cross-referencing of CT theories to help me decide what were the most important conceptions to analyze. In an earlier course in my graduate degree, a professor suggested that I analyze the CT theories of Ennis as the beginning of my inquiry into CT. I discovered that Ennis is recognized as the originator of the modern CT movement because the conception developed in his 1962 article “*A Concept of Critical Thinking*” defined CT and outlined the important abilities and dispositions necessary for CT. Ennis was the perfect starting point, and throughout many of his published articles and journals I discovered references to CT theories developed by McPeck, Paul and Norris. Upon reviewing their theories, I discovered further references to conceptions developed by TC<sup>2</sup>, Lipman, Siegel and Facione. After compiling the list of theorists, I developed criteria to ensure that my list included only the theorists that have created “significant conceptions” of CT. The criteria included whether the

conception presented a new perspective, the theorist made a significant contribution to previous conceptions, and if the theory is recognized by other CT theorists as being significant. After applying these criteria to the list of theorists, I arrived at the six conceptions developed by the theorists listed above. For example, Norris and Facione were not included on the list despite their important work on different aspects of CT because neither theorist developed full conceptions.

In Section One of Chapter Two, I present a variety of definitions of CT that emerged from the six major conceptions (some conceptions included more than one definition), and develop criteria to determine what constitutes a “useful” definition of CT. Coombs and Daniels (1991) point out that new conceptions of thought are designed for several purposes, to make vague concepts more precise and useable in guiding curriculum development, or to differentiate the characteristics of an abstract concept to improve categorization of certain activities. The method I used to determine a useful definition of CT is based on Coombs and Daniels description of “conceptual analysis.” Conceptual analysis attempts to uncover a term’s use or meaning by analyzing theorists’ and researchers’ many uses of the term. I apply conceptual analysis to analyze definitions of CT, and develop specific criteria to compare and contrast the various definitions in order to determine “useful” definitions of CT. The criteria stipulates the qualities and characteristics of a useful definition and include the following: the definition uses language and terms that are clear and precise, it outlines a purpose or intent for CT, and it mentions that CT includes both abilities and dispositions. I developed the criteria after considering the significant characteristics common to the

majority of CT definitions, as well as the qualities that best describe how CT can be adapted to teachers' practice.

In Section Two of Chapter Two, I present the six major conceptions of CT and develop criteria to judge which conception is "most adaptable" for use in History 12. I use Coombs and Daniels (1991) theory of "conceptual structure assessment inquiry" as the method for determining an adaptable conception of CT. Conceptual structure assessment inquiry determines the adequacy of a conception for curriculum development, educational goals or research. This method uses comparison to measure which of the competing conceptual structures is most developed. Coombs and Daniels suggest asking three important questions when conducting conceptual structure assessment inquiry. Does the conception help achieve the important goals it claims? For my thesis, the conception must improve students' ability to think critically. Is the conception coherent and free of inconsistencies, contradictions and terms that have no sensible interpretation? Does the conception imply mysterious or empirically problematic processes or powers? To explain what an empirically problematic process is, Coombs and Daniels use an example from a popular conception of CT that suggests practicing thinking processes is the best way to become proficient in using them. This belief in practice further assumes that after thinking processes are mastered they can be transferred from one context to another. This is an empirically problematic assumption because it is clear that someone who is skilled at classifying buttons will not necessarily be skilled at classifying theories.

The criteria I used to determine an adaptable conception of CT were developed from the characteristics of useful CT definitions, and from my assumptions about the best methods and philosophies for embedding CT in History 12. It is important to remember

that the criteria for determining an adaptable conception of CT are developed from the perspective of a practicing history teacher, not from the perspective of a theorist.

## **Chapter Four**

Chapter Four utilizes autobiographical narrative inquiry to reflect on the effects of implicitly embedding TC<sup>2</sup>'s model of CT throughout the 2006/2007 school year in five classes of History 12. I chose to embed CT implicitly because I decided that students needed to concentrate on the curriculum during class time, rather than be concerned with how they learned the material. It is important to remember that there are significant differences between creating a narrative and conducting narrative inquiry. Gay, Mills & Airasian (2005) point out that a narrative is a story about people's lives, while narrative inquiry is focused on collecting data about people's lives, and constructing a narrative about these experiences and the meanings attributed to these experiences. Specifically, this study presents my autobiographical reflections about the effects of TC<sup>2</sup>'s conception on students and different aspects of my teaching practice. The narrative section in Chapter Four illustrates my methods and experiences using the TC<sup>2</sup> method, and provides experiential-based conclusions about the strengths and limitations of the conception from a teacher "in the field." I felt that I was in a unique position being both a graduate student and a teacher, because I was both a practitioner and a researcher. This duality provided me with rich amounts of material for reflection. However, my dual role also left little time during classes to make observational notes, and as a result all field texts were in the form of reflections made after events occurred, which may be a limitation.

The chapter is an “autobiographical narrative inquiry” on two counts: it uses autobiographical details (family life, personal attitudes towards dimensions of education, community and family background) to illuminate and inform my personal context of the story; and because I use personal experience as the primary experience (empirical data) considered in the inquiry. When conducting narrative inquiry, Clandinin and Connelly (2000) discuss the importance of acknowledging the centrality of the researcher's own experience—the researcher's livings, tellings, retellings, and relivings. Clandinin and Connelly suggest that telling stories of our past shape our present viewpoints. Early in Chapter One I reflect on how my experiences as a student and as a teacher impacted the philosophies and methods that I utilize in my current practice. I also acknowledge that prior educational experiences shaped my assumptions about best practice in history teaching, and the limitations of the History 12 curriculum and provincial exam.

Clandinin and Connelly (2000) developed a method of doing research into experiences that focuses on the four directions of an inquiry: “inward”, “outward”, “backward” and “forward.” Inward describes the internal conditions such as feelings, hopes, and moral dispositions. Outward refers to environmental or existential conditions, while backward and forward refers to the temporality—past, present and future. To do research into an experience—is to experience it simultaneously in these four ways, and to ask questions pointing each direction (p. 50). To provide an example of how I used the four directions of inquiry in my research, I refer to a journal entry that I wrote on the night of October 13, 2006. After using the TC<sup>2</sup>'s method since the beginning of September I wrote that, “One of my big worries is that I am becoming too pedantic and structured. Will students get bored or worn-out with my teaching?” This single question

raised several important issues that informed the “restorying” (or writing) of my narrative. Inwardly, I was reacting to my feelings of inadequacy and worries that I lacked the knowledge to use TC<sup>2</sup>'s method in a variety of ways, and that my methods were too systematic and structured and as a result students were becoming bored. Outwardly, I was reacting to the comments students made after I introduced similar routines and activities several classes in a row, and the less interested atmosphere that I witnessed in the classroom that week when compared to previous weeks. Students said things like, “Not this again,” or “Do we have to do this again?” Temporally, I reflected back to the frustrations and negative feelings experienced in classes where teachers used the same pedantic methods each day. I also considered the future, and wondered what students in my classes would be saying or doing if I used the same group of teaching methods and activities in June? These four directions of inquiry helped me reflect on the classroom experiences I witnessed, and aided in the construction of the stories that eventually came together to form the narrative found in Chapter Four.

My narrative involves two interwoven texts described by Clandinin and Connelly's (2000) categories of narrative text. The central text is comprised of my reflections on the implementation of TC<sup>2</sup>'s conception over one year of teaching five History 12 classes. The field texts or “rough data” informing the story are my recollections of the past year, reinforced by the journals, notes, lesson plans and class activities created during the process. My journal entries document observations, conversations, experiences, and interpretations of the process of embedding CT in History 12. As Clandinin and Connelly (2000) point out, “field texts help fill in the richness, nuance and complexity of the landscape, returning the reflecting researcher to a

richer, more complex, and puzzling landscape than memory alone is likely to construct” (p. 83). Throughout the narrative, I insert specific anecdotes and examples from the past year to illustrate and accentuate important points. Furthermore, the specific anecdotes and remembrances serve to legitimize the narrative and strengthen the plausibility of my accounts.

To accentuate the importance of field texts to the accuracy of my narrative, I describe an example where my journals contradicted the memories I had of certain events. By June 2007, I was convinced that the amount of time spent using didactic methods to teach my classes decreased as I used the TC<sup>2</sup> model throughout the year. However, before writing the narrative I consulted my notes and discovered that my December 18, 2006 journals contradicted these memories. The journals reminded me that there was a period during the year when I reverted back to using didactic practices, “I am slipping back into the habit of what Richard Paul calls a Mother Robin. I am biting off pieces for them to chew on and dropping them into their mouths to eat.” Clandinin and Connelly alert narrative researchers that memory tends to smooth out the details of the past. Without the information provided by my field texts, the plausibility and veracity of my narrative would have been compromised.

## **Limitations of the Study**

The study is limited by the innate characteristics of the methodology employed and by my approach to working with the challenges. As noted earlier, Chapter Two features two sections; Section One analyzes literature to uncover “useful” definitions of CT using “technical use analysis.” Coombs and Daniels (1991) explain that technical

use analysis is used to uncover a term's use or meaning, by analyzing the various uses of the terms by theorists and researchers. In Section Two, I use the Coombs and Daniels method of conceptual structure analysis, and develop specific criteria to determine which of the six conceptions of CT is most "adaptable" for teaching History 12. Conceptual structure assessment inquiry determines the adequacy of a conception for curriculum development, educational goals or research.

The main limitations I faced in working with these two methods of inquiry are my lack of background knowledge in philosophical training and the analysis of conceptions of CT. This limitation was overcome in several ways. I relied upon the expertise of supervisors and mentors to provide the sensitivity and good judgment required for competent conceptual analysis. Their advice and direction helped me avoid analytical errors, develop strong criteria and ensured that my assumptions and beliefs were made explicit throughout the inquiry. For example, my supervisor constantly reminded me that my analysis of CT was from the "lens" of a practicing teacher, not a philosopher or CT theorist. My criteria for determining a "useful" definition of CT, and the most "adaptable" conception of CT are framed by my beliefs about education, teaching history, and knowledge of the History 12 curriculum that were made explicit in Chapter One.

When I began my investigation into CT in the fall of 2005, the first conception that I was introduced to was the TC<sup>2</sup> model. I was excited by the possibilities this model represented for my instructional methods, and began to experiment with its usage in several classes. As my thesis topic and questions developed, a major limitation surfaced. In Chapter Two, I determined that the TC<sup>2</sup> model was the most adaptable conception of CT, and used autobiographical narrative inquiry to highlight the strengths and limitations

of the conception as it related to my practice. My prior usage of the TC<sup>2</sup> model created a situation my thesis supervisor labeled the “chicken or the egg” syndrome. Did I decide that the TC<sup>2</sup> model was the most adaptable because I had already predetermined this conclusion after my prior experience with the model, or did I prove it to be the most adaptable after applying criteria and analysis to the six conceptions? Further complicating the issue was the fact that my thesis supervisor is a workshop presenter for TC<sup>2</sup> and senior editor for TC<sup>2</sup>'s series of Science and Mathematics resources. Did his involvement and belief in the TC<sup>2</sup> conception influence and bias my decision that their conception was the most adaptable?

I took several steps to address these limitations. I relied on the advice and fair-mindedness of my supervisor and other graduate professors. They advised me that the awareness of my potential bias and conflict of interest would ensure that the conclusions in my analysis of literature in Chapter Two were reasonable, justified and based on criteria. Furthermore, by making this limitation explicit I ensure that the reader is cognizant of these issues as they proceed through the thesis. The limitation presented by the professional affiliation of my supervisor can also be reconciled. As a member of the academy he has an obligation to ensure that my study has been conducted in an objective manner, and would not risk his professional reputation for the sake of influencing my thesis. He repeatedly reminded me that the purpose of my study was a personal inquiry into CT, and my findings are meant to inform my practice and understanding, no one else's. In a conversation with Dr. Roland Case, one of the founders of TC<sup>2</sup>, he stressed the importance of objectivity and remaining true to the nature of CT when conducting my inquiry. CT is focused on using criteria to make reasonable decisions about what to

believe or do. It would be hypocritical and duplicitous if the decisions I made about the most adaptable conception of CT were based on biased or fraudulent criteria.

As noted previously, Chapter Four is an autobiographical narrative and as such has several limiting characteristics. The most important issue is the role that bias and subjectivity plays in the chapter. In my autobiographical narrative inquiry I play dual roles, as both researcher and practitioner. Critics of this method of inquiry argue that there is a potential for unreliable and skewed results because, “I only see what I want to see.” Clandinin and Connelly (1991) argue that reliability and validity are overrated criteria in narrative study, while apperency and verisimilitude are underrated criteria. Their argument is that reliability and validity have little importance in narrative inquiry because narrative inquiry focuses on increasing understanding of central issues related to teaching and learning through the telling and retelling of teachers’ stories. The results of a narrative inquiry cannot be assumed to apply to all teachers in the world, instead a narrative inquiry can be seen as a “snapshot in time”, an individual experience that may or may not have applications to a larger audience. Instead, each researcher must defend the criteria that best apply to their work. Throughout my study, I include a commitment to veracity and plausibility when conducting research, which is similar to the standards applied by non-autobiographical researchers. Clandinin and Connelly (2000) refer to the term “wakefulness” to describe the ability of the researcher to proceed through inquiry with an awareness of risks, narcissism, solipsism, and of simplistic plots, scenarios and unidimensional characters. The thoughtful reflection required by a researcher in the field, writing field texts, or writing research texts is best described by a “wakeful” disposition.

