

CRITICAL THINKING IN THE  
SECONDARY SOCIAL STUDIES CLASSROOM

by

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## ABSTRACT

This thesis engages the question “how can educators teach for the development of critical thinking in the secondary social studies classroom?” This inquiry places an emphasis on the development of empathy and compassion in teaching critical thinking, highlighting the potential application of critical thinking skills by students in long-term increases toward social, economic, and democratic equity. While this thesis is specifically concerned with the secondary social studies classroom, its relevance is broader than this particular setting. It begins with a discussion on how philosophical and epistemological underpinnings influence pedagogy and understandings of the purposes of education, and includes a consideration of biological and psychological research concerning empathy, behavior and attitudes in human development. An account of how critical thinking has manifested in contemporary public education is given, with particular attention placed on how historically marginalized groups have experienced schooling in the United States. The simultaneous increase in pedagogies conducive to teaching critical thinking with educational rights of minority groups is infused. These discussions lead into a critical review of the professional literature on teaching critical thinking. The elements of embedding empathy into teaching critical thinking, the historical trajectory of critical thinking in public schools, and a review of professional literature on critical thinking are then synthesized. Strategies for teaching critical thinking in the secondary classroom in general, and the social studies classroom in particular are recommended followed by suggestions for future research.

## CHAPTER ONE

### CRITICAL THINKING AND EMPATHY: AN EMBEDDED APPROACH

Educational approaches and pedagogical dispositions of all persuasions have roots based in underlying philosophies that -- implicitly or explicitly -- frame arguments seeking to articulate the purposes of education and directly affect the resulting processes and curriculum embodied in a particular educative mode. These dispositions must be exposed to examine a matter critically. This work attends to the presuppositional inherencies embedded in its pedagogic predilections. This initial conversation will further serve in framing the structure, trajectory and scope of this thesis. But before providing a discussion of the educative philosophical positions of this work, it is important to go a step deeper still, to the heart of the following discourse. Here we find the fundamental tenets of empathy and compassion, and it is from this place that the entirety of the proceeding examinations, analysis and prescriptions arise.

This chapter will begin by defining critical thinking – the focus of this thesis – in the context of the professional literature and describing the contemporary professional and political contexts that conversations on social studies occur in. The purposes of education and the epistemological approach taken in this work are then addressed, with an emphasis being placed on knowledge, its construction and application. A brief discussion on the essential role of empathy and compassion in critical thinking will then be offered. A consideration of particular biological and psychological phenomenon of human development that effect cognitive and empathetic development, behavior and attitudes in the context of teaching for critical thinking will follow. Next, this discussion will be summarized, providing a framework for understanding that serves as the

foundation for following chapters that seek answer to and prescription for the question: “How can educators teach for the development of critical thinking skills in the secondary social studies classroom?”

## Defining Critical Thinking and The Professional Literature

What is critical thinking? What is higher order thinking? What is historical thinking?

A clear understanding of these terms is a precursor to teaching for their development.

This section focuses on these questions, and is primarily informed by the professional literature. It seeks to establish working definitions and make some distinctions between these types of cognitive modes. Further, this section takes a step beyond definition and distinction: it discusses the motives for teaching critical thinking and addresses the relationship between knowledge and application.

There is no absolute agreement on a precise definition of critical thinking, but many common themes emerged in different definitions. Some researchers asserted that critical thinking is an active process in which the thinker considers alternatives, combines ideas, takes risks to find new connections, and evaluates steps to a conclusion (Dixon, 2004). Others defined critical thinking as involving analysis, synthesis and evaluations of concepts (Gokhale, 1993). Some viewed critical thinking as an active, purposeful, and organized effort to make sense of our world by carefully examining one’s thinking, and the thinking of others, in order to clarify and improve understanding (Gadzella, 1996) and others defined critical thinking in terms of problem solving, and link skills of selecting pertinent information, recognizing stated and unstated assumptions, formulating and selecting promising hypothesis, and drawing valid conclusions and judgments of the validity of inferences to critical thought (Gadzella, 1996; Inoue, 2005). Some researchers

included very particular skills in defining critical thinking, such as reading a map or chart (Ring, 1993).

Other approaches to understanding what critical thinking is identified particular dispositions with critical habits of mind (Klaczynski, 1998). These included open-mindedness, truth seeking, tolerance for ambiguity, metacognition and self-reflection. Some researchers defined critical thinking with the social studies classroom in mind and noted that critical thinking involves the study of topics in depth; the presentation of content as problematic, changing or controversial, rather than authoritative, fixed and true; students involved in problem solving and interpreting information; and students reasoning about their views and receiving feedback from their teacher on the quality of their reasoning (Newmann, 1990). In addition, there are researchers who place an emphasis on empathy and perspective taking as essential features of critical thought (Ogawa, 2000; Tirri, 2000).

A synthesis of these varying perspectives on how to define critical thinking might read as follows: critical thinking is a product of particular habits of mind and dispositions in the gathering, evaluating, synthesizing and interpreting information and knowledge -- for the purpose of engaging and solving authentic problems -- and requires both an acknowledgment that understandings are more interpretations than absolutes, the ability to suspend judgment, empathize and take the perspective of others.

The terms critical thinking and higher order thinking are often interchangeable. However, in the professional literature the term critical thinking appeared to be more often associated with problem solving than higher order thinking. Also, the term higher order thinking implies a particular hierarchy of cognitive abilities with critical habits of

mind resting on top. This appeared to assume that learners must go through a specific series of cognitive developments to engage in critical thinking. This further implies that only those students who have mastered other types of thinking and learning are able to engage in critical thought. The discussion in chapter three on the research literature will address this assumption. For now, it is included to make a distinction between critical and higher order thinking.

Historical thinking, as the name suggests, is more concerned with the doing of history. The term historical thinking can indicate one or both of two things. First, it can indicate the process and approach that historians engage in. Primarily, this involves seeing historical documents and information as interpretations and arguments from particular agents with particular understandings, motives and interests. Historical thinking can also indicate seeing the present (or any time period) in light of the past and constructing a well-reasoned conception of a historical trajectory based on the evidence and knowledge available to form hypotheses on why and how events have taken -- or might take -- place.

The last piece in the working definition of critical thinking offered above – the ability to empathize and take the perspective of others -- will receive particular attention in this thesis, for this feature of critical thinking is crucial if real-world applications of critical thinking in our social world are to be democratic, equitable, just and sustainable. Let me elaborate briefly. Bettering the human condition requires harmony in the relationship between what is known and how it is applied, for grave consequences to humanity have and will continue to result from discord in the symbiosis between understandings and actions, or, of praxis. In other words, the ongoing analysis and transmission of what is understood between and among humans requires the continual examination of how

particular understandings come to be and, just as importantly, how they have or might be been applied in human actions. For example, we, as a society, understand nuclear energy, and choose to use this knowledge to produce advanced killing mechanisms. And, likewise, we have come to understand the nature of many sicknesses, and developed medicines and treatment to combat these unfortunality. This example illustrates the conundrum associated with what is known and the application of this knowledge. This issue will be further considered in following sections.

### Critical Thinking And Social Studies: Professional and Political Contexts

Why is it important to teach critical thinking in the secondary social studies? What are social studies? This section will discuss these questions and argue that, based on the definition of and quality within the doing of social studies offered by professional bodies, social studies requires the ongoing cultivation and application of critical thinking.

The Board of Directors of National Council for the Social Studies defined social studies as follows:

“Social studies is the integrated study of the social sciences and humanities to promote civic competence. Within the school program, social studies provides coordinated, systematic study drawing upon such disciplines as anthropology, archaeology, economics, geography, history, law, philosophy, political science, psychology, religion, and sociology, as well as appropriate content from the humanities, mathematics, and natural sciences. The primary purpose of social studies is to help young people develop the ability to make informed and reasoned decisions for the public good as citizens of a culturally diverse, democratic society in an interdependent world (NCSS, 1992).”

The following features of this understanding of social studies merit emphasis:

- Social studies is interdisciplinary in nature, incorporating content from a number of academic disciplines
- Students' real-world applications of content, in the interest in of the common good, are central to social studies
- Students are seen as interdependent, active agents and encouraged to participate in a democratic process

These features demonstrate that authentically doing social studies -- more than just another discipline required in primary and secondary education -- requires critical thinking. This is particularly true in terms of perspective taking and empathy in that purely individualistic pursuits are antithetical to concerns for the betterment of common good. Further, participating in a democratic process requires the ability to consider multiple perspectives in evaluating complex situations and acting in our shared society.

While the link between critical thinking and social studies may be clear in the NCSS definition of social studies, contemporary forces are at work that might pose a challenge to educators interested in the development of critical thinking in social studies classrooms. In particular, recent legislation in Florida seems to compromise the depth and quality that critical thinking might be practiced in the secondary classroom as it requires a particular perspective to be taught in Florida's history classrooms (Jenson, 2006). This issue will be discussed further in the following chapter, and is included here to alert the reader to an important contemporary controversy in teaching critical thinking in the secondary social studies classroom.

## Purposes of Education

I recently asked a few people what they thought the purpose of education is. The responses I got included “to learn stuff,” “to get a better job,” “to control information and ideas,” “so people won’t be taken advantage of,” “to become smart,” “so the world can be a better place and people can figure out our problems. For justice.” Although informal, these responses echo some of the central ideas that academics and philosophers have identified as purposes of education.

Purposes of education can generally be categorized into two spheres. The first of these is to provide the tools, knowledge and skills in students so that they might be in a better position to interact within existing social systems given the relative perceived agency of a particular student. Most of the responses I identified fall into this category. The second category of purpose can be seen in expanding on the development of these tools, knowledge and skills, to be able to develop – through education – the ability to identify problems or potential improvement with human conditions, and further plan and execute actions in solving, resolving or transforming these conditions. Teaching for critical thinking, as explored and defined above, places emphasis on a model of education interested in the agency and potential of all learners without dismissing the reality of the social and economic structures in which agents operate.

The purpose of education is often equated with the need to produce good citizens. In our society, this is often articulated in terms of developing the skills, tools, and knowledge in young people so that they are better able understand our social systems and participate in democracy. However, what this looks like is often not made specific. It may mean developing the tools to be able to understand social, political and economic

issues for the purpose of electing leaders who can move polity in a desired direction. Some might take this further, asserting that students who demonstrate the most promising skills and ability in areas of citizenship might become political or social leaders themselves. And still, some might be inclined to mean studying when, why and how society has changed, how agents have affected this change, and how students might interact with society.

Approaches to the organized and deliberate education of people in any purposefully sustained social and economic system predicate teaching and learning in ways of thinking that are often designed for specific occupations or roles anticipated by controlling forces within such a society, often with little thought given to how particular status quos – or the dominant customs of social organization and interaction – might be critically understood and improved upon for the purpose of improving the collective human condition.

In most cases, the debates around the purpose of education can usually be broken down into two spheres: a production model and a developmental model. The former is primarily concerned with the economy and existing social structures, largely seeing education as the cultivation of human capital potential. Likewise, in this model, particular kinds of educational modes, or the lack of education, can be used as devices of limitation for groups or individuals whose developmental potential – in terms of education – might challenge or threaten existing hierarchies of power in a given society. The historical and calculated treatment of marginalized groups in our society is a clear example of this, and will be discussed more in the following chapter. For now, it is adequate to make this primary distinction in broad spheres of formulating the purpose of education. In the production model, students are foremost viewed as economic entities

whose education influences the level of worth in terms of his or her human capital and economic value as a consumer. Tracking and sorting practices in schools often represent how this concept of purpose in education manifests in schooling models. The act of teaching for authentic critical thinking is more interested in developing qualities of cognition to inform personal and social action choices in productive, innovative, transformative, empathetic and compassionate ways than it is with maintaining dominant structures and ideologies.

I recently spoke with a high school teacher of sixteen years. Our conversation implicitly revealed a view of education's purpose in line with the production model. She shared that a group of teachers she was a part of recently met with business leaders in the community in which she taught. These business leaders – assuming their role as the future employers of at least some high school graduates from the community -- were interested most in high school graduates being able to do three things: possessing enough reading and writing skills to be able to fill out an application and other documents, the ability to do basic arithmetic, and to be punctual and show up to work on time. The teacher appeared to use these desires to justify her classroom policies of accepting no late work, and a strict disciplinary procedure for tardiness and truancy. Indeed, these may be skills that a student will need in future employment. But underneath this desire to serve the students and develop in them the skills and knowledge to navigate future roles, lays a production model and philosophy of education that has – at least to some extent – predetermined the agency and actions of students, and seems to conceive of their secondary schooling as – at least in part -- a behavioral training ground for being fit into

an existing system, with minimal concern given to how students might understand, interact with and influence that system (Freire, 2006).

Suppose a firm was engaged in massive exploitation of workers. What skills associated with organizing and redressing these grievances are students developing so that they might have voice and agency – or some amount of self-determination – in future situations and circumstances they might find themselves or others in? Further, it is reasonable to ask if a production model of education is in fact of service to students in conditioning acclimation to – or complicitness with -- the interests of those seeking to profit from the human and labor capital of others? How might an educative mode be reflective of the real-life circumstance students face, and the skills and knowledge needed with regard to employment and making a living, while also encouraging the development of critical reflection on the nature of the social, political and economic systems they will be interacting with, and the knowledge and skill development required in potentiating agency in redressing oppressive and inequitable systems? In short, how can educative practices be conducive to the development of citizens participating in our democracy rather than unwittingly subjected to an illusion of agency, or succumb to social and political apathy? Teaching for critical thinking potentially offers an effective tool in this process.