It was this mindset, or reflective state, that I attempted to follow as I made my way through this study.

Compared to other quantitative and qualitative methods I used less empirical data to conduct autobiographical narrative inquiry. The only “hard data” utilized in my study were documented journals, lesson plans, blackline masters for activities, assessment rubrics and personal recollections from the year. I am able to attend to these limits by presenting and acknowledging my bias and subjectivity throughout my work. My reflections on the importance of change in education, teaching beliefs and methods, and love of history are clearly laid out in the Autobiographical Background section in Chapter One. I also provide a clear and detailed account of my assumptions about teaching history, the History 12 course and how they affect the interpretation of my experiences adapting TC<sup>2</sup>'s model to History 12. These beliefs and assumptions shaped the way I analyzed other CT conceptions, and the effects the TC<sup>2</sup> model had on my classes and my teaching methods.

In Chapter Four, I discuss my experiences using TC<sup>2</sup>'s conception to teach five History 12 classes. I provide a detailed explication of the model, a description of how I used the model in my classes, an analysis of the strengths and weaknesses of the TC<sup>2</sup> conception, and suggestions to improve the conception in the future.

## **CHAPTER FOUR: DISCUSSION OF FINDINGS**

### **The Adaptability of TC<sup>2</sup> and History 12**

In this chapter I describe the TC<sup>2</sup> conception of CT and provide examples of how I adapted the conception to teach five History 12 classes. Later in the chapter, I reflect upon my experiences using TC<sup>2</sup>'s method, and discuss the strengths and limitations of the conception as it applies to teaching History 12. Throughout the chapter, I make several suggestions on how to make improvements to the TC<sup>2</sup> model to make it more adaptable for teachers wanting to implement it in their classes. Before beginning the discussion of my experiences in History 12, it is important to understand the basics of the TC<sup>2</sup> conception.

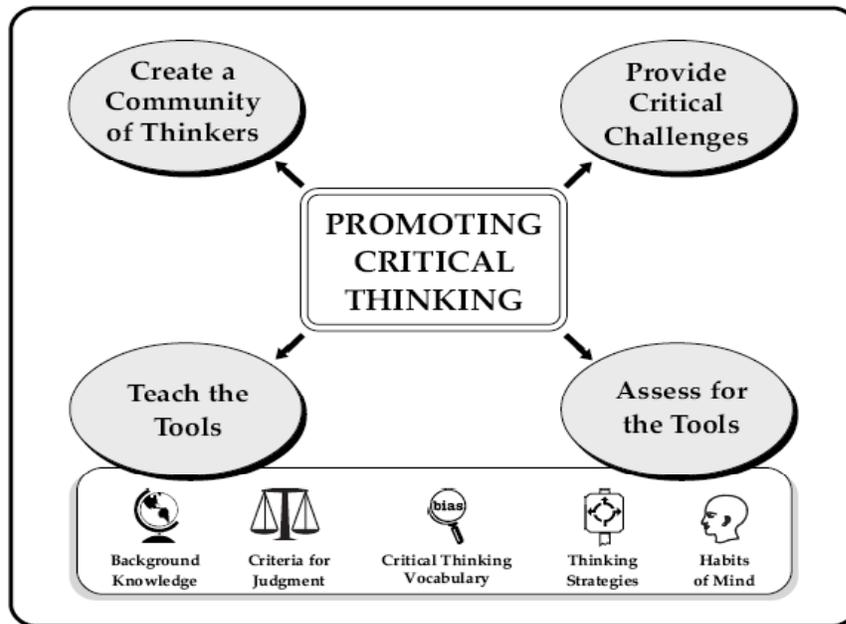
### **Explication of TC<sup>2</sup>'s Four Fronts Model**

TC<sup>2</sup>'s definition stipulates that, "Critical thinking involves thinking through problematic situations about what to believe or how to act where the thinker makes reasoned judgments that embody the qualities of a competent thinker" (Case and Wright, 1997). Teachers often believe that curriculum content should be the primary focus for classroom instruction. The teaching of CT is often identified as an important goal, but it is not usually taught because curriculum content occupies most of teachers' attention. Many teachers also believe that CT cannot be taught until content is fully understood. They see thinking skills as a hierarchy, and believe that CT cannot be taught until basic thinking skills like knowledge, understanding and application are first accomplished. As a result, teachers only focus on CT when the other thinking skills have been

accomplished. As a result, CT usually is not given the concentration or focus that other thinking skills are. TC<sup>2</sup> disputes this view of teaching CT, because they argue that CT should be “embedded” throughout the curriculum, not as an add-on to the curriculum, and should be one of the key methods for delivering the curriculum. Even the most mundane classroom activities can be taught critically (Case, 2005). For example, teachers often have students read a section of a history textbook to comprehend an event or issue. To make this a CT activity, a teacher might ask students to read the section and identify the five “most important” points in the article that helps students understand the historical event. Students will better understand the content because they actively think about the information as they read it, which will help them understand the information better.

TC<sup>2</sup>'s model focuses on improving students' abilities to critically think by developing four distinct “fronts” of CT that interact and complement each other. The “Four Fronts” model provides a comprehensive pedagogical method that teachers can use to support CT in the classroom (see Figure 1 below). The first front in the model is a Community of Thinkers that fosters CT by developing a supportive community of inquiry. The second front helps teachers embed CT throughout the curriculum in classroom activities called Critical Challenges. The third front labeled Teach the Tools aims to develop the tools that help students become critical thinkers, while the fourth front Assess the Tools provides methods and tools to help teachers assess students' improvement as critical thinkers. Within each of the four fronts, there are specific methods, strategies and recommendations that support CT in powerful ways. Figure 1

below shows the Four Fronts model and illustrates how each of the four fronts are equally important for establishing CT in the classroom.



**Figure 1: The Four Fronts (Used with permission from TC<sup>2</sup>)**

Below, I explicate each of the Four Fronts by discussing the important details of each, and provide examples from my experience that illuminate how the Four Fronts can be adapted to History 12.

### **Front One: Community of Thinkers (COT)**

TC<sup>2</sup> defines a Community of Thinkers (COT) as, “a collection of individuals interacting in mutually supportive ways to nurture critical reflection” (Case & Wright, 1997, p. 15). An important part of CT is establishing an environment that supports and encourages thoughtful reflection and rational thinking because CT cannot exist in an environment that does not encourage these ideals. TC<sup>2</sup> identifies five aspects that help build a COT in a classroom: classroom expectations, classroom routines and activities,

teacher modeling, questioning techniques and tools for community participation.<sup>19</sup>

Within these five aspects, TC<sup>2</sup> makes several methodological suggestions to help teachers convert their classrooms into COT's. Throughout the year I used the TC<sup>2</sup> approach as a general guideline for developing a COT and I also adapted several Case and Wright's (1997) descriptions and recommendations to suit my method of teaching History 12.

1. Setting appropriate classroom expectations

In my view classroom expectations are important to establish in any class, however, when teaching history it is especially important that students make up their own minds, use reasons to support their conclusions and suspend judgment until all perspectives are considered. These expectations are fundamental to understanding both the discipline, and the strategies historians use to make reasoned judgments.

- Students should make up their own minds about historical events, and use reasons, evidence and explanation to support all of their decisions.

Furthermore, before making up their mind they should consider the pros and cons of all relevant perspectives.

- Disagreements about history are encouraged, but debate should focus on the interpretation of historical events, not personal disagreements. It is expected that all people should be treated respectfully by all members of the class.

2. Implementing appropriate classroom routines and activities

Classroom routines create an environment for rationality and reasoning to prosper, thus making CT more likely to occur. Classroom routines and activities

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<sup>19</sup> For a comprehensive inventory and list of all of the methodologies and practices that TC2 believes will support a community of thinkers see Case and Wright's (1997) article "Taking Seriously the Teaching of

can be considered part of the “hidden curriculum”; the informal learning environment that powerfully affects the way that students learn.

- Students and teachers scrutinize films, textbooks and documents for evidence of bias, stereotyping and inaccuracy.
  - Student responses that are insightful, creative, thoughtful or empathic are valued.
  - Assignments are intended to get students to think critically and to help students understand course content better. I never create assignments that are trivial or intended to keep students busy.
  - Throughout the course, students are expected to understand and utilize important CT and historical vocabulary (e.g., what “criteria” did you use to determine the historical “reliability” of that document?)
  - Students are expected to help determine criteria for assessing assignments and be actively involved in peer marking and self-evaluation of assignments.
  - Students are expected to develop historical empathy. They should regularly consider historical events from a variety of perspectives in order to understand the complexity of historical causation and significance.
3. Teacher modeling of the attributes of competent thinkers

Teacher modeling of the traits, abilities and characteristics of a critical thinker is an important requirement for developing a community of thinkers. Teachers cannot expect students to become critical thinkers if they do not embody the habits themselves.

- I concentrate on helping students understand that historical conclusions are often ambiguous, and that it is acceptable to not make up your mind until all factors and considerations are considered.
- When students respond to questions, I encourage insightful and innovative responses, not the first correct response.
- When I make historical decisions, I ensure that I provide accurate evidence, reasoning and explanations to justify my decisions, and I expect students to do the same.
- I avoid making careless and quick conclusions about historical events, and I aim to provide a variety of perspectives when studying historical topics.
- I attempt to model open-mindedness by displaying a willingness to change my mind and perspective if presented with plausible evidence contrary to my opinions. I am not afraid of being wrong, or of not knowing everything about the curriculum. If students ask me a question that I do not know the answer to I model positive habits of mind by telling students that I will search for accurate information about the topic and inform them next class.

#### 4. Employing effective group questioning techniques

TC<sup>2</sup> wants to help students make decisions about problematic subjects in a reasonable and rational manner. Therefore, questioning techniques should aim to get students thinking deeply about topics rather than just locating the correct answer. Below are samples of questions that support students in making reasoned judgments.

- Questions that seek greater clarity. (I do not fully understand, could you describe what you are saying differently?)
  - Questions that probe for assumptions. (Is this always the case? Are you making any generalizations in your statement?)
  - Questions that probe for reasons and evidence. (Is there any reason to doubt this evidence? What evidence would verify this conclusion? What reasons seem most plausible?)
  - Questions that explore alternative perspectives. (How do you think other groups would respond? What would people who disagree with you say?)
  - Questions that consider consequences and implications. (What are the intended/unintended consequences of this action?)
5. Developing the tools for student participation in a reflective community

In my experience, teachers often wrongfully assume that students understand how to work in groups because they have been doing it throughout most of their school careers. In order for students to work effectively in groups, they need to learn the CT vocabulary, thinking strategies and habits of mind that support group work.

- Provide opportunities for students to work in groups.
- Students must understand that individuals see events from different perspectives.
- What problems do unsuccessful groups encounter?
- When speaking in a group, are individual opinions and explanations clear to everyone?
- What strategies can be utilized for making group decisions?

- What strategies allow group members to critique other group members in non-threatening ways?
- What are the best strategies for presenting group work to the rest of the class?
- While working in a group, are students aware how their actions affect the group and various individuals within the group? Are students willing to stand-up for their own beliefs?

### **Front Two: Critical Challenges Through the Curriculum**

The second front in the TC<sup>2</sup> model is focused on providing critical challenges throughout the curriculum. TC<sup>2</sup> labels any opportunities, assignments or tasks that require students to engage in CT as *critical challenges*. TC<sup>2</sup> believes that CT is strengthened when students are presented with numerous opportunities to engage in CT throughout the curriculum. In order for students to become better critical thinkers, they need to be exposed to situations and problems that require them to make judgments or arrive at reasoned solutions. Critical challenges do not need to be major projects or arduous assignments that take up a great deal of classroom time, they can also be small focused assignments that require a few minutes to think through. Critical challenges can be used in conjunction with any pedagogical style or approach, but TC<sup>2</sup> has created several criteria that establish the characteristics of an acceptable critical challenge.

#### 1. Critical challenges require students to make judgments

Students are often asked questions that merely require them to find the correct information and write it down, TC<sup>2</sup> refers to these as “Where’s Waldo?” questions. Other types of questions ask students to explain why they prefer one option to another, such as,

Why do you think Stalin was a harsher leader than Lenin?” These types of questions do not require any critical judgment because there are no wrong answers. As long as students explain their position and reasoning clearly their answers are correct, which teaches students to be self-righteous and opinionated. Neither the “Where’s Waldo?” questions, nor the personal preference questions require any CT. Figure 2 below provides examples of two types of questions that do not invite CT, and one example of a critical challenge question that invites CT.

<b>“Where’s Waldo?” Basic Knowledge Question</b>	<b>“How do you Feel?” Preference Question</b>	<b>Critical Challenge Question</b>
List the reasons Britain and France adopted the appeasement policy during the 1930’s?	Why do you think Britain and France adopted the appeasement policy in Europe during the 1930’s?	What is the <b>most plausible</b> explanation why Britain and France adopted appeasement in Europe during the 1930’s?