A developmental approach to education rejects a benevolent disposition to learning where controlling voices assess social needs from a dominant class paradigm and go about the business of educating in a way that, at worst, exclusively serves these interests, or, at best, paternalistically determines the best interest of the student and directs them toward maximizing their individual potential within existing – often seen as unchanging -

- hierarchical social, political and economic systems. A developmental approach -- an approach more adhered to in this work -- appreciates and nurtures the development of students in ways of instruction that ask the why, how, “so what” – and perhaps most importantly -- the “now-what” of things and experiences, not merely what, who, when and where. This is an important part of what distinguishes teaching for critical thinking from more traditional models of education.

### Epistemology, Examination and Analysis

In any learning inquiry, including this one on critical thinking, it is important to identify how and why something is understood to be true (Leming, 1998). The trajectory of human understanding manifests in the continual being and becoming of deliberate, disciplined and conscious cognition into higher ways of thinking and critical habits of mind. Applications of knowledge often reflect the interests and dispositions of the dominant social and economic powers of a given society. Two factors are important to consider here: (i) the nature of human knowledge and understandings and (ii) the application of this knowledge. In terms of the former, the particular methods that facilitate how knowledge and experience come to be perceived and understood not only implicitly indicate the presuppositional underpinnings of interpretations of knowledge, observation and experience, but, moreover, in terms of the latter, they predicate and largely determine the application of understandings and largely govern the scope, depth and quality of human knowledge. In short, examining the nature of human knowledge requires consideration of how something is known. As for the latter – the application of knowledge -- the subjective yet prevailing ideologies and systems of power in a given society largely dictate how knowledge and understanding manifest in our shared

objective reality (or, more accurately, our intersubjective understandings). In short, the ways in which humans understand knowledge, experiences and observations are antecedents to their application. Objective social reality is, therefore, the ongoing product of what is known and how this knowledge is used.

In the philosophical tradition, epistemology centers on the notions of objectivity and subjectivity, and how these two ways of assessing reality might be reconciled. As individuals, it is easy to conceive of an outer objective reality, and an internal subjective understanding of such. If I see an object, it is taken that that object exists outside of my being and that somehow a representation of that object is shared objectively. However, this representation is produced in my mind through my particular senses and may not be similarly experienced by all members of society. This type of understanding is derived from the experiencing of senses through particular human schema. Therefore, to critically understand critical thinking one must be conscious of how critical thinking is being understood, not simply in terms of determining a codified definition, but also in terms of the specific tendencies one might have in interpreting and applying an understanding. The application of particular schematical interpretations of what critical thinking is make subjective understandings and interpretations more visible, and it is where assumptions and un-addressed predilections often surface.

In the Western tradition, empiricism – or the scientific method – has developed as the dominant paradigm against which objective reality is usually measured. This systematic approach to increasing the scope and accuracy of human understanding consists of (i) the formulation of a problem or question (ii) the collection and analysis of information through observation and experience, and (iii) the development of and testing of

hypothesis. The approach to this examination i.e. “how to encourage the development of higher order thinking” within a specific context seeks to recognize and preserve the most valuable aspects of the scientific method while also pushing these boundaries so that understandings deeper still might be achieved. Certainly, the scientific method reflects many aspects of critical thinking, but a total reliance on this way of knowing -- more than arrogant and smugly condescending – is antithetical to the nature of critical thought, for it might co-opt, minimize, dismiss and/or disengage other ways of knowing central to human experience and understanding.

The organization and approach of this work is primarily a reflection of the dominant modern day mode of understanding -- empiricism -- and ultimately finds status-quo legitimacy through the socially and economically recognized institutional education systems of the society in which it was produced. Nonetheless, it also attempts to consider and critique the restrictive paradigms of this socially constructed legitimization, and strives to serve as an example of the content considered here in (Knight, 1989).

It cannot be assumed that understanding through the scientific method is an infallible approach to human understanding. Indeed, the history of scientific inquiry clearly indicates this. Nonetheless, an impressive body of knowledge understood by humans emerges through this method of examination. This work seeks to fruitfully examine the question posed within this framework while also considering and recognizing the limitations of this paradigm and push this examination in a productive, innovative and creative manner.

Rationales for understanding outside of empiricism are possible. A consideration of other ways of thinking merits consideration if critical thinking is to be conceived of and

practiced. The revelatory way of knowing has largely stemmed from religious and spiritual traditions whose transmission of knowledge has come from the clerical institutions and the educative approaches they have practiced. This mode of knowing and learning has historically proved quite fallible. For example, assertions of a flat world would be taken as ludicrous today. This is not meant to dismiss the power of revelatory knowledge, but to acknowledge its limitations. Such understandings are so often filtered through powerful human institutions that have their own interests in mind – including a reluctance to challenge their own traditions no matter how contradictory they may be to lived experiences – and the conundrum associated with different and contradicting versions of revelatory truth from different historical and sociocultural settings.

Revelatory truth resists examination -- making no claim to make logical sense -- and often fails to address the particular historic context it exists in. It is often declarative in nature, dismissing individual examination and analysis, and therefore can burden critical thinking rather than advance it. This critique is aimed at the institutionalized dogma associated with revelatory knowledge, not the personal connections individuals have with the themes and concepts revelatory knowledge engages. Indeed, understanding revelatory knowledge is important to the critical thinker as it continues to strongly influence social thought and history.

The historical inaccuracies of understanding derived from both empirical and revelatory knowledge might be understood through another way of knowing: understandings that are accepted because of the authority of the agent or agents professing them. This is known as authoritative knowledge. This type of knowledge is accepted because of who is offering it as a truth rather than what the content of the

understanding is. This type of understanding, while certainly having a legitimate place in the trajectory of human understanding, is, by itself, only as reliable as the assumptions it stands upon.

Growing up, I remember many times asking why something was the case, and told that this or that was the way it was “because I said so.” If I, as a child (or as an adult) accepted this justification as an indication of truth, I would be relegating my understanding within the sphere of authoritative knowledge. While authoritative knowledge by itself is completely divorced of critical thought, it would be foolhardy to reject that expert voices do exist in areas of understanding. But rather than blindly accept these voices, it is important to critically examine them to see how well these ways of knowing correspond to others. In terms of examining critical thinking, this will be ventured in the third chapter when voices of authority within academia – specifically those doing research on critical thinking in educational institutions – will be examined. Without this critical examination, this work would simply be a sort of sophisticated book report, merely relating what the professional literature was professing on the subject rather than a representation and implementation of critical thought.

In terms of this thesis, its question and the professional literature it reviews, a critical reflection on the authoritative nature of the studies merits consideration. Individuals possessing particular schema -- through which data was collected and analyzed -- conducted all the studies considered in this work. Even though researchers considered in chapter three agreed on many components in defining critical thinking, the selection and interpretation of the data they encountered must be considered in light of their proposed application of their understanding. A consideration of this might increase understanding

of the motives and presuppositions of researchers, and further illustrate the relationship between knowledge and application. For example, some researchers considered in chapter three appeared to be interested in validating and verifying particular curriculum (Dixon, 2004). While this alone is no reason for dismissing these investigations, it should not be ignored that the intended application of these findings may be motivated by an interest to enter a potentially lucrative market. Other researchers may have been interested other unknown applications, or have career or personal stakes in their research that influenced collection and analysis. There are also some studies considered in this work that -- while investigating a particular curriculum -- also place an emphasis on empathy and perspective as a necessary component of critical thinking, and openly proclaimed that an interest and concern for others is fundamental to developing critical habits of mind (Saye, 2002). In sum, a consideration of the proposed or implied application of an understanding of critical thinking from authoritative voices-- and the outcome potential of such -- is very important and will be considered in the concluding chapter of this work.

Intuition is another way of knowing that is often used to justify understandings. Intuition is important, no doubt, especially from a short-term living-in-the-present position. Intuition is relegated to an immediate, organic or sensory assessment of a situation or experience, and largely devoid of reflective thought. While highly important for navigating many day-to-day experiences and situations, this type of knowledge is highly subjective requiring further investigation if it is to be corroborated with other evidence and used to profess a correlation with reality. However, this point is not only true in terms of intuitive knowledge, but in all areas of knowing.

No one source of knowledge can hold the ultimate way of understanding, for errors can and have been made in assertions and understandings stemming from any single way of knowing. Taken together, though, when these ways of knowing are complimentary and not contradictory, the validity of an understanding increases. This is what this thesis seeks to do – to corroborate different ways of knowing so that a more accurate understanding of how to teach toward critical thinking in the secondary social studies classroom might arise. This investigation must begin, therefore, by being explicit about how an answer to the question posed will be arrived at. While focusing on the scientific method of understanding, and therefore adhering to and critically examining the authoritative or expert voices on the subject of inquiry, this thesis is based on an integrated approach that acknowledges the essential role of empathy and compassion in the development of critical thinking in the classroom. A short poem I wrote expresses this idea.

*All true is...um... true or not true or too true for some?*

*Search for a purp, us might be them*

*A bird in a flock falls back in flight and views a point in a past moving formation*

*Learning the why, how where what and when*

*We'll start with the heart and then we'll begin*

## Empathy and Compassion: A Pedagogical Imperative

It is of value to consider why empathy and compassion might be necessary components in critical thinking and teaching for its development. A consideration of some base elements that make humans what they are may be of value here, and serves to

openly acknowledge a major presupposition from where this work comes. More importantly, it serves to frame this thesis. In short, equitable applications of critical thought in our shared world appear more likely if the motivation and basis for engaging in critical thought rests on the tenets of empathy and compassion rather than self-interested individualistic ambitions.

People care about the conditions of other people. People can conceive of the situation of others, and act in congruence with their own individual or group agenda, whether or not the specific conditions of others is of concern. But is it possible to be compassionate? Is it possible to care about another's situation not for the benefit of the agent conceiving it, but for the other, or at least for a desire for a mutually better situation?

Biologically, humans are empathetic beings, meaning that when a person witnesses others experiencing or engaged in something, physiological responses result (Aronson, 1995). The more intense the action or experience witnessed by a person, the greater the physiological response. When pain or suffering is involved in the observation of an agent, these physiological responses tend to be negative at a root level. Humans have developed two ways to deal with this experience of witnessing others in pain. The first, and most obvious, is to give aid to or attempt in reducing or alleviating the suffering of another person or group of people. This can be seen as the transforming of empathy into compassion and will be addressed shortly.

The second option for a person witnessing another who is suffering is for that individual to psychologically distance themselves from those suffering. Additionally, this psychological separation may already be in operation in an individual exposed to the suffering of others. This schema of distancing oneself from those suffering can further

develop into justifications and rationalizations for inflicting pain and suffering on others, with hate crimes being a clear example. Empathy is not, however, always exclusively related to the suffering of others, as in the case of being physiologically affected by other people or groups experiencing joy. Nonetheless, empathy is a human trait that is only undermined through some form of psychological distancing which itself often appears to be a product of socio-culturalization (identity), lack of self-efficacy (agency), or fear.

The other day I was talking with a friend of twenty years on the phone. He asked me if I honestly thought there was really such a thing as altruism. “So, Nathan, do you *really* think that true altruism exists?” In a separate conversation on the same day, a cousin of mine, in response to my assertion that it seems to take some amount of dehumanization to wage war or enact systematic violence against another group, said, “It’s like the animal kingdom, man. You know, kill or be killed. Survival of the fittest.”

These two statements and conversations seemed to be closely linked. In both cases, an underlying assumption appeared to be present on the nature of humans mirroring a philosophy of Hobbes in his assertion that life is brutish, nasty and short, and that humans are atomistic. Philosophically, these sentiments appeared to come from a common sense place. That is, epistemologically, these positions asserted that an altruistic or compassionate nature of humans was naïve and best, and wrongheaded at worst – largely found grounding in a theory of coherence that fails to question the assumptions embedded in the context of socially indoctrinized market-values-based thinking, falling victim to a cognitive enslavement of sorts embedded in the mantra that Margaret Thatcher coined during aggressive neo-liberal political and economic undertakings in the 1980’s “There Is No Alternative.”

What was not taken into account in these conversations was why and how these positions might be constructed. For sure, those growing up in the United States have been continually subjected to a socialization and cultural indoctrination that imposes market values: i.e. the righteousness -- or at least the social merit -- in the accumulation of individual material wealth. As the so-called free market system expands throughout the world many traditions continue to bump up against the contradictory motivations espoused in capitalist ideology. Central to critical thought is the evaluation of information and experiences in order to create alternatives to problems. Dismissing alternatives to oppressive systems -- or deeming them unrealistic or utopian -- is often a tool used by those deeply invested in systems designed for the accumulation of individual wealth. And it is easy to see why this is the case, for a critical examination of these systems -- and a further application of this understanding that rests on the tenets of empathy and compassion -- ought to be viewed as threatening to destructive and oppressive systems, as well as those interested in the maintenance and expansion of such.

Free market ideology has a value system embedded within it, and is carried with it as it -- by the nature of capitalism -- necessarily expands. This ideology of individualism and understanding of human nature sees people as atomistic ( or existentially separate from one another). However, this conceptual basis for understanding the nature of being human is increasingly at odds with empirical disciplines and the furthering in human understanding of how our world and universe function. It is obvious in the most simple of observations that if any person is isolated from that which surrounds them, he or she will not survive. Physically, if an individual is sealed off from their environment -- as in the case of being dipped in some wax or other material that constituted a physical barrier

between an individual and the environment – that being will surely die from lack of materials necessary for his or her life functions to continue. On a social or human-interactive level, when infants are isolated and not given human care – if they are simply provided with the basic physical elements needed for survival (nutrient, water, oxygen etc) they will usually die as well. Interestingly, in our advanced capitalist society, individuals are increasingly being physically and cognitively separated and isolated from one another as individual activities (computer usage, watching television etc) physically separate people from direct interaction with one another.

So, returning to the conversations that I recently had with a friend and a family member, one implying my own naivety in taking seriously ideas of altruism – or perhaps more accurately reciprocal altruism -- and the other professing a justification for (at least at times) violent competition through an ideological alignment with social Darwinism, my response, in both cases, is based on the presupposition that the survival of humans depends on our empathetic and compassionate potentials. Is empathy and compassion at least part of what it is to be human? Or are they mere sentimental fantasies of disservice to any serious mind that truly understands the nature of our inner beings and outer social world? In terms of addressing how we ought go about the business of education, an examination of these bigger questions on the nature and purpose of being is required prior to a development and application of this understanding into specific pedagogical and educational practices.

The tenets of empathy and compassion should not be viewed as mere conditions or traits of mind capable of full intellectual or scientific analysis. In other words, it should not be assumed that human intellectual capacities can fully grasp other habits of mind and

understanding, just as the conscious mind cannot control many sub or unconscious mental phenomenon. Why do people care about each other? Why should it matter if others suffer if one is secure in comfort, or at least finds oneself in a satisfactory or tolerable situation? These questions hit on the heart of what it is to be human, and consider how one, or a group of people, or people in general, have a paradoxical, complex and often unexamined sense of justice (which will be defined as fairness and equity in social relationships).

Justice cannot be conceived of without some amount of moral understanding. Indeed, humans severely lacking here are often diagnosed as psychopaths and viewed as victims of mental illness. Humans, by their nature, are reflective beings possessing a sense of what might be right or wrong -- not in terms of correctness -- but in terms of morality. Philosophical positions opposed to this view would minimally agree that societies require some level of expectation and enforcement of behaviors that promote social cohesion, even if they dispute an inherent moral predisposition embedded in the human experience.

It is important to make clear the distinction between empathy and compassion. Compassion is qualitatively different than empathy. Compassion is more specifically focused on the suffering of others while empathy may or may not be. In other words, humans can identify when another is experiencing something unfair; when another is being oppressed. That's why if an agent wants to demonize someone or some group that appears as a competitor, or enemy, focus is given to his or her action toward those most vulnerable. "Look what they did to this poor wretch. How inhumane!" Unfortunately, these sentiments seem a disguise for tactics and strategies designed to outdo or undo a perceived competitor rather than representing a desire to remedy the injustice perpetrated.

Compassion is in not using the more troublesome conditions of others as a means or justification of an individual or group self, but instead is an unfaltering desire and commitment to action in remedy and improvement of those conditions.

This section has been included to establish empathy and compassion as crucial tenets to critical thinking. This approach is in opposition with the oppressive and unjust predispositions associated with philosophies promoting market-driven understandings of human nature. Empathy was distinguished from compassion, with the former associated with perspective taking skills in general. Compassion never comes from a desire to undo an enemy or competitor, but instead, compassion comes from an understanding of injustice or lack of fairness, a concern for improvement in that condition, and desire to take action on suffering's behalf. Critical thinking stemming from empathy and compassion can deeply inform understandings of justice and potentially produce informed and innovative approaches to solving problems of oppression and injustice in our society and world through a democratic process. In terms of how to teach toward the development of critical thinking skills in the secondary social studies classroom, this is the hope and vision this inquiry manifests from.

### Mirror Neurons, Empathy and Social Consciousness

The concept of empathy is not limited to the philosophical, sociological and psychological disciplines. The field of neurology has produced important work in this area in the last decade. Specifically, the discovery of mirror neurons potentially offers a concrete framework for understanding how a major aspect of being human manifests in empathetic social relationships (Sonny-Borgstrom, 2003.). A mirror neuron is "one that is active when the individual whose brain it is in is engaged in some action or

experiencing some sensation or emotion, and also when that particular action, sensation or emotion is being observed in someone else (p.1).”

Mirror Neurons were first discovered in monkeys. They were found to manifest when a primate observed the motor actions of another agent. Specifically, some of the same neurons active in the motor actions of one primate also fire in the brains of that primate when he or she witness another agent involved in the same action (Keysers, 2004). This neurological response to seeing an action appears to be a feature that is not learned, but an innate biological component of being. For example, infants as young as eighteen hours will replicate facial expressions -- sticking the tongue out -- they witness adults doing (Gallese, 2004). The implications here with how humans respond to and interact with the environment are vast, for, from the early hours of a newborn’s life, the organizational components and emerging schema may be ultimately based on the ability to mirror another agents’ observed actions.

Since the discovery of mirror neurons where early studies focused on motor functions, researchers have expanded their approach of investigation to encompass studying the relationship between empathy, mirror neurons and social cognition. While research remains in an infantile stage, and a lengthy discussion of this phenomenon is outside the scope of this investigation, the implications that mirror neurons beget are important to consider in understanding the possible nature of empathy and compassion, and how humans might construct their social reality. To state in simple terms, individuals possess neurons that fire not only when an action or emotion of an agent comes to be, but also these same neurons fire when actions and emotions are observed in others. This shared neuronal state suggests that empathy may well not be a result of merely observing and/or

interacting with another human, but that this shared physiological state represents a phenomenon by which an agent and the observed might look more like a shared self than like objectual others.

A debate on whether internal dispositions produces behavior or behavior produces internal dispositions – or attitudes -- is important to consider here. In the field of social psychology, it has been shown that attitudes follow behavior. In other words, doing something, or acting in a particular way predicates the development of attitudes that support, justify and perhaps rationalize the behavior (Myers, 2000). People like to believe that they have a set of attitudes and beliefs from which their behavior is selected, and while this might be true when conscious reflection and critical habits of mind are implemented, research demonstrates the opposite is a more frequent phenomenon.

One prominent explanation for this is known as cognitive dissonance. This is the state of disequilibrium resulting from a contradiction between behavior and beliefs. If a person's actions and beliefs are in contradiction – say in the case of believing that it is wrong to lie, but one finds oneself lying, it is more likely that a change in the attitude toward lying will occur than a change in that behavior. In terms of critical thinking, even when agents profess a desire for developing critical thinking skills, cognitive dissonance may appear when the results of critical examination lead to contradictions between attitudes and actions. For example, if a teacher is teaching toward critical thinking and a student has a critique of a classroom rule – let's arbitrarily say being late on an assignment – that might thwart or hinder that student's potential to critically examine whatever it is being considered – the teacher might well dismiss the student's sentiments, thus changing his or her attitude to justify a behavior that may be contradictory to the

tenets being professed. To resolve this, the teacher might come up with a number of attitudinal morphing strategies to resolve the dissonance, such as having better judgment than a student, being more experienced, or preparing the student for future experiences. One could also rationalize the contradiction between attitude and action by reasoning that the contradictory behavior, more than being a product of hypocrisy, is a result of the circumstances outside of one's control. In this case a teacher might explain that the no-late rule is a school rule, not the teacher's. The main thing to consider here is how, absent of critical thought and reflection, and perhaps contrary to intuitive understandings, an individual's behavior affects his or her attitude more than an attitude affects his or her behavior.

The implications of these two phenomena – mirror neurons and the relationship between attitudes and actions – paint an interesting portrait of how our intersubjective reality is constructed. In short, a possible account – broad as it may be – suggests that from a very early stage in development humans mirror the actions and expressions of others, and that the behaviors of an individual are highly influenced by this. Further, these behaviors shape attitudes about things. Devoid of critical thought, this scenario diminishes the potential for choice in action. If humans are to be free from this cyclical trap of behavior and attitude, an utmost priority on critical thinking should be given.

Neurological research increasingly understands empathetic dispositions as an innate feature of healthy cognitive development as manifested in mirror neurons. Neurological diseases such as autism and schizophrenia – victims of which live in largely isolated internal worlds -- have been linked with mirror neurons not functioning properly (Sonny-Borgstrom, 2003). In one study, participants (n=61) were given a questionnaire

that sorted them into categories of high and low empathy. These participants were then exposed to images of different facial expressions. As supported by previous research, high empathy participants mimicked the facial expressions they were exposed to at both the automatic level (reaction time less than 56ms) and at the control level (reaction time less than 2350ms). Low-empathy participants did not mimic the facial expressions. Interestingly, participants with a negative model-of-self showed higher rates of empathy than those with a positive image-of-self (Klaczynski, 1998). The implications of this, particularly in terms of developing dispositions conducive to critical thinking will be considered further in the concluding chapter of this work.

This section has briefly considered the biological underpinnings of empathy through a discussion of mirror neurons. It further considered the relationship between attitudes and behaviors. It then suggested that critical thinking is a necessary component in addressing the biological and psychological reproduction of attitudes and behaviors contributing to unjust conditions and systems in our society and world. In terms of how to teach toward the development of critical thinking in the secondary social studies classroom, this section has informed this investigation by bringing to light biological and psychological phenomenon that -- on one hand -- validated an understanding of empathy and compassion being an innate biological feature of human nature, and -- on the other hand -- offered insight into human psychological tendencies that might obfuscate empathetic and compassionate dispositions in humans, thus burdening the development of potentially transformative habits of mind.

## Chapter Summary

In order to exemplify the nature of critical examination, this chapter has attempted to explicitly and critically examine the philosophical perspectives it comes from. A definition based in the professional literature was arrived at, with an emphasis placed on the application of critical habits of mind. Empathy and compassion were placed at the heart of this inquiry, and postulated to be an imperative to the equitable application of critical thought. Next, an epistemological position was established, where varying ways of knowing and understanding were considered. Value systems embedded in market ideology were considered, with an emphasis placed on the need to develop critical thinking in young people so that they might democratically participate in and influence the social, political and economic systems they interact with. Finally, this chapter addressed particular biological and psychological phenomenon of cognitive development effecting human empathy, behavior and attitude. The rationale of this thesis for examining how to teach for critical thinking in the secondary social studies classroom has been embedded with a deep concern for how these skills might be applied in equitable and transformative ways in our society and world.

Teaching for critical thinking in the classroom – when approached from a position that empathy and compassion are necessary in its development -- is concerned with the dignity and the maximization of the developmental potentials of all humans. Critical thinking in social studies offers a promising venue in which knowledge and action stemming from empathetic and compassionate dispositions can increase the effectiveness of redressing factors negatively affecting the collective human condition, so that humanity might critically address the traditions of oppression -- potentially avoiding

repeating the mistakes of the past -- in the ongoing struggle for a more just and sustainable world. This inquiry now moves to a discussion of the historical role of public school in general, and secondary schools in particular, focusing on teaching for critical thinking in public schools.

## CHAPTER TWO: A HISTORY OF CRITICAL THINKING IN PUBLIC EDUCATION

### Economy, Critical Thinking and Education in the United States

Formal education has historically served as a means for individuals to interact with their social, political and/or economic world in more sophisticated ways not possible without particular bodies of skills, knowledge and interpretations (Liston, 1998). A main goal of a society is to insure its own survival and improve its situation for at least some of the members in that society. These most basic aims are reflected in the content and processes of a society's educative practices. However, unanimity in how a society ought to organize and conduct itself is elusive, giving rise to the political nature of social organization. The particular political nature of a society produces structures and institutions that set the paradigms for how the lack of unanimity will be resolved and what directions society will move in. Planned societies have specific beliefs and procedures for managing internal disagreements and conflicting agendas in determining what ideas and activities will be adhered to and what norms will be established. When these procedures fail, conflict often results. The more powerful or strategic prevail, giving rise to the imposition of the victors' inclinations. These inclinations and ways of progressing are then reflected in the educative norms of a society (Gradstein, 2005).

The United States began as European colonies expansion settlements in a developing agrarian trans-Atlantic capitalist economy. Prosperity and profit was substantially a result of the enslavement and forced labor of Africans and the removal of indigenous people from lands. Economic conflicts of interest between these settlements and their host societies emerged, bringing conflict and war, and eventual resolution through the establishment of the independent and expanding United States. Today, well over two

centuries later, while evolving beyond colonial economic ambitions that sought economic expansion through territorial gains, the United States economy continues ambitious economic expansion through opening up new markets to the now global capitalist economy. The resulting economic, social and political norms – highly inequitable in nature -- has created dynamic tensions, heated debate, political and social conflict, and social change as it struggles with this historic reality and the democratic ideals of equality, liberty and justice-for-all professed in the founding documents of our country. In terms of educational institutions in the US, the process and content of our public schools has largely reflected the perceived needs of dominant status quo voices. However, the contradiction materializing between ideas of equality and the interest of controlling agents has resulted in an ongoing dialectical public debate on how our country ought go about the business of educating young people. Many episodes in revising and reforming our public school systems have resulted.

The following discourse examines some of these major episodes and how critical thinking may or may not have been developed in public education practices, and, perhaps more importantly, why or why not. This introductory section has been included here to set the tone for how this chapter is approached. Namely, this chapter places an emphasis on increasing democratic ideals and social equity for all people as the goal and purpose of teaching for the development of critical thinking in the secondary social studies classroom.

### Historical Thinking and Interpretive Analysis

The study of history is central to the social studies curriculum. It is therefore important to discuss the nature of history, or what is meant by the term history. Many

agents and voices fill the pages of history; each having an interpretation of how and why now has come to be what it is, and what factors influenced the conditions leading to the present. Further, through studying history a trajectory is formed that can aid in understanding what potentials the future holds. Whether it be the history of transportation, the history of technology, of governments and empires, of economies and patterns of trade, of the movement of peoples – all these areas of historical study help build an understanding of where we find society and the world, and where we might be headed. But there are many voices involved in history. There are many perspectives. History then becomes more of an interpretation of the sources of information available, and weaved together to construct an account of the past. More than a mere presentation of facts, names and dates, historians use information to tell a story.

The story a particular history weaves is subjective and its validity depends upon how well the facts and accounts relied upon support a particular interpretation. Most people can think of stories about their family where the specific content and details are disagreed upon, even when many of the facts, or the general theme of the story are agreed upon. Doing history is no different. For example, one would expect an account of the displacement and destruction of indigenous people in North America to vary considerably depending on who told the story. The job of the historian is to consider contradicting narratives, weigh them against facts and any information available, and piece together a construction of how the present came to be and what the future might hold.