**Table 3: The Different Categories of Questions**

2. Critical challenges are meaningful to students

If students believe an activity is useless or trivial, then they will not engage in CT, or they might think CT is a meaningless and boring exercise. In my history classes, I try to create challenges that ask students to make judgments about historical events that are highly debatable and likely to engage them with the topic. Students enjoy working on controversial events because they feel as though they are solving an important puzzle or problem. For example, I asked students to decide if Franklin Delano Roosevelt knew about Pearl Harbor before the attack occurred. Students enjoyed this activity because it is

a frequently debated topic, there is a great deal of information available, they wanted to weigh in with their opinion, and they enjoyed the process of trying to solve the mystery for themselves.

### 3. Critical challenges are embedded in the core of the curriculum

By embedding critical challenges in the core of the curriculum, TC<sup>2</sup> claims that students will gain a deeper understanding of curriculum content, and will become active participants in their own learning. If critical challenges are not designed to teach important curriculum, then students are being done a disservice. It defies logic to design a critical challenge around content or abilities that are not important to the curriculum.

### 4. Critical challenges limit the number of CT tools used (Case and Wright, 1997)

The last criteria that a successful critical challenge requires is that it limits the number of CT tools needed to complete the challenge. In designing a critical challenge, teachers must anticipate the tools that a student will need to complete the challenge, and then help the students acquire and develop these tools. If a challenge requires background information about a topic, then the teacher should provide an information sheet or article on the topic. If a thinking strategy or tool needs to be utilized during the challenge, then the teacher needs to explain how to use the strategy. One of the common problems teachers make is that they require students to learn too many strategies and tools to complete the challenge. If the challenges require enormous amounts of background detail, thinking strategies and tools to complete, students will become discouraged by the difficulty of the task. It is possible that a critical challenge focuses on

only one CT vocabulary term, one habit of mind or one thinking strategy. In an activity I developed, I limited the amount of background knowledge. Instead of asking students to determine if all 440 articles in the Treaty of Versailles were *fair* to Germany, I provided students with two editorials (from a German and French perspective) about the fairness of the Treaty of Versailles and asked them to determine which one of the documents is most accurate.

### **Front Three: Tools for Critical Thinking**

The third front of the TC<sup>2</sup> conception is the development of the intellectual resources or “tools” necessary for CT. Critical thinkers must have knowledge of the important tools that facilitate CT, and they must know when and how to apply these tools to situations that require CT. TC<sup>2</sup> has identified five categories of tools that help foster CT: *background knowledge, criteria for judgment, CT vocabulary, thinking strategies* and *habits of mind*. All of these tools complement each other, and are of absolute importance in facilitating CT. If a thinker neglects any one of these tools, the quality of CT will be compromised.

*Background knowledge* is one of the simplest, yet most essential aspects of CT because reasoned judgments cannot be made if all of the relevant background knowledge is not fully understood. The importance of background knowledge is accentuated by McPeck (1981) who stated that thinking can never be thinking about nothing. Proficient critical thinkers are able to identify the exact knowledge that needs to be understood before making judgments (Case and Wright, 1997). It is important that teachers help students new to CT understand precisely what background knowledge is required for

each critical challenge. Otherwise, students may impede the CT process by trying to acquire too much information, or they will not acquire enough background knowledge to make an informed judgment. For example, a student cannot understand who won the Cuban Missile Crisis until they understand the previous fifty years of Cuban-American history, and the relationship between the United States and the Soviet Union in the years leading up to the event.

As previously discussed, CT judgments require the development of *criteria for judgment* that help individuals make judgments about the plausibility of alternative solutions. Students often need help in determining criteria that can be used to make reasoned judgments about the best option to pursue, or what to believe. If I ask students to determine whether the Treaty of Versailles was a “fair” peace settlement for Germany, students would need to develop criteria about what constitutes a fair peace treaty. The specific criteria that students develop about the characteristics of a fair treaty determine the decisions students make in the challenge. Without an understanding of the criteria or standards for making a judgment, TC<sup>2</sup> argues that a quality judgment cannot be made.

*CT vocabulary* refers to the basic set of terms and concepts necessary to facilitate CT. These concepts allow students to make important distinctions amidst the different kinds of issues and thinking tasks facing them (Case and Wright, 1997). TC<sup>2</sup> includes over 33 different concepts in its list of CT vocabulary terms (i.e. bias, critique, explicit, justify and relevant).<sup>20</sup> Knowledge of CT vocabulary is not just a matter of understanding the literal meaning of the terms—it also includes the ability to apply these terms to the appropriate context. CT vocabulary can be introduced before the critical

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<sup>20</sup> For a comprehensive list of TC<sup>2</sup>'s critical thinking vocabulary terms see Roland Case (2006) conference proceedings.

challenge, or accentuated throughout it. If I wanted to teach the CT vocabulary term “bias”, I would create a critical challenge that asks students to read a biased Soviet textbook account explaining the causes of the Cold War, and then re-write the account with an American bias as it might have been written in an American textbook during the Cold War.

Theorists such as Ennis and Paul believe that CT can be achieved by following a series of steps, or applying problem-solving models to situations that require CT. TC<sup>2</sup> acknowledges that *thinking strategies* or *heuristics* are important in aiding CT, but argue that they alone do not guarantee CT. Thinking strategies help individuals think through certain tasks, but they cannot always be adapted to a variety of contexts. The teacher’s job is to introduce various thinking strategies, and provide a variety of contexts for these strategies to be utilized. TC<sup>2</sup> believes that proficient critical thinkers understand which thinking strategies best help them think through problematic situations. Thinking strategies can be as simple as double-checking an assignment before submitting it, or it can be as complex as creating a T-chart that highlights the pros and cons of a certain problem (Case and Wright, 1997).

*Habits of mind* refer to the mindsets, or virtues that are part of the typical or habitual way that a person approaches a task.<sup>21</sup> TC<sup>2</sup> organizes habits of mind into two categories “thinking for one’s self” and “thinking with others.” Thinking for one’s self includes habits of mind such as having an inquiring mind, being attentive to detail, fair-minded or empathic. Thinking with others includes being accommodating, constructive or inclusive. Habits of mind are an essential part of CT because without them tasks are not done in a critical way. For example, if a student is not attentive to detail, the

judgments they make may be based on inaccurate information, which results in flawed decisions. Like the other tools for CT, habits of mind should be taught as part of critical challenges. I developed an activity in which I asked students to decide if Stalin did more harm than good in the Soviet Union between 1924-1941. If I want to reinforce the habit of mind of “open-mindedness”, I get them to write down three reasons someone may disagree with the position they supported in their essay. The ability to consider other perspectives and arguments helps students understand the importance of being open-minded in arguments, and that in each historical argument people will have different arguments and perspectives on each issue.

#### **Front Four: Assessing the Tools for Critical Thinking**

As I argued in Chapter Two, one of the main problems for the majority of CT conceptions is how to measure whether students are improving their ability to think critically. CT involves more than recall of content, therefore it is misguided to measure students’ CT ability by evaluating their recall of content knowledge. One of TC<sup>2</sup>’s main positions on assessment is that there are no single correct answers for critical challenges. Critical challenges are not designed to have correct answers; what is important instead is the CT tools developed, and the reasoning and justifications provided for the decisions. TC<sup>2</sup> argues that assessment for CT is best measured by determining students’ ability to embody the “qualities of a competent thinker” (Case & Daniels, 2002). “The qualities of a competent thinker” describes the level of proficiency an individual has with the five

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<sup>21</sup> For a full listing of TC<sup>2</sup>’s habits of mind see Roland Case (2006) conference proceedings.

categories of intellectual tools from the Four Fronts model.<sup>22</sup> The five CT tools form the categories of criteria used to assess students' work, and measure how well students meet the specific requirements of the five intellectual tools. The standards for each critical challenge should be clearly articulated before beginning each challenge so that students understand exactly what is expected. To give you an idea of how this assessment model works, I provide an example of a critical challenge and an accompanying assessment rubric below.

In this challenge, students are expected to write an essay that determines whether or not Franklin Delano Roosevelt's New Deal program cured the problems of the Great Depression in the United States. Before a final decision is reached, students are expected to use appropriate thinking strategies that outline arguments and counter-arguments for each position, and develop criteria that helps determine which position is more valid.

In the example below, each of the five CT tools are included in the marking rubric. The five tools are given equal weighting and importance in the assessment of the task. When marking this task I determine how well students met the criteria for each of the five tools.

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<sup>22</sup> The five intellectual tools include: background information, criteria for judgment, critical thinking vocabulary, thinking strategies and habits of mind.

<b>Criteria for Assessment (The Five Intellectual Tools)</b>	<b>Evidence for Assessing the Intellectual Tools of Critical Thinking</b>
Background Knowledge	<ul style="list-style-type: none"> <li>The student includes important, relevant and accurate information about the New Deal program</li> </ul>
Criteria for Judgment	<ul style="list-style-type: none"> <li>The student develops sophisticated and relevant criteria that enables them to determine if the New Deal actually <i>cured</i> the Great Depression</li> </ul>
Critical Thinking Vocabulary (i.e. argument and counter-argument)	<ul style="list-style-type: none"> <li>In the pre-writing section, the student correctly differentiates between arguments and counter-arguments</li> </ul>
Thinking Strategies	<ul style="list-style-type: none"> <li>The student employs a thinking strategy in the pre-writing section that enables them to make a reasonable judgment about the task</li> </ul>
Habits of Mind	<ul style="list-style-type: none"> <li>The student demonstrates fair-mindedness and openness to alternate conclusions before making a reasonable decision</li> </ul>

**Table 4: Example of Critical Challenge and Assessment Rubric**

## **My Methods for Adapting TC<sup>2</sup> in History 12**

In the previous section, I described the TC<sup>2</sup> conception of CT and explained how each of the Four Fronts mutually benefit each other, and collectively strengthen CT in the classroom. Below I provide details of how I employed TC<sup>2</sup>'s conception when teaching five History 12 classes. This enables the reader to understand the adaptations I made when implementing the model, and describes how the TC<sup>2</sup> conception can be practically applied to teaching History 12.

Throughout the 2006/2007 year I never explicitly told any classes that I was using TC<sup>2</sup>'s method to teach them History 12. I made this decision because I felt that students might be overwhelmed learning both the curriculum and the TC<sup>2</sup> model of CT. Furthermore, I realized that knowledge of CT was not imperative in helping students learn how to think critically. Lipman (1989) supports this idea when he argues that teaching “about” CT is not necessarily an effective way to “teach” CT. In my experience, students are not interested in the methods teachers are using to teach the curriculum—they are more interested in the purposes and requirements for completing each task. At the beginning of each task I explain my content goals and CT purposes for the assignment so that students clearly understand the direction for each assignment.

Throughout the course I used a variety of tasks and methods to introduce TC<sup>2</sup>'s conception of CT, these included mini-critical challenges, major unit critical challenges and online discussion challenges. I chose to use a variety of methods because I wanted to increase my understanding of the different ways CT can be embedded in classroom instruction, and to avoid repeating the same tasks again and again, thereby ensuring that students do not see my class as a mundane and predictable set of similar activities.

## **Mini-Critical Challenges**

“Mini-critical challenges” describes tasks that require anywhere from five minutes to one-class<sup>23</sup> to teach and reinforce limited numbers of CT abilities, habits of mind or vocabulary terms. The advantage of mini-challenges is that they require less planning than major challenges, and can easily be adapted into courses with massive amounts of content in the curriculum. If time to complete the curriculum is an issue, teachers can focus on two or three mini-challenges in each major unit of the course, rather than devote an entire unit to CT. An example of a mini-challenge I use is, “Why did the United States get involved in the Vietnam conflict?” I provide students with various primary and secondary sources that describe various accounts of American involvement in Vietnam, and then ask students to use evidence from the sources to identify all of the explanations for American involvement. After students identify all of the arguments, they discuss the different reasons in partner groups. Students are then asked to decide which explanations are the “most plausible” reasons for American involvement after considering what they already know about American policy during the Cold War.

Mini-challenges do not have to be this complicated, and can include tasks that students are commonly asked to complete, like summarizing information from a textbook. To infuse CT into this task, students are asked to summarize the most important information from the relevant page in the textbook in 100 words or less. The benefit of this type of task is that it requires students to think critically and make

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<sup>23</sup> One class at my school is exactly one hour and eighteen minutes.

decisions about what they are reading, rather than complete the task in a thoughtless or careless way. The limitations of mini-challenges are discussed later in this section.

### **Major Unit Critical Challenges**

Another method I use to implement TC<sup>2</sup>'s model into the classroom is the creation of major unit critical challenges.<sup>24</sup> I utilize two different methods to introduce these types of critical challenges. One method is to create one major critical challenge that all activities in a unit are designed to help students complete. For example, during the World War II unit students are asked to determine which events during the war were most important in helping the Allies win the war. Each day the class focuses on a particular battle or aspect of war that helps students make an accurate judgment about the most important events in the war. The culminating assignment involves students explaining the criteria they developed to determine the most important events, and a written explanation of how each important event is chosen and ranked.