The secondary social studies classroom offers a unique and promising venue for fostering dispositions conducive to critical thought. These dispositions include

perspective taking, truth seeking, empathy building, open-mindedness, analyticity, and cognitive maturity. The main disciplines associated with secondary level social sciences (history, civics, economics and geography) offer immense potential for applying teaching practices aimed at increasing higher order thinking skills within these particular content areas. This chapter builds on chapter one, and is focused on how the social studies have been approached in public school in the past followed by a look at Washington State guidelines for teaching critical thinking in secondary public school classrooms. This discourse will lead into chapter three, where a critical review of current professional literature on critical thinking and areas of research associated with it will be offered.

A consideration of how history and other content areas in secondary social studies have been taught in public schools, and how the development of critical thinking has or has not been fostered is in order. But it seems of value to first look at a present day development in our country concerning the teaching of history. After this, the discussion will jump back in time to the pre-colonial educational institutions in North America, moving through to the present day, with an emphasis given on the period from the 1970's to present. A hypothesis will then be offered of what the role of critical thinking might have in a secondary social studies classroom in the future as a segue into a critical review of the professional literature related to critical thinking and the dispositions associated with it.

### The Contemporary Outlawing of Historical Interpretation

Few credible historians would argue that some amount of interpretation is not always present when doing history. Historical thinking can be broke into five components (National Center For History In The Schools, 2007) that serve as guidelines for suggested

grade band benchmarks in primary and secondary schools. These include (i) chronological thinking (ii) historical comprehension (iii) historical analysis and interpretation (iv) historical research capabilities and (v) historical issues-analysis and decision-making. The US Department of Education, in their benchmarks, divides history into three components. These are (i) major historical themes (ii) chronological periods and (iii) ways of knowing and thinking about history, with the third being further broken up into two parts: historical knowledge and perspective, and historical analysis and interpretation. Doing history requires making reasoned and informed judgments about events of the past, considering multiple perspectives, analysis and synthesis, and also being willing to change a perspective or alter an understanding when one becomes aware of new information, events or evidence. This is why the secondary social studies classroom offers such a rich opportunity for developing critical habits of mind. However, recent legislative action in Florida has effectively made the critical thinking skills required in studying history illegal.

The recent legislation signed into law by President Bush's brother Governor Bush in Florida stated "American history shall be viewed as factual, not as constructed, shall be viewed as knowable, teachable, and testable, and shall be defined as the creation of a new nation based largely on the universal principles stated in the Declaration of Independence (Florida House of Representatives HB 7087, 2006, p44). Interestingly, this wording includes the phrase "shall be viewed," implies that there are more than one possible perspective on the history of the United States, but that it is the "factual" account, the "testable" account that will now be the only view allowed by law. But what does this mean? What set of facts is the law speaking of. It seems like the law is asserting that

there is a correct set of facts that comprise a truly objective view of history. Zinn, a prolific contemporary historian said the total objective objectivity is

“not possible because all history is a selection of an infinite number of facts. As soon as you begin to select, you select according to what you think is important. Therefore it is already not objective. It is already biased in the direction of whatever you, as the selector of this information, think people should know...The worst thing is to claim to be objective. Of course you can't be. Historians should say what their values are, what they care about, what their background is, and let you know what is important to them so that young people and everybody who reads history are warned in advanced that they should never count on any one source, but should go to many sources (Zinn, 1992, p. 9).”

Consider these facts: 1) 57,700 names were removed from voter rolls by a Republican secretary of state before the 2000 presidential election. 2) 90% of the names removed were African Americans, some of which were convicted felons. At this point a construction or selecting of facts has already begun to portray a particular that establishes paradigms of analysis. If a couple more facts are added to the list: 3) 90% of the names removed from the voter rolls were of non-criminals and 4) African Americans overwhelmingly vote Democratic, a different set of facts emerges and different paradigms are set for analysis (Bell, 2006, p. 20). Simply put, all historical accounts are an interpretation based on the perspective and knowledge base of a person engaged in its activities, not an objective truth. Facts may be true, yes – even uncontested – but content cannot be divorced from context, as the recent Florida legislation attempts to do.

Before I could enter a graduate course of study in teaching, part of which includes this Master Thesis, I had to take two standardized tests. One was for general reading, writing and math skills, and the other for social studies content. Here I experienced this interpretive phenomenon. Several questions, particularly in the section covering economics, were clear interpretations that came out of specific schools of economic thought, specifically neo-classical economic theory. I had to think about who had written and administered the test, and what the dominant paradigms of economic theory are in the US. I answered according to how I imagined they would answer, even though I felt that I could have presented a substantive argument against the answers I gave. The point here is, more than the specific content of the test, is that my correctness – or my understanding of the content – was, at least in part, based on having the correct interpretation, not in how well I understood the material or how knowledgeable I was of economic theory. I scored highest on the economic portion of the test.

Florida's legislation is a bold move, but besides the restrictions of historical thinking it prohibits, includes a few other elements this author thinks worthy to consider. The first, as noted above, is that the historical facts to be taught in public schools "shall be defined as the creation of a new nation based largely on the universal principles stated in the Declaration of Independence (FHOR, HB 7087, p. 44)." While far from being universal principles, many educators in the United States – including this author -- would argue that these principles, most notably equality, freedom, and justice should be taught in our public schools. But these tenets are not those highlighted. Instead, the Florida legislation mentions three times the principles of the "right to life, liberty and property," not the right to "life, liberty and the pursuit of happiness" as it appears in the original document.

Granted, the word “property” was considered for the original, but was changed to “pursuit of happiness” before it’s signing. Nonetheless, it demonstrates the selectiveness and the interpretative nature of the legislation. Finally, the legislation commands that students be instructed in the “the nature and importance of free enterprise in the United States economy.”

The following discourse on the history of how history has been taught in public schools in the United States, the educational theories and practices that have accompanied this history, and how critical thinking skills have or have not been fostered over this time, is an interpretive account of facts, knowledge and experiencing encompassing several ways of knowing (as discussed in chapter one) based on many primary and secondary sources. This account emphasizes the contradictions and dialectical trajectory resulting from the development of an advanced capitalist society in a nation professing the fundamental tenets of equality, freedom and justice for all. It strives to come from a place of empathy and compassion for those who have suffered in the continual struggle for freedom and dignity -- those found in the highest ideals that our democracy proclaims -- and attempts to avoid and de-emphasize condemnation of those who, being unaware or perhaps by no decision of their own, helped orchestrate or benefited from inequitable and oppressive systems. In terms of teaching for the development of critical thinking skills in the secondary social studies classroom, this section highlights the need for social studies educators to be courageous in insisting that teaching their content – especially in terms of history -- needs to be authentic to the discipline, openly acknowledging its interpretive and subjective nature, so that students might be able to have the opportunity to engage in critical thinking.

## Toward Public Education: Colonial America

The European colonies established in America were physical manifestations of expanding systems of governance and economy. Few would contest the fact that early explorers were commissioned to explore the seas, discover trade routes, and establish posts for the benefit of accumulating wealth for themselves and their investors. The purpose and ambitions of the colonies that were established in the region of North America that would eventually become the United States fall into two broad categories. The first was to turn profit for investors, as the case with Virginia. However, some colonies in the North, in Massachusetts for example, were interested in creating self-sustaining communities where being able to practice their religion was a high priority. The educational norms varied in these colonies and reflect the different purpose and ambitions of establishing the colonies in the first place (Spring, 2005).

Thomas Jefferson was a central proponent of public education. Like Plato, he believed that a natural aristocracy ought be gleaned from the population. More specifically, Jefferson envisioned that the brightest and most able white males should become they ruling aristocracy, and that public schools might sort these leaders out. Additionally, Jefferson believed that citizens of a democracy needed to be literate and educated enough to be able to select representatives. Interestingly, while issues of systemic racism and sexism appear to have been of little concern to Jefferson, these sentiments indicate reservations held about economic inequities in a democratic society.

In the North colonies, with self-sufficient communities being a prime objective, educational practices focused on producing a homogeneous population whose social norms stemmed from a protestant interpretation of revelatory knowledge offered in the

Bible. In other words, education focused on literacy for the purpose of reading scripture. The New England Primer, the main book used in schools at the time, included materials focused on literacy, and religious prose, questions and dialogues only. It has been asserted that in these colonies it was felt that education – specifically literacy – was of high value because the devil was interested in keeping people illiterate so that they could not read the Bible. It seems that establishing a common vision using strict dogma and codes of behavior were of the utmost priority on these colonies. Compared with other colonies, the middle and southern colonies, literacy rates were high. The first laws in colonial America establishing requirements for the creation of schools based on the number of families in a town were passed here in the early and mid 17<sup>th</sup> century (Films For The Humanities and Sciences, 2001).

Communities in the North colonies often considered non-Protestants inferior and savage (Feagin, 2001). Indeed, non-European and non-Protestants were largely absent from being considered equal members of these communities. Samuel Hopkins, A New England minister, and perhaps one engaged in the critical examination of the social climate of the time, noted that, in terms of African Americans, “[w]e have been used to look upon them in a mean, contemptible light; and our education has filled us with strong prejudices against them, and led us to consider them, not as our brethren, or in any degree on a level with us; but as quite another species of animals, made only to serve us and our children; and as happy in bondage as in any other state (FFTHAS, 2001).”

The middle and southern colonies were quite similar in their schooling practices, not so much in terms of who received formal education or the content of that education, but rather in terms of establishing educational practices that reflected the interests of the

ruling social, economic and political agents of the setting. In the middle colonies, about half of the adults could sign their names – the indicator of literacy at the time. Religious groups ran most of the schools in the middle colonies. In the southern colonies, only children in the higher classes were educated, usually in a private home from a tutor. Blacks that sought an education were punished. Education focused on literacy and, for boys, learning trades (Spring, 2005). Critical thinking was not a part of the curriculum.

It appears that formal education in colonial schools was largely seen as the transmission of particular content – namely literacy and protestant beliefs – from the teacher and texts to the students. There is little evidence to suggest that critical thinking was a curricular process in this schooling, particularly in terms of the purposeful development of empathy for and perspective taking of systemically marginalized members of society. Further, formal education was for the most part only available to certain groups of children who came from the dominant or powerful sectors of colonial society

### Public Schools in the 19<sup>th</sup> Century

Textbooks from this time and well into the 19<sup>th</sup> century were blatantly racist. For example, an early geography text described the Africans, stating, “...the people are black. They are also very ignorant of books and learning and destitute of true religion. For many centuries it has been the practice of other nations to use them as slaves. Millions have been brought to America (FFTHAS, 2001).” The Boston school committee declared that “[i]n the case of colored children, we maintain that their peculiar physical. Mental and moral structure requires an educational treatment different from that of white children (FFTHAS, 2001).” Other groups were taught about with prejudice as well. For

example, according to Historian Carle Kaestle it was not uncommon for textbooks to contain passages such as “[t]he Irish in general are brave and hospitable, but passionate, ignorant, vein and superstitious,” or “[t]he Irish immigration has emptied out the common sewers of Ireland into our waters.” These types of sentiments reflected the dominant ideologies of the time, and indicate that critical thinking about socially constructed race systems was not encouraged and largely absent.

In the 19<sup>th</sup> century, education and emancipation began to be associated with one another. In the words of historian James Anderson, “It became clear to most [black people] that a better education did not mean a better position in society or a better job because of their race. And therefore it always raised the question for them ‘education for what?’ And I think the answer for African Americans was that they began to tie the quest for freedom and the quest for education and excellence together. And so they began to think of education as part of the freedom struggle (FFTHAS, 2001).”

A pattern emerges in this educative mode, where the reproduction of class, race and gender inequities is strikingly clear. It seems that all children were subject to educational systems that had structures (or the lack thereof) designed to situate individuals within zones of social and economic potential ultimately designed to reproduce these institutions and serve the interests of those atop socially constructed hierarchies of power. This is true both in and outside the schooling systems of this period, for only a fraction of what an individual learns comes from formal schooling.

The schools debates of 1840 secularized public schools. Before this – and to a large extent afterwards as well – public schooling was taught from a Protestant perspective. Indeed, even early and unsuccessful colonial era schools were established for the purpose

of anglicizing Native Americans and converting them to Protestantism. Irish immigration, however, brought a flood of Catholic children into the public school system. Religious groups demanded that they receive the portion of the education budget for public schools equal to the proportion of their children attending so that they could educate their children with their own religion (FFTHAS, 2001). Leaders feared that if they did this, soon many more religious groups would ask for the same thing, and public education would not be able to fulfill many of the purposes they envisioned, which included the construction of a distinct American identity in young people. Instead, schools were officially made secular in New York and passages in textbooks that were particular to Protestant beliefs were removed. In 1855, the Massachusetts became the first state to abolish segregation in public schools. In 1896, decades after the abolition of slavery, the Supreme Court case *Plessy v. Ferguson* made race segregation in public schools legal (and the social norm) through a doctrine known as separate but equal (Spring, 2005).

Again, there is little evidence to suggest that critical thinking was a curricular process in this schooling, and again, this is particularly true in terms of the purposeful development of empathy for and perspective taking of systemically marginalized members of society. In fact, quite the opposite seems to often have been the standard mode of operation, with great emphasis being place on an us-and-them type mentality that justified the dehumanization and oppression of many members of society. In terms of teaching for the development of critical thinking in the secondary social studies, throughout most of the 19th century, social studies were not included in the public education curriculum, with the exception of limited geography and small amounts of

European history. Additionally, the content that was taught not only appears antithetical to critical thought, but, in many cases, blatantly racist in nature.

### The 20<sup>th</sup> Century: Education, Social Studies and Critical Pedagogy

Social studies were first introduced to American schools between 1913 and 1916. The first official definition of social studies was issued in 1916 by the Committee on Social Studies. It stated that “[t]he social studies are understood to be those whose subject matter relate to the organization and development of human society, and to man as a member of social groups (Leming, 2003, p. 3).” At the same time during the early 20<sup>th</sup> century, the scholarship of DuBois was constructing what can be interpreted as the beginnings of what is known today as critical pedagogy (Graves, 1998). The relationship between critical pedagogy and critical thinking is found in the formers’ critical reflection – an application of critical thinking -- on education practices with an emphasis being placed on increases in social equity and educating in ways conducive to these gains. DuBois saw the schools as a place of social struggle and education central to gaining racial equality. This view, that the roots of critical pedagogy can be traced back to DeBois, is not often voiced. Instead, many understandings of critical pedagogy site Dewey perhaps, and more likely to educational theorists of the 1970’s when discussing the origins of critical pedagogy (Dewey, 1966). However, the themes central to most understandings of critical pedagogy can be found in the works of DeBois. The work and ideas of DuBois have very similar features to the five tenets of critical pedagogy articulated by contemporary theories (Graves, 1998).

- A language of possibility: having an informed sense of hope underpins critical pedagogy.

- A terrain of struggle: seeing the classroom as a space where teachers and students confront hegemonic social powers.
- Transformative Intellectualism: teachers are seen as active agents involved in social change.
- Group Solidarity: Facilitating an environment where all voices are valued and given space.
- Border Crossing: working across differences through dialogue with intent to achieve understanding.

Another feature that is common to the work of Dubois and contemporary understandings of critical pedagogy is that to challenge oppression is not to seek for higher status in a system of oppression, but to challenge the oppression itself. DuBois' writings on black education and ideas of setting up a black university were met with criticism that such institutions would be racist. However, his writings indicate that he was not interested in mirroring the systems benefiting white people or creating new systems of oppression, but instead was interested in overcoming oppression (Dubois, 1935).

The influential theories of Dewey were also being given significant attention during the first half of the 20<sup>th</sup> century. His theories emphasized the need for students to learn not through rote memorization and didactic educative modes, but instead achieve intellectual growth through problem solving and critical thinking. Dewey believed in learning from doing. Dewey's ideas of education were never implemented on a large scale in American public schools. Once the Cold War began, emphasis was placed on math and sciences in education so that the US could build a more advanced military.

Taken together, the ideas of DuBois and Dewey are closely linked with critical pedagogy and critical thinking. The works of these individuals provide a base for understanding the history of critical pedagogy and teaching toward critical thinking for the purpose of increasing social equity.

In terms of thinking for the development of critical thinking in the secondary social studies classroom, the period addressed in this section gave witness to the inclusion of social studies curriculum at the secondary level, and the first indication of the manifestation of critical thought. It may be no coincidence that critical thinking – though not explicitly identified in those words -- seemed to have begun manifesting in the public dialogue on education at the same time that historically marginalized peoples secured the right to an education. It appears that the inclusion of diverse voices in the academia and educational domains may have been a catalyst for the academic community to begin considering divergent perspectives. The entry of these voices into the public conversation on education may also have foreshadowed the development of educative practices conducive to critical thought, specifically in terms of empathy and perspective taking. That being said, these developments did little to combat inequitable practices in public education for many decades.

### Desegregation

In 1954 the Supreme Court case *Brown v. Board of Education* ruled that racial segregation in public schools was illegal. Chief justice Earl Warr stated that “[I]t is doubtful that any child may reasonably be expected to succeed in life if he is denied the opportunity of education. Such an opportunity is a right that must be available to all on equal terms. Separate facilities are inherently unequal (Bell, 2004, p. 14).” This was in

stark contrast to the “separate but equal” legislation passed nearly sixty years earlier.

However, this legislation only addressed students, not teachers or administration. One result of this was 30,000 black teachers in the south being displaced and losing representation.

The historical trajectory of race discrimination in public schools, however, would not be undone by the stroke of a pen. Indeed, more than fifty years later race based social, political and economic inequities continue to be powerful forces in our society. In the words of Bell – who stated this in the context of addressing *Brown v. Board* “[t]he very process of realizing a gain sought through the courts ultimately serves to deepen the legitimacy of the system... [C]ritical legal scholars are correct in asserting that the effort to gain rights and even the discussion of rights serve to co-opt and legitimize the very concept of rights and equality, leaving them empty of dependable substance (2004, p 188).” Bell’s sentiments are exemplified in the works of another author, Magnet in his statement “...injustices and victimization long kept blacks poor, but the injustice was racism, not some recondite economic inequity” (Magnet, 1993, p. 128). This reasoning leads to an idea – which is very prolific in our society – that abolition and the Civil Rights Act undid the racist nature of our history. This often further results in a classic feature of oppressor groups – blaming the victims of oppression for their own position. The answer to issues of injustice is then found to be in working within the paradigms offered in an oppressive system. In other words, becoming free of oppressive simple translates into accepting and working for a better position within an oppressive system. A critical examination of injustice is then skirted, with the solution being to try and achieve gains by moving from a position of being oppressed to a position of oppressing.

This is exemplified in pop culture today through prolific artists such as 50 Cent, who recently released a rap album entitled *Get Rich or Die Trying*. This mentality does little to address the structural features that facilitate the reproduction of inequitable systems, but rather simply advocates for individualism and the idea that the accumulation of wealth that has produced these systems.

In terms of teaching for the development of critical thinking in the secondary social studies classroom, desegregation had mixed results. On the one hand, it offered the possibility of including increasingly diverse student perspectives to participate together in dialogue and the doing of history (and other areas in the social studies) in the secondary classroom conducive to increasing empathy, perspective taking, and by extension critical thinking skills. On the other hand, it marginalized and further disenfranchised diverse voices at the faculty and administrative levels in public education. In other words, increases in diversity among student populations began coincided with the homogenization of educators (FFTHAS, 2001; Spring, 2005). It seems like little coincidence that this social reality took place during the same time period witnessing substantive increases in the momentum of the Civil Rights movement of the same period.

The history considered in this section might suggest that increases in diversity in a given setting might have a historically positive correlation with -- and predicate the need for -- increases in critical thinking, particularly in terms of empathy and perspective taking. This applies not only to the secondary social studies classroom, but also to the trajectory of social consciousness in general. Furthermore, when race, class, gender, religious or other hierarchies of domination, oppression, power or worth are adhered to, an increase in diversity may also mean an increases in conflict when critical habits of

mind are not present (again, particularly in terms of empathy and perspective taken) begetting the necessity of critical thinking if social relations are to be based on principled ideals rather than brute force.

### The 1970's: Justice and the Oppressed

The 1970's were when critical pedagogies and philosophical dispositions began to concretely manifest in the discourse on educational philosophy. Three influential thinkers are considered here: Rawls, Freire, and West. In terms of teaching for the development of critical thinking in the secondary social studies classroom, Rawls work provides a powerful conceptual tool for empathetic perspective taking. Freire's work offered a pedagogical model for teaching outside of an oppressive paradigm, and West's work articulated well a mode of thought – prophetic thinking – conducive to both historical and critical thinking. Taken together, these ideas provide a concrete framework for engaging in teaching for the development of critical thinking.

Establishing a foundation for understanding justice is crucial if gains in equity and justice are to be thoughtfully pursued. Rawls, in an influential work, articulated that principles of justice ought be deliberated by suspending one's particular identity so that "no one knows his place in society, his class position or social status, nor does anyone know his fortune in the distribution of natural assets and abilities, his intelligence, strength, and the like. I shall even assume that the parties do not know their conceptions of the good or their special psychological propensities. The principles of justice are chosen behind a veil of ignorance (Rawls, 1971, p. 11)."

This idea would be like a hypothetical situation where each person would be entering our world without knowing there social, political and economic position. It would be like

a rolling of dice, where one's birth would randomly be determined. Rawls' concept of justness would manifest as systems where the individual would decide on principles of justice without knowing their race, gender, class, sexual orientation, intelligence, or disability. He argues that if systems were decided upon under these conditions, a truly just system would be chosen. Obviously, these conditions are impossible to achieve. However, when considering what systems of justice might look like, and what those interested in working toward a more just might envision, this way of thinking about our social, political and economic systems is useful.

We are not, though, working in a system that will suddenly be reshaped by intellectual tools to conceptualize just systems. We work within a specific social and historical context, where the trajectory of the human story is in motion. One problem with Rawls' idea of a veil of ignorance is that society is constantly in motion and change, and cannot be collapsed like a motion picture might to view a single static frame. Working toward more just systems must be done within this historical trajectory that is continually experiencing motion and change. This requires a critical examination of the structures and institutions we interact with, keeping in mind a historical consciousness and the agency that humans have in influencing these systems. Perhaps most important aspect of Rawls work is in his marrying of empathy and intellectualism – two features closely linked to critical thinking -- in many of his ideas.

Freire published an influential work in the 1970's that articulated well many of the themes central to this work (Freire, 1970). One of these is the banking concept of education. This can also be seen as traditional modes of education. In this model, students are viewed as empty vessels to be filled with knowledge and information

transmitted from teacher to student. This model manifests as a unidirectional secretion and absorption of teaching and learning. It is antithetical to critical thinking in that the student is not encouraged to consider and grapple with information, knowledge and experiences to come to their own understandings, but is rather co-opted by an educative mode seeking to place the student within existing social, political and economic paradigms. As the history of public schools in the United States demonstrates, this mode of learning reproduces oppressive and unjust systems.

Another important aspect of Freire's work is his assertions that teaching for liberation does not entail teaching so that students may merely achieve a better status in an existing oppressive system, but that education is a crucial feature in transforming these systems. This educational philosophy comes from a position that learning can empower individuals and groups to work for their own empowerment and create communities of learning not to serve the interests of oppressive forces, but for the improving of their own communities and ways of living. Unlike many approaches to increasing justice in society, this approach does not enter an educational situation proclaiming to have the answers for the oppressed, but is rather the facilitation and orchestration of an environment where the paradigms of oppression are minimized: a garden for critical examination, learning and the development of agency.

More recently, the ideas of West have furthered these understandings. In particular, West has articulated a concept he called prophetic thought. There are four elements to prophetic thought.

- **Discernment:** Having an understanding and analysis of the present in light of the past. This is important so that a vision of the future might manifest.

- **Connection:** Prophetic thought requires an ability to relate and connect with others. Thinkers must have empathy for others. West describes this as “...the capacity to get in contact with the anxieties and frustration of others (West, 1993, p. 3).” In terms of education, the lack of this feature often manifests as the inability of teachers to connect with their students.
- **Tracking Hypocrisy:** To make known “the gap between principles and practice, between promise and performance, between rhetoric and reality (West, 1993, p. 5).” Central to this feature of prophetic thought is that it should be done in a self-critical rather than a self-righteous way.
- **Hope:** “[T]he notion that history is incomplete, that the world is unfinished, that the future is open-ended and what we think and what we do can make a difference (West, 1993, p. 6).”

These tenets are incredibly conducive to the dispositions associated with critical thinking. Interestingly, many of the ideas discussed in this section arose at the same time that aggressive neoliberal policies were also being implemented by those atop our society’s dominant social, political and economic systems.

### Critical Thinking in Contemporary Curriculum

Teaching in contemporary public schools inherently involves working in a system that has a long history of oppression and injustices. Teaching for critical thinking in these systems appears crucial if transformative practices are to be achieved. In Washington State, benchmarks have been established for meeting critical thinking standards (Office of Superintendent of Public Instruction, 2007). Six benchmarks are identified for the

high school level. According to these benchmarks, students at this level should be able to:

- Define and clarify a problem: Identify central issues; formulate appropriate questions; identify multiple perspectives; compare and contrast; validate data using multiple sources; determine relevant information; paraphrase problems.
- Judge information related to the problem: Distinguish between fact, opinion, and reasoned arguments; clarify point of view and context; identify assumptions and fallacies, recognize stereotypes, clichés, bias, and propaganda techniques; evaluate accuracy and timeliness of information; determine main message and identify target audience; analyze credibility and authenticity.
- Solve problems and draw conclusions: Compare benefits and costs, suggest logical alternatives, predict probable consequences, provide evidence to justify best solution, select most effective manner of communicating solution.
- Analyze cause and effect relationships: Hypothesize possible outcomes from an initial event recognizing multiple causes and accidental factors.
- Think Chronologically: Group human and natural events into broadly defined eras and use timelines to explain patterns of continuity and change in the succession of events.
- Take perspective: Reconstruct and express multiple points of view and integrate a historic, geographic, civic, or economic perspective.

In terms of teaching for the development of critical thinking in the secondary social studies classroom, these benchmarks reflect much of what has been discussed in the last two chapters. However, while the benchmarks do address perspective taking as an

element of critical thinking, they do not address empathy building. As has been discussed earlier, in the absence of empathy the development of all the habits of mind addressed in these benchmarks fall short of purposefully pursuing increases in equity, justice and democratic ideals, and may unwittingly play into a protectionist model of education that may not best serve the needs of students, our society and world.

## Chapter Summary

A central feature in the social, political and economic landscape in the history of the United States has been the race based class systems that continue to be witnessed and reproduced. The history of public schools and how individuals and groups have experienced these institutions reflects this broader condition. However, Washington State critical thinking benchmarks offer avenues of inquiry that, if applied to the social studies content and embedded with a commitment to building empathy, might serve to increase social equity and understandings of unjust systems of oppression thus inspiring visions of how students and educators might interact with and influence these systems toward increases in democratic ideals and the betterment of the common good. Additionally, if legislation similar to that recently passed in Florida is proliferated in other states, critical thinking might be limited to so-called scientific inquiry and divorced from the pressing social, political, economic, and ecological challenges we face.