I discovered that another way of presenting major unit challenges is to create a series of mini-challenges that are all steps towards accomplishing one final activity. During the Paris Peace Conferences (PPC) unit, students complete seven mini-challenges that are designed to help students decide if the PPC were a success or a failure. The final activity is a debate in which students are assigned to either side of the debate, and prepare arguments and counter-arguments for their respective positions. At the end of the debate, students are asked to abandon the roles they are assigned and consider the PPC after viewing the question from a variety of perspectives. Students are then asked to organize themselves in a U-shape. Students who think the conferences were a failure stand at one

end of the “U”, while students who think the conferences are a success stand at the other end of the “U.” Students who are undecided, or support arguments from both sides are asked to place themselves in the middle position that best represents their conclusions. Students are then asked to explain the reasons why they placed themselves where they did. After listening to various reasons and evidence students are queried to find out if they want to move to a new location. Several students move to new locations in the “U”, while others remain where they were. The students who move (or do not move) are asked to explain why they moved, or stayed in the same position. This activity teaches students important listening skills, habits of mind and reinforces the important CT idea that it is acceptable to change one’s mind if presented with irrefutable evidence and reasoning.

### **Online Critical Challenges**

The last method I employ to initiate TC<sup>2</sup>'s version of CT is the use of online discussion challenges. Five years ago, my school district implemented collaborative software program for e-mail, messaging and online conferencing that every teacher and student in the district has access to. I created two online conferences for my five History 12 classes (three classes in one conference, two in the other), and I posted one critical challenge question per week on each conference page. Students are required to respond to two of the questions each month in an original posting, or as a response to another student’s entry. All of the questions are designed to meet the criteria described by TC<sup>2</sup> for quality critical challenges. I purposely create contentious questions that I know will interest students and stir debate. During the unit on early Cold War competition, I asked

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<sup>24</sup> In my classes a unit requires three to ten classes to complete.

students to decide who won the Space Race, the United States or the Soviet Union? In making their decision students were asked to explain their criteria for determining a victor in a Space Race. Online challenges are useful because they get students using CT outside of the traditional classroom environment, and provide me with extra time to reinforce content, or introduce new content that I do not have time to cover during regular instructional time. Furthermore, it helps students see other student responses to critical challenges, which further strengthens students' understanding of CT and history.

I utilized all of the above methods when implementing TC<sup>2</sup>'s conception of CT in my History 12 classes and I use these examples to provide a context for my conclusions regarding the adaptability of the TC<sup>2</sup> conception for teaching History 12. The next section discusses the effects the TC<sup>2</sup> model had on students' CT abilities, my teaching practice and the development of a community of thinkers.

## **Reflections on Adapting TC<sup>2</sup> to History 12**

### **Impact of the TC<sup>2</sup> Conception on Students**

Throughout the past year of implementing TC<sup>2</sup>'s model in my History 12 classes I noticed several improvements in students' ability to think critically. When students first arrived in my class in September they were prepared to learn history as they had before. Based on previous experiences they expected that learning history involved memorizing the details of historical events, watching videos, and then representing their acquired knowledge on assignments and tests. I presented an alternative view of learning history that emphasized the importance of making reasonable decisions about the causes, details and consequences of historical events. Initially, when asked to make historical

judgments, many students restated other people's informed opinions, or they made narrow judgments that did not consider important perspectives or information. Many students made egocentric and self-righteous judgments that did not utilize aspects of the TC<sup>2</sup> model, except for important background knowledge. They did not use criteria for judgment, employed few thinking strategies, and rarely embodied important habits of mind. After using the TC<sup>2</sup> model for a year, students became accustomed to developing sophisticated criteria for making historical judgments, and utilized important thinking strategies, habits of mind and CT vocabulary when making decisions about critical challenges. In short, *they improved their abilities in all aspects of the TC<sup>2</sup> conception, and as a result improved as critical thinkers.*

For example, in one critical challenge students were asked to determine who won the Space Race, the United States or the Soviet Union? Before discussing the details of the Space Race, classes involved themselves in discussions about the different criteria for determining the winner of a race, especially a race in which the competitors are unsure where the finish line is—or even if there is one. Some students stated that the winner of a race was the first one to cross the finish line. These students stated that a successful landing on the moon was the finish line, and because the United States first landed on the moon, they won the Space Race. Others argued that because there was no predetermined finish line, the winner of the Space Race was the nation who achieved the most “firsts” in the Space Race; for example, the first nation to launch an earth orbiting satellite. These students saw the Space Race as a point system in which the winner was awarded a point each time a first was achieved. After applying these criteria to the background knowledge on the Space Race, students determined that the Soviet Union won the Space

Race because they achieved more firsts in space than the United States. It was during the debate about criteria when I realized the growth the students had attained during the year. In September they were incapable of discussing criteria, let alone displaying such sophisticated thinking about criteria. This event was not an isolated anecdote of success, rather it was one of many examples that I could cite from my journal from the past year.

I observed that the majority of students not only improved their ability to develop criteria for making reasoned judgments, and also improved their proficiency with other CT tools. They developed an understanding of the thinking strategies that best aided them in making reasoned judgments. When students were asked to determine if Stalin's industrialization policies were good for the Soviet Union, they discussed which thinking strategy best organized information and aided in the decision making process, a T-Chart or a positive negative factors list? I also noticed that students began to expand their CT vocabulary list, and regularly CT vocabulary words like evidence, inference and criteria were used in casual student conversations. Students also became more proficient at recognizing the appropriate background knowledge that needed to be understood before judgments were made. When students were asked to compare the Hungarian Revolution of 1956 with the Prague Spring Revolution in Czechoslovakia in 1968, they outlined the categories of information they needed to understand about each country before completing the task.

The one CT tool students struggled to improve throughout the year was habits of mind. They are called "habits" of mind for a reason, because the negative ones are hard to break, and the desirable ones require constant attention, effort and self-reflection to improve. Habits of mind such as open-mindedness, fair-mindedness and circumspection

require years, not months to improve. TC<sup>2</sup> advocates that teachers include habits of mind as a focus for development in each critical challenge they design. Concentrating on a different habit of mind in each challenge does not provide enough time to properly develop it. There were too many other classes besides History 12 that did not build habits of mind, or fostered habits that were detrimental to CT. Many students spend their school years learning habits that counter the habits of mind that the TC<sup>2</sup> model is trying to improve, thus decreasing the likelihood that CT can be improved.

Furthermore, I noticed that many of my grade 12 students lack important habits of mind such as being inquisitive, persistent, circumspect, or attentive to detail. This situation is problematic and difficult to understand. It could be that the current school system does not build habits of mind, or that students realize they do not need many of the habits of mind TC<sup>2</sup> accentuates in order to be successful in the school system. Just because I create a critical challenge that focuses on persistence, does not mean students will become persistent. The only way that I can improve students' habits of mind is to emphasize a small number of specific habits of mind throughout the entire course. The TC<sup>2</sup> model assumes that habits of mind can be improved if they are included in critical challenges. I think that *the only way habits of mind will be improved amongst students is if they are explicitly taught and emphasized throughout students' school careers, not just in one class.*

One of the truly exciting aspects of *the TC<sup>2</sup> conception is that its effective implementation improves students' understanding of course content*, and there are several examples of evidence that support this claim. TC<sup>2</sup> claim that thinking and content are intertwined, and both cannot exist without the other. When I designed critical challenges

according to TC<sup>2</sup>'s model, students understood content in deeper ways than when I used didactic methods. For example, I organized a class debate where I asked students to decide if the policy of appeasement practiced in 1930's France and Britain was a policy of submission to an aggressive enemy, or an optimistic policy focused on avoiding another catastrophic global war? I knew that students would learn about the important appeasement events because they would not be able to competently complete the challenge if the important events were not understood. After the debate was over, I was amazed at the exceptional discussions that took place. The students clearly understood the important events and arguments on each side of the debate. It was not just the top students either, even the lower achieving students displayed an understanding of events that I did not expect. More importantly, several students challenged the myth that appeasement was a policy of weakness and submission because their criteria helped them see the events from a different perspective. This helped students gain insight into the epistemology of historical judgments by understanding that historical conclusions are not always concrete. They understood that historians' perspectives, biases and interpretation of evidence determine their positions on appeasement. After the debate, I gave students a series of multiple-choice questions about appeasement from previous provincial exams. Although the majority of students got most of the knowledge-based questions correct, it remains to be seen whether students will do better on the provincial exams because of their ability to think critically about history, especially considering that CT is not accentuated on the exam. However, based on informal evidence, I am confident that students' exam scores will improve as their ability to think critically improves. This topic will be addressed further in chapter five.

*Students became more engaged and interested in history after using the TC<sup>2</sup> model, when compared with classes that did not.* There are several factors that seem to explain this occurrence. Firstly, students prefer making decisions about history rather than just memorizing important information about historical events. When making decisions, students begin to understand that history involves more than merely understanding historical experts' viewpoints. Instead, students get a chance to look at various arguments and evidence, and decide which of the conclusions is most reasonable. In many ways students are performing the same tasks as professional historians, analyzing evidence and making decisions about what or why an event happened. There are many examples from my classes that provide examples of increased student engagement throughout the year. One of the more lively examples was an online discussion challenge that asked students if Harry S. Truman was justified in his decision to drop two Atom bombs on Japan. Almost all students replied to the question, whereas one-third of the class usually responded to previous questions. There was vociferous debate on the moral and strategic decisions to drop the bombs. I cannot imagine that a homework question on the reasons for dropping the bomb would have elicited a similar quantity or quality of responses. Some of these debates began to enter class discussions and I overheard discussion of the topic in students' personal conversations. Throughout my teaching experience I cannot recall any topics that students continued to talk about after the class was over.

Another reason students engage more with history when using the TC<sup>2</sup> model is because they experience more autonomy and control over their own learning. In history classes that employ more conventional didactic methods, students are often told what is

historically significant about a topic, and what conclusions they should draw from certain events. This type of teaching is more focused on indoctrination than it is on helping students understand what they are learning. Student engagement is usually minimal with this type of teaching because learning is passive and scripted. When using the TC<sup>2</sup> model I design critical challenges that ask students to make their own decisions and conclusions about historical events. This does not mean that students work on critical challenges on their own. I directly teach concepts or background information that helps students complete critical challenges, or I ask groups of students to determine what background knowledge about the topic is necessary to understand before beginning the challenge. I also discuss the criteria students have created for making reasonable judgments before the task is begun. Students find this type of learning environment more engaging because it is up to them to determine what they need to know, and how they are going to learn it. They do not have to sit through canned lectures, rather, they get a chance to form their own conclusions on the topic, which is always more engaging.

Many theorists have discussed the importance of CT as an educational ideal (Siegel, 1988). Although I taught CT implicitly, *I noticed several occasions where students exhibited the characteristics of a critical thinker and began to use CT in their daily lives.* Several students remarked that they regularly develop criteria to help them make decisions, such as when one student told me she developed criteria for determining what movie she wanted to see. During class discussions several students analyzed arguments from multiple perspectives without noticing what they had done and why they were doing it. They looked at the causes of the Cold War from an American perspective, and also from a Soviet perspective. Although these developments may not appear to be

substantial to an outsider, they are significant because I know that considerable progress is being made if students are using CT in their daily lives after only one year of working with TC<sup>2</sup>'s model. After all, the goal of CT is to teach students to become critical thinkers in their everyday lives, not just in the classroom. After focusing on the effect of TC<sup>2</sup>'s model on students, in the section I discuss the potential effect on a teacher.

### **The Impact of TC<sup>2</sup> on Teachers**

A teacher's role in the classroom

Earlier in my career, I believed improving students' ability to learn history involved simplifying difficult topics and events and making them more interesting and accessible. In other words, I was a "Mother Robin" teacher. I broke course content into bite-size pieces, chewed the content until it became palatable, and then placed it into the students' mouths. The problem with this method was that I was assuming too much responsibility for students' learning and this was impeding their ability to develop their own understandings.

When I first began using CT as the method to teach history, I worried that I could not adequately teach curriculum content using CT methods. There was not enough time in a school year to cover the entire curriculum using TC<sup>2</sup>'s model because CT required more time to cover content than didactic methods. After using the TC<sup>2</sup> model I realize that it is possible to cover the entire curriculum using CT. Furthermore, *the TC<sup>2</sup> approach allows teachers to be more effective in the classroom by freeing up more time for assessing students' individual needs and building stronger relationships between students and teachers.*

In order to accomplish these purposes, I needed to make two adaptations to my teaching methods; change my teaching role and develop more effective methods for delivering the curriculum. I had to stop trying to directly teach every concept and event in the curriculum. It was not helping students understand the subject more, in fact, my teaching was an impediment to their learning. I also realized that successful critical challenges help students think about and understand the curriculum at a deeper level. It was a liberating moment when I realized that I did not need to control every student's learning, and yet they would gain a deeper understanding of the subject material.

It is a commonly heard adage that teachers in the classroom should strive to be a "guide on the side" rather than a "sage on the stage." *Once I began to use the TC<sup>2</sup> approach I became more of a "guide" in the classroom.* For each new topic or class, I started by introducing and explaining the critical challenge we would be working on. Instead of teaching every concept students needed to understand, I focused on teaching the important background information and concepts that helped students accomplish the critical challenge. After students understood the initial concepts, they began working on the challenge. While they worked on the activity, it provided me with time to circulate around the classroom helping students with difficulties, establishing better relationships with the students, and assessing students' understanding of the material.