I'm sure many people living in contemporary America were asked many times as a child "What do you want to be when you grow up?" I remember this very well. And I had many answers that changed over the course of my childhood, adolescence, and still as an adult. The first "what I wanted to be" I can remember is a comedian. Many others followed: an astronaut, a preacher, a musician, my own boss, someone able to pay the

rent, or whatever is available – why, do you have any work? All these responses, and the implicit assumption of the question itself, is not really what a child might want to be when he or she grows up, but perhaps more accurately, what interests does the child have that might shape his or her occupational position in terms of an economic identity when she or he is economically responsible for themselves? The assumption is that many options are open and that the child is free to choose among many possibilities. However, as with prolific educative modes of the past and present, transformative and visionary ambitions toward a more just world will only manifest as the paradigms of fitting into an existing oppressive system are overcome through educative modes embracing empathy, compassion and justice. This thesis will now engage in an evaluation of the professional literature on critical thinking, suspending the current discussion until chapter four where a synthesis and conclusion will be offered.

## CHAPTER THREE: A REVIEW OF THE PROFESSIONAL LITERATURE

### Introduction

Teaching for critical thinking comes from an association with the skills involved and the development of habits of mind conducive to thoughtful participation in a democratic society for the betterment of the common good. This notion – that a main purpose of education is to develop the skills and knowledge in a citizenry to participate in our democracy -- is as old as our nation, and then some – much more! Many changes have occurred since this time of our nation’s birth for sure. But what can current research tell us about the factors involved in teaching toward the development of higher order thinking? This chapter will focus on this question.

This chapter is divided into four sections in to address how educators might teach toward the development of critical thinking. The first section focuses primarily on the teacher and the dispositions, tendencies, and predilections of secondary social studies teachers that might help or hinder students developing critical habits of mind, and also considers critical thinking at the department level. The second section looks at the adolescent student, his or her developmental predispositions, and factors that contribute to learning and fostering higher order thinking. The third section – keeping the information and discoveries of the previous two in mind -- considers research and studies on the curriculum and methods in educational practices seeking to increase critical thinking in students. The fourth section then offers a discussion and analysis of the research considered in the first three chapters.

## Critical Thinking and The Teacher

Why should teachers care about educating for critical thinking? What dispositions, knowledge and skills affect a teacher's ability to teach higher order thinking skills? Do teachers possess the habits of mind embedded in the processes of critical thought – and to what capacity? How might teachers improve their ability to foster higher order thinking skills in their students? Before insights into these questions are addressed through the lens of formal research on critical thinking, it is important here to look at what teachers' concepts and understandings of justice are, for -- assuming that many teachers in the US have predilections toward ideals of equality and democracy – particular understandings and ideas of justice are the foundation of these democratic ideals. Indeed, most classrooms in the US recite the Pledge of Allegiance daily, which ends in the culminating phrase “and justice for all.” It seems important to understand this concept that so many students are taught to recite in their school classrooms every day. If teachers do not have a solid grasp of concepts of justice -- having developed their own interpretation and well-reasoned assessment of what justice is -- it seems likely that their educational practices and mode of teaching will reflect a tenuous or undeveloped concept of justice that might prove a major stumbling block, potentially serving to model and proliferate unidentified and unrecognized injustices.

A qualitative study focusing on interviews with eighteen social studies teachers (n=18) looked at the concepts of justice held by these educators (Makler, 1994). This study attempted to answer four main questions through the interviews: 1) Do teachers believe that they teach about justice in their curricula, and what are the reasons for saying yes or no? 2) If justice is a part of their curricula, how is it presented? 3) How do social

studies teachers conceptualize justice? 4) Do male and female teachers conceptualize and teach about justice in significantly different ways and, if so, what do these differences look like? Notice in this last question the implicit assumption – one that this author thinks accurate – that how a teacher conceptualized justice directly affects how they teach justice and what their students might learn about it.

While none of the teachers interviewed in this study made explicit remarks concerning the epistemological underpinnings of their concepts of justice, all the teachers believed that their practice encompassed students learning about justice in some way. The most common ways the teachers thought that they taught about justice was by:

- respecting the opinion of individual students
- treating students with dignity
- implementing clear policies concerning homework, late work, and attendance
- being polite
- setting equal standards for all.

These behaviors were those most reported by these teachers in how they teach concepts of justice. However, as several studies to be considered in this chapter will also hypothesize, adolescents might not demonstrate knowledge of materials taught implicitly, meaning that learning about justice is embedded in the curriculum, but not explicitly addressed. Perhaps teachers who believe they are teaching concepts of justice implicitly through their policies and behavior are simply not well versed on concepts of justice themselves, and therefore don't have the knowledge and skills to educate about justice or assess how their students are conceiving of and understanding justice.

The Interviews conducted in this study produced three main dominant themes or concepts of justice. These included viewing justice as (i) right or wrong (ii) as an ideal or standard (iii) and as fairness (the ordering of these understandings reflect the developmental trajectory of higher order thinking that stems from the rudimentary and primary dispositions associated with dualistic understandings -- but that might potentially flower into more critical habits of mind addressed later in this chapter). Congruent with past research on how people conceptualize justice, males in this study tended to view justice more in terms of fairness, rights and reciprocity while females tended to be more responsive to individual circumstance. In other words, female teachers were more likely to incorporate ideas of caring, relationships and specific context into how they thought about justice while males were less likely to represent these dispositions, relying more on deductive and inductive reasoning. No teachers explicitly explained why they were thinking about justice the way that they were. They simply stated what they thought justice was and how they did or did not include it in their curricula.

Those teachers that were better versed in concepts of justice tended to articulate that teaching for democratic participation involved teaching for social action. In other words, when ideas of justice were informed by some explicit study of justice (only two teachers reported such) they were more likely to equate justice with fairness, and advocate that students become active participants in our democracy, developing a sense of entitlement and obligation in acting in ways conducive to increases in equality and fairness. It seems likely that a teacher's view on the purpose of education comes into play here, as well as their sense of history and how the social, political and economic systems of our country reflect their concepts of justice. If a teacher camps in a subscription to a just world

theory – a social-psychological state wherein an individual has internalized a fundamental justness of the world – they seem much more likely to view education as a means to fit students into an existing system rather than seeing students as active members in a participatory democracy that they might influence.

This study relied on self-reported data only through interviews, so the specifics of how justice might be taught by these teachers are unknown. Researchers would need to create a criteria or rubric for what it is to teach justice, and observe or somehow systematically assess the degree that these teachers' instruction reflected the criteria. It is felt by this author that there is a real need for teachers to be explicitly exposed to differing concepts of justice during their time in teacher-education and pre-service so that they may better understand and articulate their own concepts of justice. This study indicates that this component of teacher education might be lacking, but this is unknown given the limited sample size. Many teachers in this study indicated through interviews that they were not well versed in theories of justice, had usually not considered such, and therefore struggled in teaching ideas of justice in an assessable and substantive way. This study concludes with a recommendation for in-service teachers to be more explicitly instructed in facets of political science. If teachers have not had the opportunity to consider, develop and looked at their own understandings of what justice might be, it should not be assumed that they will be able to teach toward increases in justice, equality or equity.

Another study that looked at how adolescents perceive a caring nature in their teachers will now be considered (Ferreira, 2000). An important element in teaching for the development of critical thinking is fostering environments conducive to building

empathy – a critical disposition associated with higher order thinking skills. However, like many activities associated with teaching, teachers might need to model empathy if they are to hope for developing or increasing empathetic dispositions in students. In other words, since one of the aims of teaching for critical thinking is to develop students that care about other people, teachers must care about students. It would be surprising to hear a teacher posit that the students he or she teaches are of little concern; that he or she does not care about students. On the other hand, it is reasonable to postulate that students might sense that some teachers do care about them, and others less so. This study asked what might make the difference whether or not adolescent students feel that a teacher does or does not care about them and what qualities do teachers demonstrate that translate into students feeling cared about? Research on this question indicates that the answer to this question appears to depend on the particular educative mode and group norms of a given classroom.

In open-ended interviews with students (n=101) in two mid-western – one urban and one suburban) middle schools with traditional classroom settings, features were identified as being indicative of a caring teacher. Students were selected through being identified by their peers and teacher as being caring students. A cross sample of students was selected to represent differences among the students and the perceived caring dispositions so that a spectrum of students with varying caring dispositions were included in assessing student perception of a caring teacher. In the urban school 90% of the students qualified for free or reduced lunches, 51% were black and 48% white. These students were mostly drawn from the neighborhood the school was in, with a small amount of bussing of students from outside the neighborhood. The suburban school had about 30% of the

students moving in and out of the school every year. These students were the students of mainly blue-collar workers. 12% of the student population were black children bussed in from a poor urban neighborhood. Also bussed in were poor white Appalachian children that made up 8% of the student population.

Both of these schools practiced educating in a more traditional way. These features include:

- Desks being arranged in rows, all facing one direction
- Knowledge/learning being viewed as something that is transmitted in a unidirectional fashion from teacher (or text, film, etc) to student
- An authoritarian classroom management style and/or school culture with students having little input; where students are subjected to, rather than participating in establishing the rules and codes of behavior they are expected to.

Some of the most common features students cited as indicating the caring nature of a teacher included:

- Teacher helping with class work
- Encouraging and guiding
- Developing relationships.

Further, in this traditional setting, students often cited being disciplined, having the teacher become visibly angry with the students, and being sent to the principles office as a sign of a caring teacher. Interestingly, none of the students mentioned content or curricula as indicative of a caring teacher. And further, all caring teacher behaviors were from teacher to student in nature.

The authors of this study discuss the disjunct between what teachers might think are caring actions and what students might perceive as caring actions. For example, one student who gave birth did not perceive that a teacher sending a card and balloons to the hospital was caring, but instead shared that she thought that if the teacher really cared they would have visited her in person. The authors further speculate that when a student perceives a teacher as uncaring behave in a way that reflects this feeling, and then the teacher sees the student's lack of appreciation as identifies the student as uncaring. This assertion exemplifies the situation discussed in chapter one concerning how mirror neurons illicit emotions and actions in others and the relationship between this an how attitudes tend to follow behavior. In this situation, when the students perceive a teacher's behaviors as uncaring, they reflect this back, and the teacher then judges the student as uncaring. Trough the uncaring behavior of the teacher (even if the teacher does not recognize it) negative attitudes on the caring disposition of the student develops.

The results of this study differ significantly from others that assert that the development of caring communities is essential in teacher caring and the development of caring students. The features of a caring learning environment include the following (Schaps cited in Ferreira, 2000).

- Student involvement in shaping classroom norms and practices.
- Activities that help students and teachers to know each other as people.
- Activities that build a sense of unity within the class by joining students together in shared, enjoyable pursuits.
- Disciplinary approaches that deepen children's bonds with one another and with the teacher.

- Minimizing competitive activities.
- Collaborative pedagogies such as cooperative learning that allow children to work interdependently.
- Integrating discussion into the teaching of literature, history, science, and other subject areas about the lives and circumstances of diverse others, and about what it means to be compassionate, principled and responsible.

Students in the previous study demonstrated a limited understanding of caring in teachers by only mentioning teacher to student behaviors and not mentioning curriculum or content as a potential indicator of a caring teacher. In other studies students who have experienced non-traditional learning environments have recognized teacher caring in other actions including their role in fostering student-to-student relationships, the relationships between teacher, students and content, and engaging learning activities.

The differences in these studies suggest that a student's perception of caring in teachers is bound to the paradigms of the educational experiences of a student or group of students. In other words, if students' classroom experiences have been confined to traditional modes of schooling, this model will limit their understanding of caring in a teacher. On the other hand, if students have experienced classroom environments that embrace some of the elements described in a caring setting, their understanding of teacher caring will involve a broader set of relationships and methods. This might be a useful understanding for teachers going into a particular school environment with preconceived notions of how they are going to be perceived by students. If students have only been exposed to traditional modes of education, a teacher should not expect to immediately be thought of as caring if he or she comes into an environment with more

progressive teaching strategies. Instead, perhaps these studies imply that new teachers might assess the background of students and their educational experiences, and work from there to develop the skills and experiences students might need in order to engage in activities and ways of learning conducive to cognitive, emotional and social growth. Middle class codes of language and possible behavioral norms may not be effective in increasing s students' perception of what it is to be a caring teacher in some settings, for several students stated that teachers who disciplined and gotten angry with students when they were not doing as instructed showed a caring nature. However, developing relationships with students, listening, and giving extra guidance when needed seem to be teacher behaviors perceived as caring in all of these studies. This appears important in teaching toward critical thinking because so that empathy – a disposition associated with critical thought -- is modeled by the teacher.

So far we have looked at the conceptions of justice held by social studies teachers, and how students conceive teachers to be careing. These are important issues. Let's suppose that a teacher is well grounded in their concepts of justice and take this into account when they teach. Further, let's suppose that a teacher has developed behaviors and attitudes that foster a caring environment. Here we can conceive of a teacher that has possession of some base attributes associated with critical thought. In other words, there is no reason to suspect that this hypothetical teacher is unable to engage in critical discourse, but rather that they demonstrate some habits of mind and an epithetic disposition conducive to higher order thinking. But how can the next step be taken in teaching toward critical thinking? What particular behaviors can teachers use to foster environments conducive to the development of critical thinking in students?

Studies and reports have indicated specific teacher behaviors that can help improve a thoughtful learning environment (Minstrell, 1993). For example, when leading a classroom discussion, asking questions can be a good strategy. Unfortunately, teachers often do not maximize the potential of discussion and question posing. Results of these studies indicated that more thoughtful discussions occur in classrooms when teachers:

- Allow appropriate wait time after asking a question. Teacher often wait than two seconds after asking a questions.
- Students answer individually at first, either by thinking individually about a question, having time to write a response to an answer.
- Have students share their answer with another student or small group.
- Move into a whole group discussions and write responses on the board.
- When discussing responses, allow supporting arguments to go first.
- Allow students who presented a particular response the opportunity to challenge the idea first. This gives students the chance to critically examine their own thoughts.