I recognize that it is an intimidating experience for many teachers to change their role in the classroom, and the way they teach. Many teachers prefer complete control of the learning environment in the class, and might see a change in methods as a loss of control. For me it was an exciting change because I recognized that my previous methods were achieving marginal success. I did not view my change in role as a loss of

control; I viewed it as a way of enacting positive changes to student understanding and appreciation of the course. My role was to teach important concepts and knowledge, and design tasks that lead students towards improved understanding. At the same time, the TC<sup>2</sup> method shifted the focus of the students away from me and onto their own learning. Rather than spend valuable classroom time teaching every concept, I devoted time and energy to helping students improve their understanding of course material and concepts.

#### Instructional planning and organization

*One of the best aspects of the TC<sup>2</sup> model is that it helped me identify a clear purpose for my lesson plans because it helped me reflect on the exact goals I wanted to achieve by the end of the year.* Before using TC<sup>2</sup>'s conception, I organized my daily planning on the Prescribed Learning Outcomes (PLO's) mandated in the provincial curriculum (IRP) for History 12. Although I always managed to cover the required material by the end of the year, I found too much of my daily planning focused on broad content knowledge or skills that lacked unifying goals or objectives. The daily objectives might be clear, but there was no end goal or purpose besides helping students do well on the provincial exam. When planning a section on why the March Revolution in Russia occurred, my objective would be, "by the end of the lesson students will understand the causes and consequences of the March Revolution." While this objective is clear, it lacks description on what methods will be used to help students understand the March Revolution better, and it does not place the March Revolution within a larger goal for the course.

Many teachers identify CT as a goal for their teaching, but few can articulate how they support and improve CT in their courses (Paul, 1998; Case, 1992). TC<sup>2</sup> provides a very clear idea how teachers can improve the ability of students to think critically. When I began formulating critical challenges according to the TC<sup>2</sup> model, the focus of my planning became clearer—each lesson was geared towards improving students’ understanding of history and helping them become critical thinkers. Instead of focusing on improving students’ knowledge of one historical event, or students’ ability to master one historical thinking ability<sup>25</sup>, critical challenges accomplished numerous objectives at the same time. The development of critical challenges helped me consider how each individual lesson helped me achieve curriculum and CT objectives simultaneously.

*The TC<sup>2</sup> model benefits teacher planning by aiding teachers in aligning content objectives, CT objectives and assessment.* In other words, TC<sup>2</sup> believes that assessment should measure exactly what has been taught and reinforced during class time. This sounds like common sense, but many times in my career my objectives and assessment methods did not coalesce. I have designed units where students learned how to recognize historical bias, or how to conduct primary research, yet the unit assessment focused on how well students performed on unit tests that focused on content-based questions. Critical challenges designed according to the TC<sup>2</sup> model focus on important background knowledge, criteria for judgment, thinking strategies, CT vocabulary and habits of mind that teachers determine are important. The TC<sup>2</sup> model contends that teachers should assess critical challenges by determining how well students demonstrated proficiency with the specific CT tools chosen for the challenge. After their products are assessed, students should clearly understand how well they demonstrated the various tools

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<sup>25</sup> Denos & Case (2006) discuss six major historical thinking abilities.

necessary to become a critical thinker. The alignment of goals, content and assessment also helps teachers determine which CT tools need further attention, and how well students understand important course content (an idea that is referred to as either assessment for, as, or of learning). TC<sup>2</sup>'s focus on aligning objectives, content, abilities and assessment provide an example of good teacher practice that helps both teachers and students.

#### Contributions, limitations and recommendations

Despite the benefits of the TC<sup>2</sup> model, it also has several limiting impacts on teacher planning. TC<sup>2</sup>'s assertion that CT can be embedded in the curriculum of any subject or grade is one of the strengths of the model. However, *embedding CT in History 12 requires more planning time than teaching according to traditional methods*. For example, I decided to plan a large eight lesson critical challenge on the Paris Peace Conferences (PPC) for the first unit in History 12 this year. When organizing the unit, I considered the big concepts and ideas necessary for students to understand the unit (i.e. self-determination, successor states and mandates), and concentrated on identifying important habits of mind, CT vocabulary and thinking strategies I wanted students to develop during the unit. I located supporting primary and secondary sources, created blackline master activity sheets, and developed marking rubrics for assessment. I also identified the important outcomes, objectives, and tools for CT that each lesson focused on. From inception to completion, the eight lesson unit required somewhere between 40-50 hours of preparation. After it was completed, I was extremely proud of the quality, and I was impressed by the student responses and results of the challenges. However, I

also realized that I did not have the time or energy required to put the same planning time into the other ten units in the course. Although, the planning time for creating critical challenges decreased as I became more comfortable and knowledgeable when using the model, it still required a significant amount of time beyond what many teachers are willing to spend devising lesson plans.

I am not suggesting that once critical challenges are created, they never have to be improved or readdressed. Throughout the planning and implementation of challenges I recognized the necessity of making frequent adjustments to all aspects of the challenges from blackline masters to assessment rubrics. This process of self-reflection and change is imperative for any teacher who supports CT in the classroom because it models the habits of mind essential for CT. Every challenge created will need to undergo significant alterations. Teachers must also realize that planning for CT is never completed, because it is an evolutionary and organic process.

The difficulty I faced in planning time highlights a significant problem with the TC<sup>2</sup> model. The effort and time required for planning a TC<sup>2</sup> unit in comparison to a more traditional unit are so substantial that many teachers might be unwilling to put the amount of time into restructuring their lessons, especially if they teach three or four different courses. There is no doubt that there were incredible benefits to the lessons I created, but it will still take me another two or three years to fully develop “quality” critical challenges for every unit in History 12. Mini-challenges are a reasonable alternative because they require less planning and preparation, but still instill aspects of CT into lessons. Often times mini-challenges utilize resources (like textbooks) that are already available and do not require much preparation. For example, a mini-challenge on

historical significance might ask students to determine why one textbook devotes a full page to one historical event, while another textbook only devotes two lines of space.

Although mini-challenges are useful, they are not the most powerful method of supporting CT because they lack the organization and rigour of the “larger” challenges. Furthermore, they do not emphasize TC<sup>2</sup>'s CT tools as comprehensively as other challenges.

*Another significant challenge for TC<sup>2</sup> is that the model requires more classroom time to teach content than traditional didactic teaching.* TC<sup>2</sup> claims that their model can be embedded in any course at any grade level, and in my experience this claim is partially true. TC<sup>2</sup>'s model demands more curricular time because it requires students to make a more considered decision about a problem or issue than a standard activity. Although the TC<sup>2</sup> method of teaching requires more teaching time than other methods, it also increases student understanding of the curriculum. Didactic teaching takes less time because it presents information to students and asks them to find the right answers. When I implemented TC<sup>2</sup>'s model in my History 12 class, there were several drawbacks. Due to the enormous amount of content in the History 12 curriculum, embedding TC<sup>2</sup>'s methods took a great deal of time and made it almost impossible to complete the course on time. By the end of the course I still had a great deal of content to cover and had to use some didactic methods, and watered down versions of TC<sup>2</sup>'s conception to complete the course on time. Supporters of the TC<sup>2</sup> conception argue that this is a problem with the amount of content in the History 12 curriculum and not the model. Although I agree that the amount of content in the curriculum is far too large for students to adequately comprehend, TC<sup>2</sup> should recognize that History 12 is not the only high school curriculum

in North America that over-emphasizes content. If use of the model does not enable teachers to complete the entire curriculum in the time allotted, then it will not be fully accepted by the majority of teachers not matter how successful it is at helping students understand content. At the same time, the Ministry of Education in British Columbia and other government bodies should consider revamping the curriculum to focus less on content and more on thinking.

Critics might further argue that I did not have a full comprehension of the TC<sup>2</sup> model to be able to implement it properly. Furthermore, they might argue that I did not use innovative methods that enabled me to embed CT in History 12 in the time provided. Although I am in the beginning of my TC<sup>2</sup> journey, I have more understanding than a teacher who has gone through a few TC<sup>2</sup> workshops and is beginning to use CT in their classrooms. In order to complete the course in the required time and embed TC<sup>2</sup>'s model in the curriculum I utilized a wide variety of innovative methods. I created online discussion challenges because the only way to embed critical challenges in more of the course content was to get students to use CT electronically from home. Electronic challenges have allowed me to embed more CT in the curriculum, monitor student progress, and discuss historical issues in addition to the 120 hours of classroom time. The amount of curricular time required to implement the TC<sup>2</sup> conception is an important issue that must be reconciled. The TC<sup>2</sup> model of CT provides an alternative to the pervasive belief in content-based curricula and the importance of standardized high-stakes testing. Either TC<sup>2</sup> must adapt their model to meet the demands of the current system, or the current system must reform and focus on increasing understanding and CT ability by reducing the amount of content in its courses.

## Curriculum knowledge and understanding

Another difficulty in adapting TC<sup>2</sup>'s model of CT to History 12 is that it requires extensive knowledge of the curriculum, the major objectives for the course, and an understanding of the importance of each topic to the curriculum. Not every teacher can effectively implement TC<sup>2</sup>'s conception in their classrooms because many teachers lack experience in the course, or they may not fully understand the discipline, or curriculum they are teaching. Early in the implementation of TC<sup>2</sup> in my teaching I noted in my journal that, "It is absolutely essential to know the curriculum. You need to know where you are going, how to get there, and how much time you can spend on each unit." I made this statement after I finished teaching the eight-challenge PPC Unit. I realized that part of the reason for the success of the unit was because I understood the essential parts of the curriculum after teaching the course several times previously. My prior experience provided me with perspective on which topics in the PPC I should emphasize, and how much time I could devote to the PPC without taking time away from other significant topics in the course. This experience led me to conclude that teachers who do not have teaching experience with a particular course might struggle to implement the TC<sup>2</sup> model effectively. CT also requires a more thorough knowledge and understanding of the epistemology of the discipline being taught than other teaching methods. The lack of experience and knowledge could have several negative consequences: critical challenges might focus on insignificant subjects, or overemphasize some areas in the course, while leaving out areas that are more important. Furthermore, a lack of knowledge of the epistemology of history could lead to a narrow

understanding of a subject, faulty assumptions, or poorly designed challenges. McPeck (1990) argues that the first thing teachers need to do is get a clearer fix on the structure of their discipline, and to use it as the core of their curriculum. In my experience, teachers know the content they are required to cover, but they do not fully understand the unifying principles of the course or the discipline they are teaching. The Four Fronts model is built on the faulty assumption that teachers understand the curriculum they are teaching. This knowledge can only be gained through teaching experience in a particular subject, a thorough understanding of curriculum documents, or a keen comprehension of the discipline. *TC<sup>2</sup> needs to help teachers who do not know their subject area well enough by providing guidance on implementing CT into specific disciplines in different government curricula.* They have begun the development of resources focused on helping teachers understand discipline specific thinking and knowledge in history in the “Teaching about Historical Thinking” resource created by Denos and Case (2006). This is an excellent start, but there is still a large demand for resources in other disciplines as well.

Should TC<sup>2</sup> adopt a more prescriptive model of instruction?

New pedagogical models presented to teachers at in-services and professional development days are often prescriptive—for each grade level the resources outline what topics to teach, how to teach the topics and when the topics should be taught. Designers of these models understand that teachers will not employ models, even if they believe they are useful, unless examples are provided that clearly outline how the model can be directly implemented into teachers’ classrooms. TC<sup>2</sup> has purposely avoided the

development of too many prescriptive lessons, units or “how to” guides to apply their model because they believe that the development of too many prepared examples contravenes the nature of CT. CT is about making informed decisions about what to believe or do, not following a series of steps or standardized practices to arrive at a decision. If TC<sup>2</sup> prepares too many “ready made” curriculum resources, then teachers will not really learn about CT and how to help students become critical thinkers. TC<sup>2</sup> wants to avoid the overly procedural models of CT developed by theorists like Ennis and Paul because they are too pedantic and utilize the “pedagogy of practice”<sup>26</sup> to improve CT ability amongst students. In my experience, students and teachers become constrained and bored by models that repeat similar processes, *algorithms* or *heuristics* for each assignment. Furthermore, students’ CT abilities will not improve if they blindly follow a number of steps, rather than thinking critically about the subject at hand.

While I support TC<sup>2</sup>’s opposition to the development of too many prescriptive models and lessons, *I believe that TC<sup>2</sup> needs to provide more guidance to teachers on how to implement the model in their classes over the entire school year.* TC<sup>2</sup> provides many examples of entire units for different courses in their “Critical Challenges Across the Curriculum Series” but these units are extensive and require a great deal of time to complete, leaving little time to accomplish other required parts of the curriculum. Throughout the process of using the model, I desperately wanted to see how an expert TC<sup>2</sup> practitioner would embed CT in the entire History 12 curriculum. Teachers, like students need constant feedback to ensure that they are “on the right track.” I struggled

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<sup>26</sup> The pedagogy of practice is a term coined by Bailin, Case, Coombs & Daniels (1999) to criticize CT models that believe that if CT abilities are practiced enough in isolation they will transfer to everyday life.

to fully implement the model because each time I created a challenge it required far more classroom time to complete than more traditional models.

Another area that needs more attention and clarification for teachers is a suggested timeline for introducing the 20 habits of mind, 33 CT vocabulary terms, and 23 thinking strategies outlined in the TC<sup>2</sup> model. TC<sup>2</sup> provides little idea how and when teachers should accomplish this extensive list of objectives. TC<sup>2</sup> needs to suggest how many vocabulary terms, thinking strategies and habits of mind teachers can reasonably expect students to learn in a year. Without a clear idea of what can be reasonably accomplished in a yearlong class, teachers might attempt to teach too many of the CT tools in a year. If teachers are given a list of habits of mind or vocabulary terms to teach, they are prone to teach them once and then check them off the list. This style of teaching TC<sup>2</sup>'s model will not help students improve as critical thinkers. Teachers must recognize that CT is a lifelong journey, not something to be accomplished in a year. Rather than trying to make students adroit critical thinkers in a year, TC<sup>2</sup> must help teachers understand that every time a single aspect of CT is reinforced in a classroom, students are another step closer to becoming critical thinkers. Roland Case (2007) borrows a quote from Ralph Tyler when he suggests that teaching CT to students is like dripping water on a stone: "In a day or week or a month there is no appreciable change in the stone, but over a period of years definite erosion is noted" (p. 17). Like dripping water eroding a stone, CT will not begin to make an impact on students unless it is accentuated throughout their entire scholastic careers. I am not asking for TC<sup>2</sup> to mandate exactly what CT abilities and habits of mind should be accomplished at each age and subject level. *What TC<sup>2</sup> should provide are tangible and useful examples of yearlong plans from*

*teachers who have successfully implemented CT in their classes.* This will help other teachers understand how to organize their courses according to TC<sup>2</sup> principles, and that embedding CT in the curriculum can be accomplished. Although the TC<sup>2</sup> conception has gained widespread acceptance as a legitimate method for classroom teaching, it has not yet gained acceptance as an important method to use in everyday classroom instruction. It will not gain full acceptance as an important method to use until teachers can be shown how TC<sup>2</sup>'s model can be utilized in every aspect of different courses.

### **Successes and Struggles: Building a Community of Thinkers**

While teaching five History 12 classes this year I experienced moments in each class where the beginnings of a COT were established. There were other instances when there were palpable amounts of student resistance to establishing a COT. Few classes ever embody all the characteristics of a COT, however, when a class achieves more COT characteristics, the amount and quality of CT increases. What is important is that teachers focus on helping their classes make continual progress towards a COT. Below, I reflect on the difficulties I faced when trying to establish a COT in my classes, and the reasons a COT was difficult to establish. Later in the section, I describe the successful implementation of a COT, and the factors that best enabled a COT to be created.

#### Difficulties building a COT

The main challenge in building a COT was not the theoretical or methodological deficiencies highlighted in TC<sup>2</sup>'s conception, it was students' undeveloped habits of mind and inexperience with this type of classroom environment. Frankly put, by the time students reached History 12 they had developed many habits of mind that were

antagonistic to building a COT. Throughout the year I established the understanding that the focus of history is not just finding the right answer. I accentuated the importance of arriving at plausible conclusions that are supported by strong evidence, reasoning and explanations. Early in the year many students did not enjoy some of the ambiguous aspects of history because their entire educational experience reinforced the importance of finding the right answer. After finishing critical challenges students frequently asked me what the correct answer was, like I was secretly withholding the answer throughout the lesson, only to dramatically reveal it at the end. I responded by asking them what they meant by “right answer”; were they asking me what the majority of historians believed, or what I personally believed? I explained my opinion to them, but I also explained that historians have developed different arguments as well. I also pointed out that I was marking them on the quality of their thinking, not on how well their answers aligned with other people’s opinions.

Students were often frustrated by this ambiguity because they wanted affirmation for finding the correct answers, or they wanted the satisfaction of knowing that there was a right answer. Some complained that any assignment that has no clear answer, is not important for them to do. I would remind students that throughout human history there are historical mysteries that have never been solved, yet historians continue to debate different arguments and theories and search for new evidence. Other students tried to fool me into giving their critical challenge assignments good grades. They felt that they would receive good grades, even if their judgments were irrational, as long as they supported their judgments with reasoning. These students were displaying self-righteous habits of mind that worked against CT. They lacked fair-mindedness and the ability to

see historical problems from multiple perspectives. Students soon discovered that this type of thinking did not meet the standards I established in the assessment rubrics for the assignments. The lack of habits of mind amongst some students prevented me from fully establishing a COT in some classes. This is not because of the TC<sup>2</sup> conception, rather it can be attributed to the negative habits of mind many grade 12 students had reinforced throughout their scholastic careers, and because there were only 120 hours of instructional time to try and strengthen students' habits of mind.

In the classes where I had difficulty establishing a COT, I noticed that there was student resistance to classroom routines that accentuated CT. I emphasized the importance of each assignment, and ensured that in each assignment students would be expected to think critically. In many instances, students complained that, "they were thinking too much" and asked for worksheets that required them to find the answers, not think about topics in any substantive way. In my reflections, I made notes to myself about students' general lack of curiosity and resistance to think through problems. They preferred passive learning because it is what that they had become accustomed to. My teaching colleagues told me that several students complained to them that my class was too hard because they had to think too much. I also noticed that some students lacked the initiative to begin work on a critical challenge until I forced them to do it. Frequently, I would ask the class to complete a standard thinking task, like creating five criteria for determining why a specific historical event was significant. Many students attempted evasive techniques to avoid thinking or discussing the topic. They pretended to be busy while waiting for other students in the class to respond, or they stalled for time until their partners or other members of the class provided the answers for them. Despite my pleas

and urging, students in classes that did not establish a COT took any opportunity for thoughtful reflection as time to avoid doing work, or discussing off-topic subjects with their classmates.

Case and Wright (1997) believe that an essential component for building a COT is teacher modelling, “If we want our students to be good critical thinkers we must model these attributes ourselves” (p. 17). Teacher modeling is difficult because many teachers who implement CT in their classrooms are beginning their development as critical thinkers. They cannot be expected to model the habits of mind and abilities of a master critical thinker when they do not fully understand what CT is and how it can be achieved. Previously in the paper, I explained that CT cannot be achieved if students do not possess the habits of mind of a critical thinker. Likewise, it is difficult for a teacher to build a COT if they lack the required habits of mind. When I began instituting TC<sup>2</sup>'s model in my classes, I was just beginning my development as a critical thinker. There were many habits and strategies I had to unlearn, and several habits and strategies that I had to strengthen in order to support a COT. I had to learn to embrace ambiguity, avoid historical generalizations and stereotypes, and be willing to change my mind when presented with good reasons to do so. These were not incredibly difficult for me to do because I was disposed to do these things already. It would be most problematic for teachers who lack the attitudes and habits necessary for establishing a COT. In my pre-service training, being tolerant of ambiguity was not emphasized; assignments and tests were geared towards helping students find the correct answer. Furthermore, I believed that a history teacher's job was to transmit information and knowledge to students. In my early years of teaching, I taught students that the Great War Battle of Vimy Ridge was

the birthplace of Canada because the “baptism by fire” turned a nation of immigrants into a united country that supported a common Canadian identity. I learned this message from teachers I had, books I read, and films I watched. This example illustrates how I did not teach my students to give fair-minded consideration of historical issues from multiple perspectives. It was not until I was more aware of CT that I realized that the type of teaching I was utilizing was little more than indoctrination that was opposed to the nature of CT and historical thinking. It also illustrates the difficulty some teachers have in building a COT if they lack the habits of mind and inclination to teach a subject critically. TC<sup>2</sup> must recognize that supporting the increase of CT in schools requires training pre-service and practicing teachers how to improve their abilities as critical thinkers so they can model CT abilities and dispositions in their practice. Furthermore, teachers will only value CT in their instruction if they see it as an important part of their own personal growth.

### Building a successful COT

After several frustrating experiences, it might have been easy for me to become cynical about the prospects of establishing a COT with History 12 students. Many students were disenchanted and disengaged with the learning methods and environments they experienced in several of their classes. For obvious reasons, many saw little reason to change their learning environment at the end of their mandatory public education. Fortunately, I experienced several examples of classes that established aspects of a COT, and the results were promising enough to influence the way I will continue to teach in the future.

Classes that began to establish a COT did several things differently than classes that did not. In most cases, these classes seemed to favour inquiry as their method of learning. They were happy to delve into subjects, rather than have every topic directly taught by me. Debates and discussions took on the atmosphere of conversations, as opposed to forced, teacher-scripted discussions. The discussions had a topic and purpose, but the route to the end of the discussion was determined by the participants, not by me. Students did not want to learn in a passive manner, they wanted to engage with the material that they were learning. In their discussions, students respected difference of opinion and were content to disagree about ideas without allowing personal feelings to enter the debate. Students with strong political or religious views were challenged by their classmates to be aware of their biases, and to consider historical topics from other perspectives. It was exciting to see that students realized that they could learn as much from each other's interpretations, as they could from a teacher.

Classes that established a COT were also quicker to understand the nature of historical thinking. They understood the difference between historical facts and opinions. They knew that historical facts cannot be disputed, but opinions about causation, consequence and outcomes are open to interpretation. In short, they began to comprehend the idea that judgments are weighed by the strength of reasoning. The students in these classes were also accepting of ambiguity, not frustrated or limited by it—many students actually felt liberated. In their other classes, they were required to prove that they understood accepted judgments or explanation of issues. In a COT, they were free to explain what they thought, and how they formed their opinion. They understood that there were historical questions that may not have any right or wrong

answers, rather than criteria, evidence, bias and perspective shaped judgments. Students not only debated historical issues, they also discussed the criteria used to make their judgments. They constantly used CT vocabulary terms like criteria, bias, inference, judgment and perspective in their formal and informal discussions. Students began to joke about the “curse of criteria”—how each time they made a decision outside the classroom, they habitually developed criteria first.

In a COT, students were more inclined to discuss the strengths and weaknesses of assignments and were also willing to discuss the criteria I developed for evaluating assignments. After major assignments were completed, I asked for comments on the evaluation rubric used for the assignment, and what they liked and did not like about the assignment. When a COT is established, students feel more comfortable discussing these issues, because they feel that they have a voice in how they are being assessed, and they want to ensure that the negative aspects of assignments do not surface again in the future.

The most significant difference between classes that created a COT and those that did not was that successful classes embodied many of the important habits of mind necessary for CT. These classes were naturally inclined to be intellectually curious, open-minded, independent-minded, self-reflective, empathic and tolerant of ambiguity. Not every student possessed these habits of mind when they first walked into class, but after several assignments and discussions I noticed that these mindsets developed more quickly than classes that were not as successful building a COT.

Why were some classes more successful at developing the habits of mind necessary for a COT than others? Obviously, this question demands a more intensive

study than I have conducted, and I have no empirical evidence that explains why.

Nonetheless, there are several factors that I think might explain this phenomenon:

- Size of different classes
- Different levels of students' intellectual development
- Student's prior knowledge and comfort with each other
- Student's prior development of habits of mind
- Intrinsic/extrinsic motivation levels of the classes. Why were they taking the class? How motivated were they in the class?
- Student's learning styles, and whether an inquiry style of learning coalesced with their preferred method of learning
- Student's previous exposure to inquiry methods

*While it is clear that TC<sup>2</sup>'s model influences the development of a COT that supports CT, using the model for one year does not necessarily guarantee that a class can be converted to a COT. From my experience, the determining factor in the development of a COT is establishing and reinforcing habits of mind that support CT.*

## **TC<sup>2</sup> and Assessment**

Garfield Gini-Newman (2005) states that instruction and assessment are two sides of the same coin; any analysis of the adaptability of the TC<sup>2</sup> model to classroom practice must consider the methods used to assess student achievement. Earlier in this chapter, I discussed TC<sup>2</sup>'s methodological and theoretical views on assessment. TC<sup>2</sup> argues that assessment for each assignment should concentrate on how well students meet the

standards of the five intellectual tools: background knowledge, criteria for judgment, thinking strategies, CT vocabulary and habits of mind. The standards required for each critical challenge should be clearly articulated and taught before the challenge so that students understand exactly what is expected, and teachers can measure how well each standard is being met. There are several aspects of TC<sup>2</sup>'s view of assessment that strengthens the adaptability of their conception to teaching history. There are also several aspects of their assessment model that requires further explanation and development to meet the assessment practices that are currently being utilized by the Ministry of Education in British Columbia.