This way of facilitating discussion gives students time to think about a question, and also allows a way to separate the student from the ideas presented. In this way, students were more likely to share ideas, and students who were often quiet were more likely to participate in the class discussion. Also, this way of holding a discussion scaffolds students toward thinking through their own responses and offer a supportive place where the challenging of ideas is not directed at a student. When done successfully, this model of questioning provides the potential for scaffolding student in critical thought. Questions are considered, responses and ideas are considered from multiple perspectives,

ideas are organized, pros and cons or strengths and weaknesses of ideas and responses are given – all these practices exemplify critical thought.

Findings of another study of a single class with twenty-two 4<sup>th</sup> and 5<sup>th</sup> grade students (n=22) that were labeled gifted corroborated this information (Dixon et al, 2004). This piece of research is a case study of a single teacher who used the Dixon-Hegelian method. The Dixon-Hegelian method is an instructional strategy based on stemming from the Hegelian Dialectic, a process of considering a thesis, or a point, its antithesis, or counterpoint, and a synthesis of the two. Researches asked what affect the method had on increasing critical thinking in students. The researchers repeatedly placed emphasis on the gifted status of the students in the study, and professed that gifted student should especially be taught critical thinking skills. The teacher in this study had been teaching for twenty-three years. Her style was observed as quite traditional, and assessed as such based on a didactic, or largely teacher to student transmission, instructional approach. She often did many things at odds with those proposed in the previous piece considered. For example, researchers observed that in class discussions she often had a very short wait time, her responses to student answers were unambiguously accepted or rejected, and she often answered her own questions, which might diminish the potential for students to develop critical thinking skills. The authors noted that the teacher loved to control discussion and filter ideas, and the teacher affirmed this in an interview. The researchers also asserted that the students seemed to end up responding the way that they thought the teacher wanted them to. For example, the researchers heard students talk about what they thought the teacher would want to hear, and answered according to this.

Administrative pressure was being exerted at the school for teachers to try teaching in ways that developed thinking skills. The researcher versed the teacher in this study in the Dixon-Hegelian method of questioning. It is based on both Socratic questioning and a dialectical approach mirroring the philosophical ideas of Hegel that, as described above, include seeing reasoning as an ongoing process involving a stated thesis, an antithesis, and a synthesis of these two that then becomes a thesis. This might be exemplified in the examining of a problem or issue (thesis), considering alternatives and other perspectives (antithesis), and arriving at a possible solution (synthesis). This potential solution becoming a new thesis subject to a further antithesis – or other options or possibilities – that might emerge.

In this study, the habits and practices of the teacher before and during the beginning of the study can be seen as the thesis if placed in the Dixon-Hegelian framework. The mode of operation that had come to dominate the classroom was observed by researchers as one where the teacher had the best or most appropriate answers, often answered her own questions with little wait, and provided little room for independent thought. This procedure did not encourage students to think spontaneously and independently, which is central to the development of critical thinking. As the study went on, the teacher became more comfortable and practiced in using the Dixon-Hegelian model, and students soon became more ready to engage in free open-ended discussion. Students' thoughts and ideas went beyond what they had in the past. For example, when students filled in an advanced organizer – a “bubble map” that compared and contrasted a fictional protagonist in different situations – students committed to a thesis, gathered evidence in support of their thesis, clarified their conclusion and went beyond opinion based

arguments. Several students who had previously remained silent in class discussions were observed to have shared thoughts and ideas with the class. The teacher attributed this to developing a non-threatening atmosphere.

This study, while offering some concrete strategies to potentially increase the development of critical thinking skills, demonstrates several confounds. One issue that arises out of this study is the possibility of a self-serving bias, as the researchers were investigating a method that the central investigator, Dixon, had conceptualized and produced. Also, there was no control group to check results against. Perhaps the most troubling aspect of this study, however, is the insistence that it is only gifted students who need to be taught critical thinking skills, with no mention of the need of all students to be guided in critical habits of mind. It is troublesome that the researchers say that teachers need to have the expectation that gifted students can do this kind of thinking, assuming that other students are unable to develop critical thinking skills. The researchers did not use this same procedure with a group of non-gifted students, so this assumption is not well supported in the study. While the study does mention that students were identified as gifted by administering written assessments, it does not describe the demographic or socio-economic make up of the class. The potential here is that a diversity of students whose learning style might be less congruent or assessable with the specific assessment administered – especially since the specifics of the assessment piece are not described in the study – might not have been equitably assessed. This could potentially contribute to a reproduction of inequities when a possibly homogeneous group of students are the only students expected to be able to learn critical thinking skills, and therefore the only ones deliberately taught in their development. In terms of how to teach toward the

development of critical thinking in the secondary social studies classroom, this study suggested that effective discussion techniques could positively influence the level of critical thinking in students.

The next study to be considered involved three beginning history teachers (n=3) and the challenges they faced in developing critical habits of mind in their classrooms (Hover, 2003). This study focused on how teachers might encourage students to participate in the doing of history more like historians would. In other words, it asked what challenges do beginning social studies teachers face that influence whether and to what extent they teach historical thinking. Doing history was discussed in the previous chapter. This study defined historical thinking according to the *National Standards of History*. This institution asserts that historical thinking involves building historical knowledge, chronological thinking, using primary sources, conducting historical inquiry, and scaffolding students toward thinking historically.

The three participants in this study all graduated from the same masters/certification program in social studies in a southeastern university. It examined them in their second year of teaching. All of them taught in very different settings. Data was collected through two semi-structured interviews, two formal classroom observations, and between five and fifteen informal classroom observations. Data collected focused on the degree to which the three teachers used the methods they had studied in their masters certification program that mirrored those described in the *National Standards of History*. Information was gathered over an entire school year. The three teachers identified challenges and concerns that fit into four broad categories.

- Instructional issues.

- Behavioral issues
- Beliefs about students.
- Contextual factors.

In terms of instruction, all teachers tended to rely on lectures and textbooks to develop lessons. This was contradictory to the methods courses they had experienced in their masters/certification programs that emphasized using primary documents and teaching historical inquiry. Only one of the three teachers set aside time for activities that might encourage critical or historical thinking. Even so, this teacher emphasized that the reason for doing this was to prepare for a standardized exam rather than to develop habits of mind that might be applied in areas of the students' lives outside of their history class. Emphasis in all of these classes was given to the recall of historical facts, dates and events. Covering the textbook was a prominent theme in these three classrooms, and often used as a gauge by which the success of a teacher was measured. All the teachers reported the structuring of the curriculum was influenced by department demands to cover a large amount of material and prepare students for test taking.

Behavioral concerns were closely related to instructional approaches. Losing control was observed and reported to be a central concern of these teachers. One teacher, while frequently asking questions, tended to answer them herself and instruct students on what conclusions they ought draw. Another teacher seemed to closely link critical and historical thinking with group work and, because of his concern of students being off track during group work and losing control, was reluctant to attempt these kinds of activities. This was especially true for classes labeled low achieving, as this teacher indicated he would be more willing to attempt these types of activities with higher

achieving students. The third teacher was the most focused on student behavior and explicitly shared that his instructional methods were highly influenced by his need for effective classroom management practices.

None of the teachers showed much faith that their students were capable of engaging in critical or historical thinking. Academic level, maturity level and personal backgrounds were often cited as obstacles to teaching toward critical thinking. One teacher even stated that she didn't feel "like the kids know how to think." She believed that it was her job to make meaning of history for the students, because she did not believe they were developmentally capable of historical inquiry. Student ability and behavioral problems were often cited by the teachers were commonly voiced by all of these teachers.

The district, school and department climate were also seen as factors contributing to these three beginning history teacher's lack of teaching historical thinking. All said that they received little or no support their first year of teaching. One of the teachers did not have a classroom and had to move to available spaces throughout the school day. One teacher stated that she felt the environment at her school was hostile, another that it was very political and hierarchical, and another expressed great relief that he had survived his first year of teaching. Examples of feeling that their was a lack of support during their first year of teaching included statements claiming that a new teacher was a threat when a good job was done and a source of pleasure for some veteran teachers when a good job was not done, that other teachers were unwilling to share lesson plans or strategies, and uncooperative students.

The results from this study suggested that the beginning teachers in this study faced similar challenges in different contexts and settings. It appears that fear was a major contributor to many of the problems these particular teachers faced. First, teachers reported that they were afraid of losing control of their class. They also reported being afraid of not being seen as having done a good job in the eyes of their colleagues and administration. It might be the case that going into the classroom with this fear, and unfamiliarity with their new position, influenced the behavior of the teachers. Specifically, the fear of losing control might have influenced curriculum decisions. These decisions resulted in teacher behavior that did not foster instruction conducive with critical or historical thinking congruent with the methods course they had taken in their masters program. This behavior then was followed by the development of attitudes that students were unable to engage in thoughtful historical study. It is very easy to develop an understanding – an intuitive or common sense idea – that our individual behavior is a result of our perspective. However, as discussed in chapter one, attitudes seem to follow behavior more than the opposite. This ties in with the last study considered, where a veteran teacher was able to see increases in students' thinking abilities when she – under outside pressure – engaged in activities over a sustained amount of time conducive to higher ways of thinking. In this case, the behavior – although reluctant at first – was followed by a change in the teacher's attitude, as measured by the subject's own perspective and classroom observations.

In terms of how to teach toward critical thinking, this study suggested that teacher fears and teacher expectations of student ability influences their decision to teach toward critical thinking. It suggests that new teachers might be more reflective on their

pedagogy and the factors that might influence their perception of student ability. And further, it suggests that teachers the many pressures that beginning teachers face might result in instructional practices focused more on control and less on developing an environment where critical habits of mind might be fostered.

A study conducted through questionnaires given to teachers in 16 secondary schools suggested that particular factors influenced teaching higher order thinking skills (Raudenbush, 1992). This study asked what they effects of curriculum, teacher preparation and school were in teaching for higher order thinking in secondary schools, and appeared very relevant in addressing this thesis' question. While this study addresses several factors, it is included in this section because data was collected from teachers.

This study collected data on 1205 classes taught by 303 teachers in 16 diverse high schools in California and Michigan. Researchers used a three-level hierarchical linear model to decompose instructional goals into three components: goals vary within teachers as a function of the different classes they engage; goals vary among teachers within a specific school; and goals vary from school to school. Data was also categories by disciplines: mathematics, science, social studies and English. Much of the data applies across disciplines. When it does not, focus will here be given to social studies. A few prominent features emerged in this study.

- **Tracking:** This was the most prominent factor influencing teaching higher order thinking skills. As corroborated with other studies, high-track classes were more likely to teach critical habits of mind.
- **Specific Discipline:** While there were significant findings in teaching for critical thinking at different grade levels, this was not the case for social studies.

- **Teacher Preparation:** This was a factor only in terms of preparation in the specific content of a given class being taught, not the overall level of teacher education. It appeared that teachers who lacked content knowledge often resorted to “teaching the facts.” No link was found in this study between a teacher holding a Masters degree and increases in teaching higher order thinking.
- **Organizational Factors:** More than a supportive administration, teacher autonomy was a significant factor in increased levels of critical thought in a classroom.
- **Pressure for Achievement Gains:** Surprisingly, teachers under administrative pressure to cover large amounts of materials predicted more emphasis on higher order thinking.

In terms of social studies, the device used to evaluate data resulted in a four-item scale ( $m = 49.53$ ,  $sd = 9.90$ ) having internal consistency .76. These items included (i) formulating and presenting arguments to a group (ii) critically evaluating historical accounts or arguments (iii) analyzing historical and social science theories and (iv) using historical concepts to interpret current social issues. Results indicated that 20.4% of the variance in teaching higher order thinking was within the teachers, 67.5% of variance was among teachers within a particular school, and 12.1% variance was between schools. In social studies, organizational predictors influenced teaching higher order thinking more than tracking, as social studies are not generally as highly tracked as math and science classes.

This study relied on self-reported data from the participants, no classes were observed for this study and no teachers were interviewed. The study relied on one data source, diminishing the transferability of results. However, much of its findings are corroborated

with other research. For example, high-class tracks were more likely to be engaged in lessons conducive to higher order thinking, which implied that an expectation might have existed that students in lower tracks were incapable of developing these skills. In terms of teaching toward the development of critical thinking in the secondary social studies classroom, this study suggested that the biggest factor in determining whether these habits of mind were engaged in the classroom might have been the teacher, their content knowledge, and the extent to which they are versed in teaching critical thinking skills.

It is worth mentioning that the schools that were involved in this study were found to already place an emphasis on teaching higher order thinking skills. In other words, it might be that the sample involved in the study was already very well prepared in teaching critical habits of mind.

Experience might also be a significant factor in teacher's confidence using and developing some critical thinking skills. A study that looked at 45 pre-service teachers (n=45) collected data through pre and post tests on 13 critical thinking classifications (Ring, 1993). These tests were administered to the participants before their student teaching and after student teaching. These included having confidence in teaching skills in classification, creative solutions, distinguishing between fact and opinion, distinguishing between fact and fantasy, drawing conclusions, forming judgments, interpreting charts, making inferences, organizing events, predicting, recognizing bias, recognizing assumptions, and summarizing. Although participants did improve on all 13 critical thinking categories, statistical significance was only found in 10 of the 13 categories. The three categories that did not show statistically significant improvement were recognizing bias, recognizing assumptions, and summarizing. The data that this

study collected suggests a positive correlation between increases in pre service teachers' confidence in their own critical thinking and their student teacher experience.