#### Benefits of TC<sup>2</sup> assessment philosophy

*One of the benefits of the TC<sup>2</sup> model of assessment for classroom teachers is that it helps teachers identify clear goals and expectations for daily and unit-long lesson plans because the model is designed for “assessment to drive instruction” (Gini-Newman, 2005, p. 3).* Each time I introduced a critical challenge I knew which habits of mind, background knowledge, thinking strategies, criteria for judgment and CT vocabulary the challenge would focus on. The criteria for assessing the students' tasks for evidence of their incorporation of the specific CT tools in the challenge were also established. Before I began using the TC<sup>2</sup> model, my assessment methods focused primarily on determining if students understood the content being taught. Occasionally I included other assessment criteria with the assignment, but in many cases, the assessment criteria were not areas that I stressed when preparing students for the assignment. For example, in an essay assignment I asked students to present “strong arguments” that

utilized “relevant evidence” to support the position they chose. Although I included this as important assessment criteria, I did not teach students how to develop strong arguments, or how to select relevant evidence. Unlike my example, the TC<sup>2</sup> model of assessment features alignment between the tools of CT that are emphasized in the critical challenge, and the categories of assessment on which a teacher concentrates. If a critical challenge focuses on promoting the habit of mind of empathy, and student development of “sophisticated criteria” for making a judgment, then the assessment tools should measure exactly how well students’ assignments displayed empathy and sophisticated criteria for judgment. The benefit of this type of assessment model is that teachers and students are both absolutely clear on the assessment criteria each assignment emphasizes. Furthermore, it provides a focus for teachers’ instructional strategies leading up to the assignment, and it helps students know exactly what abilities and habits of mind they need to concentrate on in the assignment.

*Another benefit of TC<sup>2</sup>’s assessment conception is that it utilizes formative assessment strategies that are increasingly utilized by educators across North America.* Formative assessment should not be seen as another educational fad that will eventually disappear. TC<sup>2</sup> does not support formative assessment strategies because they are popular, but because they help develop critical thinkers. The importance of formative assessment is that it provides students with clear achievement goals and regularly provides feedback to students as to how well they are achieving identified goals. Increasingly educational researchers link formative assessment with increased student engagement and skill mastery, “...assessment is a key determinant of the degree of engagement and effort students will put into mastering a skill...Students are not likely to

develop complex skills if they are not explicitly linked to important assessments” (Garfield-Newman, 1995, p. 3). My local school district recently announced an implementation plan for a formative assessment model developed by Dr. Rick Stiggins called “Assessment for Learning.” I have witnessed the need for increased amounts of formative assessment in my classes. During the explanation of a marking rubric for a critical challenge, I asked my students how many times they handed in an assignment and had it returned with a grade on it, but they were unclear how the assignment was evaluated, and why they received the grade they did? The number of responses were astounding; many students complained that for many assignments they had no idea why they got the mark they did, and they did not know what areas they needed to improve in their next assignment.

As part of their emphasis on formative assessment, TC<sup>2</sup> maintains that both students and teachers should be involved in developing the criteria used for assignment evaluation, and students should regularly be asked to self-evaluate their own assignments and peer evaluate their fellow students’ assignments. Self and peer evaluation helps students further their understanding of CT by reinforcing CT tools. Getting students to identify criteria for evaluation also helps students understand the purposes and goals for each assignment. I regularly ask students to help me generate criteria for evaluating an assignment, and they usually identify the same criteria I do. Likewise, when I get students to peer mark other students’ assignments, the grade they decide on is usually very close to the one that I assign. Strangely, many teachers believe that students will be easier on each other when they peer mark. In my experience, students are far more stringent than teachers in ensuring that their classmates met the assignment criteria. The

amount of attention currently being placed on aligning instructional goals with formative assessment strategies heightens the demand for a model that supports this relationship. The power of the TC<sup>2</sup> conception is that it establishes four important fronts of CT, how to teach students to become critical thinkers, and the methods to assess the ability of students to improve as critical thinkers.

Assessment difficulties: TC<sup>2</sup> or the curriculum?

The major assessment problem I faced when using the TC<sup>2</sup> conception, is not a problem with their method or concept of assessment, it is that current assessment practices adopted by the Ministry of Education in the History 12 curriculum are at odds with the TC<sup>2</sup> model. TC<sup>2</sup> focuses on developing competent thinkers that are able to make reasoned decisions about the curriculum, while History 12 concentrates more on the acquisition and retention of curricular information. Students who take History 12 and plan on attending a university in Alberta or British Columbia must take a final exam worth 40% of the final mark. The exam rewards students who have broad knowledge of History 12 concepts and information, not students who think critically about topics in the course. An important question to ask is whether using the TC<sup>2</sup>'s model for teaching History 12 will benefit or hinder students who take the provincial exam? If it is proven that use of TC<sup>2</sup>'s model does not help students get higher scores on the provincial exam, then teachers may not accept it as a teaching method. This would be unfortunate because use of the TC<sup>2</sup> model improves students' ability to critically think, and it improves students' understanding of the course, which I believe are both more important than the provincial exam.

I believe that students who learn History 12 using TC<sup>2</sup>'s methods will actually do better on the provincial exam because they will have a better understanding and mastery of the basic content in the course after completing critical challenges. Throughout the course I gave students multiple-choice questions from old provincial exams, and asked them to identify the most difficult questions. We marked each student's responses and discussed the most difficult questions. Students complained that some of the multiple-choice questions had more than one right answer and seemed to be designed to trick students rather than test their knowledge of the course. Many students were frustrated because the multiple-choice questions did not provide the opportunity to explain why one answer was more correct than another. The results of the tests were inconclusive because some students did extremely well, which was the same as when I taught History 12 using didactic methods. I cannot say whether students would have done better if I had taught the curriculum using standard methods, or if I taught to the test. I concluded that this point is irrelevant because my students increased their understanding of history, and more importantly they improved their ability to think critically about history.

Currently, our society and education system defines student achievement by how much information students have retained in a particular subject area, and how well they perform on standardized exams. In the last three years the government of British Columbia has increased the number of standardized provincial exams to include grade 10 and grade 11 students. The focus on retaining information is an outdated model for the twenty-first century because students today can access information very easily. The difficulty is getting students to think about the information deeply and help them make reasonable decisions supported by logic and evidence. Societies and education systems

need to define exactly how they measure student achievement if students are to meet the needs of the next century. In the future, society will demand that students have the ingenuity to solve problems and think critically, and the education system has to make adaptations to meet these needs. TC<sup>2</sup>'s assessment model provides a blueprint for making the necessary changes because it focuses on improving students' ability to critically think, not just acquire information. Garfield-Newman (2005) believes that it is time to abandon the race to "cover" the curriculum, and help students think critically so they can begin "uncovering" the curriculum.

TC<sup>2</sup> faces a problematic issue revolving around the measurement of student progress as critical thinkers. Again this is more of a problem with how society measures progress, than it is with a conceptual weakness of the TC<sup>2</sup> conception. In the current political climate in British Columbia there is a strong demand for accountability and quantitative measurement of student progress. Provincial exams are mandated in various grade 10, 11 and 12 courses, the results are published in newspapers across the province, and the Fraser Institute ranks schools according to how well their students do on the provincial exams. It is within this climate that TC<sup>2</sup> attempts to influence change. Critics of TC<sup>2</sup>'s model ask how teachers know if their students are improving as critical thinkers. TC<sup>2</sup> argues that progress is measured by teacher observation and documentation of students' improvement in their acquisition of CT vocabulary, the use of criteria for judgment, the selection of relevant background knowledge, the necessary habits of mind for CT and knowledge and implementation of various thinking strategies. The problem with this answer is that for many people who prefer traditional assessment via the use of testing and content-based assignments, the TC<sup>2</sup> model features a lack of quantifiable

assessment methods for measuring CT. Furthermore, TC2 focuses too much on formative assessment, which can be criticized for being too subjective and unreliable.

TC<sup>2</sup> can choose several courses of action to reconcile the debate with proponents of standardized tests and quantitative assessment. *TC<sup>2</sup> could conduct a quantitative research study that compares student performance on current standardized exams after being instructed using the TC<sup>2</sup> method, with student performance on standardized exams who did not use the TC<sup>2</sup> method.* This could prove that TC<sup>2</sup>'s method will improve both the CT abilities and the provincial exam mark. Alternatively, *TC<sup>2</sup> may want to consider developing standardized assessment methods (such as CT tests) that measure students' ability to think critically in different disciplines.* This way TC<sup>2</sup> could prove that students improve their CT abilities when using the model. For many within the CT movement, this suggestion is incredibly controversial because it is antithetical to the purposes and nature of CT. Many people would argue that a test can never fully measure CT ability. However, without standardized measurements of CT abilities TC<sup>2</sup> may never gain full acceptance within educational circles. I am not advocating the standardization of all TC<sup>2</sup>'s assessment strategies, but it is possible that TC<sup>2</sup> will have to acknowledge that some forms of standardized assessment are a reality in the current political and educational climate. TC<sup>2</sup> clearly disagrees with information-focused curriculum, but despite this disapproval they still created a compromise when they designed the embedded model of CT that helps teachers meet information-based curricular goals while also improving students' ability to think critically. TC<sup>2</sup> must find a similar compromise between the formative methods of assessing CT they champion, and the standardized assessment practices advocated in the government curriculum. Another possibility is that

TC<sup>2</sup> becomes strong advocates for formative assessment as “the” alternative to standardized assessment. To do this, they would need to prove that formative assessment is more successful at engaging students, and improving student achievement.

### **Final Analysis of the Adaptability of the TC<sup>2</sup> Model**

After using TC<sup>2</sup>'s model in five of my History 12 classes for a year, I have arrived at several conclusions about its adaptability to the classroom, and have arranged them into the following categories.

- The TC<sup>2</sup> conception improves students' abilities as critical thinkers as evidenced by their ability to become more proficient with TC<sup>2</sup>'s five tools of a critical thinker.
- Use of the model improved student understanding of the curriculum, and of the epistemology of history.
- Students became more engaged and interested in history, and began to use CT practices in their daily lives.
- TC<sup>2</sup> also proved that there does not have to be a separation between content and CT practices—instead CT can be used as the method for teaching the entire History 12 curriculum.
- Use of the TC<sup>2</sup> method also had positive effects on my course planning and role in the classroom. My planning became more focused on aligning content and CT objectives with assessment methods. When a COT was successfully implemented in the classroom, students began to see me more as a guide, than an authoritarian

“holder of knowledge” that they have become accustomed to experiencing in their school careers.

- TC<sup>2</sup>'s view that assessment “drives” instruction strengthens the model because it helped me understand that the purpose of assessment is to measure and provide information on how well students are improving as critical thinkers, not just their ability to understand the curriculum.

Use of the TC<sup>2</sup> model also had its drawbacks and limitations.

- Implementing the model in History 12 required more planning time and instructional time to teach the same topics as the didactic methods I used before adopting TC<sup>2</sup>'s model. Although planning time will decrease as a teacher becomes more adept with the TC<sup>2</sup> model, the amount of instructional time required to teach the entire curriculum using TC<sup>2</sup>'s methods made it more difficult to complete the curriculum by the end of the year.
- Use of the TC<sup>2</sup> conception requires teachers to have a thorough knowledge of the important concepts, content and foundations of the curriculum. Without this background knowledge, teachers will not know the important aspects of the curriculum to focus CT activities on.
- In order for the TC<sup>2</sup> model to become more readily accepted by teachers, TC<sup>2</sup> must provide more resources, training, and guidance to help teachers understand how to implement the model's extensive list of vocabulary, habits of mind and thinking strategies to different subjects throughout the entire school year.

- One of the most difficult aspects in implementing the model was improving the necessary habits of mind needed for fostering CT. It was very challenging to change the habits of mind in the last year of students' mandatory education because many students had reinforced habits of mind throughout their school careers that were not conducive to CT.

After weighing the strengths and limitations of the TC<sup>2</sup> model after adapting it to History 12, I conclude that the benefits for students and my teaching style and methods far outweigh the limitations and drawbacks. In Chapter Five, I discuss conclusions and inferences drawn from my experiences adapting TC<sup>2</sup>'s model of CT to teaching History 12. I also focus on the contributions to knowledge that this thesis makes, and discuss prospects and recommendations for future research.

## **CHAPTER FIVE: GENERAL CONCLUSIONS AND IMPLICATIONS FOR FUTURE RESEARCH**

### **General Conclusions**

In this thesis I critique the major conceptions of CT developed by Ennis, McPeck, Lipman, Siegel, the Foundation for Critical Thinking, and the Critical Thinking Consortium (TC<sup>2</sup>), and use criteria to determine which of these conceptions is most adaptable for teaching History 12. After judging the TC<sup>2</sup> model to be most adaptable, I used TC<sup>2</sup>'s methods to teach five History 12 classes. In this chapter I reflect on the process of adapting the TC<sup>2</sup> model, the contributions to knowledge that this study makes, and the implications and requirements for future research in CT.

During the past year using the model, it often felt as if I was being pulled between two opposing educational ideologies. One ideology was represented by TC<sup>2</sup>, who advocate embedding CT in the curriculum to improve students' CT abilities, while simultaneously helping students develop deeper understandings of course material. The other side is represented by the current B.C. education system's fixation on improving exam results and graduation rates via the acquisition of large amounts of standardized information and facts. Throughout the year I was unable to choose one side over the other. If I taught my History 12 classes using TC<sup>2</sup>'s methods exclusively, my students might be unprepared for the provincial exam because CT may not prepare students best for a knowledge-based exam. This would be negligent because it is important for many of my students to achieve high marks in History 12 in order to gain entrance into post-secondary institutions. If my sole focus for teaching History 12 was to make sure that

students “covered” the entire curriculum and did well on the provincial exam, then learning history would be less enjoyable for students, and they might not learn how to think critically about history. Because neither position was an acceptable choice, I attempted to find a compromise between the two. This was exceedingly challenging because finding compromise between two diametrically opposed positions is difficult. I concluded that the best way to help students understand History 12 was to use CT as the predominant model of teaching, but when necessary also use didactic methods that “teach to the exam” in order to “cover” the content in the curriculum. An illustration of the compromise between these positions was when I asked students to answer multiple-choice questions from past-provincial exams (teaching to the exam), but also asked them to pick out the ten most difficult questions, and develop criteria for what “most difficult” means (TC<sup>2</sup>’s method of CT). This helped students prepare for the types of questions they will encounter on the provincial exam, but it also got students thinking about what was difficult about the questions.

The yearlong compromise between the two positions was intellectually and morally exhausting. At the end of the year I was disenchanted and incredibly frustrated with the current History 12 curriculum because it was obvious to me that teaching the course using TC<sup>2</sup>’s model was more beneficial for the students because it improved their knowledge, interest and understanding of history. I was worn down by the constant pressure to “cover” the curriculum and “teach to the test” in order to prepare students for the provincial exam. In the last two weeks of classes I rushed to finish the curriculum because the use of TC<sup>2</sup>’s model required more time to complete the curriculum than I had anticipated. I was forced to abandon the TC<sup>2</sup> model and teach the curriculum using

didactic methods. This was frustrating and stressful because I knew that students learned the material better using TC<sup>2</sup>'s methods, but I had to return to any methods that would help me complete the curriculum. This conundrum led me to ask some fundamental questions about TC<sup>2</sup> and my future teaching methods. Did I make a mistake using the TC<sup>2</sup> model as my primary mode of instruction during the year, or is the content-burdened History 12 curriculum the root of the problem? My belief is that the conception of instruction designed by TC<sup>2</sup> should serve as an important pedagogical method for teachers in all disciplines to implement in their teaching. I will continue using the model because the benefits far outweigh the negatives. However, it is also important that the Ministry of Education considers reforming and rewriting the curriculum to reduce the amount of content and increase the amount of thinking about the content.

## **Contributions to Knowledge**

In my searches through books and journal articles looking for descriptions and theories of CT, only Siegel (1988) provides a thorough comparison and description of CT theories, but he analyzes only three theorists: Ennis, McPeck and Paul. In the introduction to the thesis I discussed almost universal agreement amongst educators about the importance of CT as a goal of education. If CT is an important ideal for education, it is important that educators understand what CT means, and what mental abilities and dispositions critical thinkers possess. My analysis considers six major theories and different definitions, and synthesizes them to uncover what the nature of CT and its constituent parts are. This synthesis can help future theorists and researchers understand what CT is, and what the key differences are between the major conceptions.

This thesis also contributes to the understanding of the relationship between CT and teaching history in secondary schools. Any journal search of “critical thinking” and “history instruction” uncovers numerous studies devoted to this area. Unfortunately, few studies have considered these issues in the depth discussed in this paper. There are studies devoted to explaining a model of teaching history that claims to increase the CT abilities of students as a by-product of using the history model. Unfortunately, these studies often use CT as a generic term that is not explained or investigated, and instead focuses on describing the model of teaching history. My study takes a different tact by focusing more on understanding CT and explaining how CT helps students think about history and historical thinking in a more critical way.

When I began graduate work, my purpose was to discover ways to improve my students’ abilities to think about history and its epistemological foundations. I soon discovered CT and became convinced that it could accomplish the purposes I identified. After this realization, the focus of my graduate thesis changed. I wanted to identify a method that would help students improve as critical thinkers, and also increase their knowledge, understanding and interest in history. This thesis reflects my beliefs and values about teaching history. However, these beliefs are not generalizable to all history teachers who want to embed CT in their practice. Clandinin and Connelly (1991) reject the idea of generalization as a goal of inquiry and believe it should be replaced by transferability. Although my findings may not be generally applied to all history teachers, uncovering an adaptable method of CT can help teachers find a conception of CT that they can understand and practice, and will improve students’ CT abilities and habits of mind. This study also assists teachers and theorists understand the difficult

process of adapting TC<sup>2</sup>'s method to history classes, and helps uncover some of the methods used to make the process easier.

While this thesis topic discusses the experience of adapting a conception of CT for teaching history, I also believe there is transferability to other disciplines. The experiences and reflections discussed can provide insight and guidance to any teacher who is interested in integrating a model of CT into their teaching practice. CT must be seen as the responsibility of all educators, not just the disciplines believed to be most suitable for adapting CT. Hopefully the movement towards improving thinking will help CT become more prevalent in our schools and our society. Another contribution of this study is more of an optimistic goal for the future—to make recommendations that will be a small step towards enacting larger changes within social studies curricula in the province. After teaching social studies courses for seven years I realize that there is far too much focus on the acquisition of information and facts in the social studies curricula, while instruction focused on improving thinking abilities of students' remains more "wish than practice." This study provides a glimpse at some of the exciting possibilities CT represents for our education system, and some of the frustrations with the current system. Hopefully the frustrations can be remedied and the possibilities can be built upon. A populace of critical thinkers is an exciting prospect because CT symbolizes the foundations of a society that makes decisions based on criteria, reasons and justice for all.

Furthermore, the discussion of the adaptability, strengths and limitations of each theory can significantly help CT theorists make their conceptions more practicable for teachers in the field. Many of the CT theories were developed by theorists who are experts in logic and reasoning, but have little training in developing pedagogical models

for implementation in school classrooms. CT theorists have done a remarkable job defining CT, explaining the characteristics of CT, and even explaining how individuals can recognize and improve their own abilities to critically think. The missing ingredient for most CT theories is that they have not developed conceptions that can be adapted to every level and subject in our schools. This has to be the next major focus for CT.

### **Implications for Future Research**

While this study provided valuable insights into the strengths and limitations of the TC<sup>2</sup> model as it applied to teaching History 12, there are several topics and areas unearthed during the study that require further research and consideration. TC<sup>2</sup>'s main focus over the past decade has been to develop a sound theoretical model of CT, and to help facilitate teachers utilize and embed this model throughout the curricula of any subject and grade level. Although the process of expanding the use of the TC<sup>2</sup> model in schools is never ending, empirical data from thoughtfully constructed research studies could provide TC<sup>2</sup> with the evidence needed to buttress their theoretical claims in the areas of students' increased understanding and engagement with the curriculum, increased comprehension of the epistemological foundations of the discipline, and the degree to which CT can be adapted to various disciplines. Evidence in these areas could lead to wider acceptance and use of the model amongst different levels and disciplines.

One important area for future research emerged from discussions presented in Chapter Three. "Does the use of TC<sup>2</sup>'s model in the classroom increase or decrease students' understanding of the curriculum?" If it is proven that use of TC<sup>2</sup>'s model increases student understanding, acceptance of the model will increase because educators

will not ignore a teaching methodology that improves students' understanding of the curriculum, while also strengthening their CT ability. If it is proven that TC<sup>2</sup>'s model does not improve understanding, this method of instruction will lose support and be seen as nothing more than an add-on to the curriculum.

Determining conclusively whether TC<sup>2</sup>'s model increases understanding of history would require a longitudinal study of a large sample of History 12 students, otherwise the results would not represent enough students to permit a generalization about students' understanding of history. This type of study would be difficult to conduct because the size of the study would present many logistical problems. Despite the possible difficulties a study of this magnitude should be conducted because the results would be helpful in determining the degree to which CT aids students' understanding of History 12.

The part of the study that would be most difficult to find agreement on would be the development of valid, accurate and reliable methods to determine if TC<sup>2</sup>'s methods increase or decrease understanding of the curriculum. There are many competing theories on how to measure understanding including: summative tests, major essays, unit projects, debates and presentations. The basic dilemma is that the current way of measuring student understanding of the History 12 curriculum is limited to a 60% classroom mark decided by the teacher (highly subjective), and a 40% provincial exam that is evaluated by a provincial exam marking team comprised of teachers from across the province (less subjective). Many teachers, administrators and ministry of education personnel contend that the History 12 provincial exam measures understanding of history, but I argue that the exam measures students' knowledge of historical facts, but does not

require “understanding” of history because of the type of multiple-choice, written response, evidence and essay questions used. TC<sup>2</sup> contends that it is not the type of activity that is important; it is the quality of the activity. Case & Daniels (2002) argue that “quality” is determined by the degree to which the activity invites “reasoned judgments” about “what to believe or do.” The provincial exam does not ask questions that require judgment; instead they ask questions that have right and wrong answers. Few teachers would measure students’ understanding of a course by giving a multiple-choice test. If this is the case, why are over 55% of the questions on the History 12 exam multiple-choice questions? Is this the best way to measure understanding of the curriculum? In order to design a more accurate way of measuring student understanding of History 12, the study should consider the recommendations of historians, CT theorists, teachers and history education professors. Without an accurate method to determine students’ understanding of the curriculum, a study on whether or not TC<sup>2</sup>’s method of instruction increases understanding of history would be inconclusive.

Ennis (1993) called for the development of more subject-specific tests for measuring CT. TC<sup>2</sup> and CT researchers need to conduct research whether standardized tests can be created that measure students’ CT abilities and understanding of history and other disciplines. Subject oriented CT tests might provide information for teachers and students about whether students are improving their subject knowledge and critical thinking ability at the same time. The development of tests might also help bridge the gap between advocates of CT and people that believe formative assessment methods for CT are too subjective and unreliable. If tests were developed and it was proven that they

provided reliable information on students' understanding of history and CT ability, it is possible that the tests could supplant the current provincial exams.

Another area that requires future research is whether TC<sup>2</sup>'s model can be successfully adapted to disciplines other than history. Although this study focused exclusively on CT and teaching history, it is worthwhile asking if TC<sup>2</sup>'s model can be adapted to teaching Math, Sciences, English, Drama and other subjects? This is an important question because if TC<sup>2</sup>'s model is going to become an important method for teaching school curricula, it must be proven that it can be adapted to multiple subjects. McPeck (1990) suggests that some subjects are not amenable to CT because they require students to learn "how to do something." A math teacher colleague with an introductory knowledge of the TC<sup>2</sup> model believes that CT works well for teaching history, but contends that it is much more difficult to adapt CT practices for teaching math. He believes that successful math teaching does not require students to make judgments about what to believe or do, it focuses on understanding basic concepts and then adapting this understanding to a variety of situations. TC<sup>2</sup> has begun to develop resources devoted to helping teachers teach CT within specific subject areas. Denos and Case (2006) developed an exceptional resource on teaching historical thinking, but further development of similar resources need to be made in sciences, math, geography and other disciplines. If TC<sup>2</sup> is going to continue to increase the number of teachers who adapt CT into their classrooms, they need to conduct research to discover the degree to which teachers can implement CT into other disciplines and develop resources that help teachers understand how it can be done.

One of the difficulties I faced this year was the isolation I felt because I was the only person at my school trying to implement CT in their classes. It was difficult not being able to discuss frustrations or celebrate successes in regards to building CT abilities amongst students. Although I am the department head of social studies, I purposefully avoided talking to colleagues about CT because I did not want to be a teacher that was constantly preaching about their “new” method of teaching. Many of my colleagues are sceptical of educational reform because they believe that many of the innovations are gimmicks, things they already implement in their teaching, or repackaged ideas that they have already seen fail in their careers. An interesting study could focus on understanding the factors that convince teachers to investigate new methods that change the way they teach. Similarly, what is the best way to support a staff or department that wants to begin utilizing CT in their practice? I find myself wondering how I can introduce CT to my colleagues in a way that will not cause tension, and will help them enjoy the benefits I experienced from employing CT in my practice.

In Chapter Four I discussed the conclusion that teachers had to understand the epistemology of the discipline they were teaching, or it would be very difficult to adapt the TC<sup>2</sup> model to their course. This observation was influenced by McPeck’s (1990) contention that teachers do not have a clear enough understanding of the core and structure of the discipline, and that understanding the discipline is at the core of CT. McPeck’s arguments provide several worthy topics of future study. Are British Columbia teachers graduating from their undergraduate and pre-service education programs without understanding the foundational principles of the disciplines they study? If this is the case, why do they not understand their discipline, and what can be done to

improve their understanding? This study might help uncover why our teachers are not readily employing CT, or capable of thinking critically about the disciplines they studied. It might also lead to changes in the methods university faculties use to teach different disciplines, and reforms in the way education faculties instruct pre-service teachers. If our graduating teachers are not learning how to think critically in their disciplines at university, how do we expect that the graduates will be able to teach students to critically think once they enter the school system? Paul, Elder & Bartell (1998) conducted a study on the degree to which CT was being accentuated by university and college professors in California. A similar study in Canada or British Columbia might be useful in awakening universities about the lack of CT teaching methods used at universities.

My study focused on “my perception” of the strengths and limitations of the TC<sup>2</sup> model as it applied to both students and my practice. Another area that requires future research is an investigation of “students’” perceptions of the effect the TC<sup>2</sup> model had on their understanding and interest in the course. This research might provide valuable insight from students about how to improve the organization of the TC<sup>2</sup> conception, and present helpful ideas on how to improve the implementation of the model in the classroom.

All of the topics for future research suggested above highlight the limited parameters of my study, but also provides for important and exciting direction for researchers interested in studying CT and understanding how to improve and increase the embedding of CT in the curricula of any subject or age level in our school system.

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