While these findings do suggest that pre-service teachers' confidence in their ability to engage in critical thinking increase with their student teaching experience, there are several problems with this study. First, the study does not indicate specific criteria for participant selection, so potential confounds associated with this aspect of methodology are unknown. The study does not test participants' critical thinking skills or ability to teach toward their development, but rather, it tests the self-reported levels of confidence held by teachers in these areas. While gaining confidence in teaching critical think skills may be an important precursor to the actual development of them in students, this study was not concerned with nor addressed how levels of teacher confidence influenced the actual learning of students. The main purpose of this study was to assess the level of teacher confidence as prior research indicated a strong correlation between teacher confidence and student achievement. In sum, this study suggests a positive correlation between teacher experience and confidence. However, without a further analysis of outcomes in terms of student learning, the affect of teacher confidence levels on student learning is unknown. Further, if student learning is not being positively affected, but assumed based on the confidence levels of teachers, the cyclical trap of attitude and behavior previously described could potentially be of no service, or possibly a disservice, to students acquiring critical thinking skills. In terms of how to teach for the development of critical thinking skills, this study suggested that teachers who gain experience in teaching critical thinking skills became more confident in facilitating

instruction conducive to critical thought. Further, without this confidence, these pre-service teachers might not attempt to teach toward critical thinking.

In a qualitative study that incorporated Freire's empowerment model involved thirty education students (n=30) (Jackson, 2003). Freire's empowerment model incorporates reflective inquiry, consciousness (evaluation) and problem solving in teaching methodology. It asked how pre-service education students' levels of awareness of self, other, and context as well as awareness of social action options in dealing with multicultural issues. This study finds relevance to this papers' question in its engagement with how teachers might develop multicultural understandings in themselves and potentially their students, not only for more equitable practice, but also integrating diversity issues as a catalyst for critical thought.

These southeastern university students, ranging from 21 to 24 years, wrote about critical incidents they personally experienced involving a cross-culture issue. Twenty-one percent of participants were male and 79% were female. Thirty-eight percent were white and 62% persons of color. After students identified an issue, they were instructed to answer the following questions:

- Describe the diversity or cross-cultural situation you experienced.
- Describe in detail the events as they occurred including the sequence as in unfolded and indicate what, when, where, how, and why the events took place.
- Indicate the cultural status of the person(s) involved in the situation and describe their relationship to one another.
- Specify how you reacted to and/or handled that situation.
- Explain the diversity issues that arose from the situation.

- Describe how you think the situation could have been addressed.

Students were given 50 minutes to write these narratives that provided the data for analysis. To assess the level of critical thinking in these narratives three categories were established.

- High-Level of Critical Thinking and Self-Inquiry: (i) the ability to recognize and articulate the value of diversity among people (ii) perceive these differences as valuable and positive and (iii) recognize when people were treated inequitably due to their diversities.
- Mid-Level of Critical Thinking and Self-Inquiry: (i) students see diversities among people but did not see or accept the values and differences and (ii) students did not recognize the uneven application of fairness or justice.
- Low-Level of Critical Thinking: (i) students saw people as homogeneous or (ii) students saw differences in people but downplayed their differences.

The narratives of these students were considered against these categories and indicated that 18% of the participants possessed high critical thinking skills, 66% were in the mid-range, and 16% fell into the low critical thinking range. This research also looked at what action students did or did not take in the narratives they wrote about. Ten percent of students took some action in addressing the situation, 37% recognized an unjust situation but did not feel responsible for addressing the situation with some kind of action, and 53% saw no need for action or did not recognize an inequality. In terms of critical thinking, these categorical findings related to the dispositions of empathy and perspectives taking as well as having had an evaluative element by having students assess inequitable treatment due to diversity. Additionally, it went beyond assessing empathy

and might be seen as to have also assessed compassion, as a measurement of students inspired to action was also taken.

This research is important to this thesis' question in more than one way. It offered some ideas for activities – or curriculum – that might help teachers assess the critical thinking skills of students on multicultural and diversity issues. It also indicated that many teachers might not be that aware of inequitable systems they experience, and may not have experience engaging in critical thought on these issues and therefore might not recognize them. It seems reasonable to believe that motivation to action will not manifest in individuals not recognizing an injustices. It suggested that raising critical awareness about issues must precede social action to address these issues. Additionally, if teachers are unable to recognize these issues they may be unwittingly reproducing them. This study also suggested that diversity and multiculturalism might not be approached as mere content pieces, but by their nature offer rich opportunities for developing critical habits of mind, particularly in terms of empathetic and perspective taking dispositions associated with critical thinking.

Another study offered an empirical analysis of the association between classroom thoughtfulness and organizational features (Ladwig, 1991). It asked the question “What departmental organizational features are associated with levels of classroom thoughtfulness?” In addressing how to teach toward the development of critical thinking skills in the secondary social studies classroom, this study is relevant in considering the influence that departmental organizational features might have on the classroom and, by extension, on student learning critical habits of mind.

This study collected data from 16 social studies departments including five departments identified as possessing strong efforts to promote higher order thinking, four departments identified as exhibiting organizational innovation in the promotion in the promotion of higher order thinking, and seven departments identified as representative of a diverse set of departments. Both quantitative and qualitative data was collected in this study. Quantitative data included teacher-planning time, number of students in each class, number of students each teacher taught, and number of courses the teacher planned for. Qualitative data was collected from observations and interviews.

Some counter-intuitive data was collected that was in contention with some previous research. For example, class sizes were larger in departments identified with higher levels of teaching for higher order thinking. Also, teachers at the top group of departments had less planning time than their lower scoring counterparts. In all three of the highest ranked departments a staff commitment had been made to promote the development of higher order thinking skills. In the four lowest ranked departments, the department chairs and a single teacher were the only participants who made assertions placing an emphasis on critical thinking as a department goal. Institutes with higher scores were more likely to continually revise curriculum while the four lowest showed no indication of revisions. Higher ranked departments also tended to attempt to increase the quality of teacher instruction in the area of critical thought while the lowest ranked departments made little or no attempt had been made in this area.

This research suggested that, in terms of analyzing teaching for critical thinking at the department level, more than particular structural factors involved with teaching (class size, planning time etc) it might be programmatic efforts (focus of entire department,

collaborative and collective efforts, common vision, teacher training) that determined the degree to which teachers effectively developed critical thinking. This informs the question of how to teach toward the development of critical thinking as it suggested that teachers might purposefully collaborate and develop an emphasis on a department-wide focus on critical thinking in order to increase the effectiveness of their practice.

A study that looked at levels of epistemological understanding and critical thinking skills of pre-service teachers asked two questions: what levels of epistemological understandings do pre-service teachers engage in when discussing cases in an educational psychology course, and is there a relationship between student's levels of epistemological understanding and critical thinking dispositions (Allen, 2006)? This is important to the question of how to teach toward critical thinking in the secondary social studies classroom, as teachers who do not themselves possess critical habits of mind are at a loss to teach for their development. In this study, 14 female and 5 male students (n=14) volunteer participants were recruited from two educational psychology classes. Twelve of the students were of traditional age (18-24) and seven students were classified as returning students (25+ years of age). Data was collected from a demographic survey, participating observation, student interviews, analysis of videotapes using a self-designed rubric, and administering the California Critical Thinking Disposition Inventory (CCTDI). Four levels of epistemological understanding were used in this study.

- **Realist:** Thinker believes that assertions are copies of an external reality, that knowledge comes from external sources and is certain, and that critical thinking is unnecessary.

- Absolutist: Thinker believes that assertions are facts that are correct or incorrect in their representation of reality, that knowledge comes from an external source and is certain but not directly accessible, producing false beliefs, and that critical thinking is a vehicle for comparing assertions to reality and determining their truth or falsehood.
- Multiplist: Thinker believes that assertions are opinions freely chosen by and accountable only to their owners, that knowledge is generated by human minds and therefore uncertain, and that critical thinking is irrelevant.
- Evaluativist: Thinker believes that assertions are judgments that can be evaluated and compared according to criteria of argument and evidence, that knowledge is generated by human minds and is uncertain but susceptible to evaluation, and that critical thinking is a valuable vehicle that promotes sound assertions and enhances understanding.

Participants were given case studies to analyze in writing. These written analysis were then compared to participants' CCTDI scores by identifying common and variant themes using a constant comparison method. Data from the CCTDI was also compared with data obtained from the rubric analysis of videotapes of case discussions held in the two educational psychology course.

In terms of the first question this study asked – what level of epistemological understanding do students engage when discussing cases in an educational psychology course? – there was a general upward tend in all levels of understanding as students gained experience with engaging and discussing cases, particularly at the Multiplist and Evaluativist levels. Researchers identified a direct relationship between the

epistemological level of student responses and the type of question that instructors posed. Students progressively went beyond responses at the Realist and Absolutist levels, offering their opinions more frequently (Multiplist level) and supporting their ideas with logical argument (Evaluativist level).

In terms of the second question this study asked – is there a relationship between students' levels of epistemological understanding and critical thinking dispositions? – little relationship was found between the cognitive maturity level of participants as measured by the CCTDI and the degree and frequency to which students did or did not demonstrate responses at the Evaluativist level during discussions of cases. In sum, this study suggested that the type of questions that instructors ask during discussions highly influences the epistemological level of student responses, but found no correlation between this level and critical thinking skills as assessed by the CCTDI.

Perhaps the reason that there was no correlation between the epistemological level of participant responses and their performance on the CCTDI is due to the particular questions posed by instructors. In other words, the phenomenon of students' epistemological levels increasing as they became more experienced with engaging cases might have been accompanied by the instructors also becoming more experienced in facilitating discussion about the, and that instructors became more skilled at posing questions that required a higher level of epistemological understanding to appropriately respond to. Perhaps demonstrating higher levels of epistemological understanding in discussions ought be more associated with questioning strategies than with critical habits of mind.

In terms of teaching toward the development of critical thinking skills in the secondary social studies classroom, this study suggests that teachers possessing quality skills in leading discussions and posing questions will be more effective in eliciting responses of higher epistemological level. However, this study also suggests that teachers should not assume that students demonstrating higher epistemological levels of understanding during class discussions – particularly when responding to teacher posed questions – indicates an overall skilled critical thinker. Further, this study looked at pre-service teachers, not secondary students, and this decreases the transferability of the results.

In one of the studies considered previously, a factor in teacher effectiveness in a classroom was significantly related to a teacher's content knowledge. This suggested that teachers not possessing both content knowledge and critical habits of mind themselves would be at a disadvantage in teaching toward the development of critical thinking in their students. In several of the studies considered thus far it appears that a pattern appears where teachers often do not trust the ability of student to be able to critically think, and therefore do not solicit ideas and thoughts conducive to critical habits of mind from students. This suggested that teacher expectations affect students' developing critical thinking skills. Certainly, if a low expectation of student ability on the teacher's part results in not even attempting to teach critical thinking skills, students will be at a disadvantage to learn these skills. Several of these studies also suggested that teacher the quality of relationships that teachers have with students might influence the development of critical thinking in their students. Further, developing effective questioning skills appeared to be of value in stimulating higher levels of thinking in students.

If teachers deliberately reflect on their own practice, considering how they themselves are or are not critically thinking about their instruction, behaviors and attitudes, considering the perspectives of their students as well as historical texts and voices they may not have encountered before, they might better be able to teach toward critical thinking. It is assumed that one cannot teach what one does not know. There is no reason to believe that this is not only true in the case of content (US history for example) but also in the process that a teacher approaches his or her subject with. For example, teachers who had experience engaging and considering concepts of justice appeared more effective in teaching justice. Another study suggested that placing an emphasis on diversity and multiculturalism might be of value, not only in terms of increasing equity in the classroom, but also in terms of providing rich opportunities to develop critical thinking skills. In sum, many of these studies suggested that teachers need to view themselves as learners as well as teachers, both in terms of discipline specific content and learning about the particular individuals he or she works with.

### Critical Thinking and The Student

The previous section considered what factors related to the teacher affect teaching critical thinking skills in the classroom. The following section considers factors related to the student that might affect the development of critical habits of mind.

The first study considered in this section relates to the last study in the previous section, but rather than looking at epistemological understandings in pre-service teachers, it considers the epistemological beliefs of undergraduate students in studying a historical event. This study looked at three classes over a three-week period examined the historical thinking of undergraduate students (Hynd-Shanahan, 2004). Researches asked how

students' epistemological beliefs influenced their thinking about multiple historic documents after receiving explicit instruction in evaluative strategies. In terms of the relevance of this study to the question of how to teach toward critical thinking, the epistemological and analytical components of this study mirror dispositions and skills associated with critical thinking. Further, the particular content that students engaged – the Gulf of Tonkin incident – is applicable to secondary social studies content. Researches self-selected participants from three classes they were themselves teaching using an epistemology inventory that assessed students on the following four-tier model.

- Stage 1: Dualism: Perceiving history or issues in a right/wrong, good/bad framework. In other words, believing that there are correct answers to all questions. This way of thinking is encouraged through didactic teaching.
- Stage 2: Multiplicity: A series of stages where students begin to understand that many answers may be more opinion than fact, and that all answers cannot be handed down by authority.
- Stage 3: Relativism: Students begin to believe that knowledge is constructed, and they are active constructors of meaning.
- Stage 4: Commitment within Relativism: Students begin to affirm their identity with the knowledge they construct. At this stage, relativism is seen as inadequate, and judgments begin to be made based on the quality of evidence of particular positions.

After assessing naivety and maturity levels of all the students in the three classes they taught through this epistemological inventory, they chose students that represented a range of cognitive naivety and maturity levels. Thirteen students (n=13) were then

closely evaluated through interviews before and after reading conflicting accounts of the Gulf of Tonkin incident. The Gulf of Tonkin incident was an initial event the US used to justify its full-scale entry into the Vietnam Conflict. Since this incident, the validity of the story presented by the US government has been discredited, and many conflicting narratives have emerged. There were three components to the strategy explicitly taught before student engaged four conflicting narratives. These were:

- Sourcing: Engaging in an evaluation of the source materials.
- Contextualizing: Placing a text's arguments within a particular times period and social-historical context.
- Corroboration: Looking for evidence across different sources and evaluating the degree to which they agree or contradict.

Although students were at different stages as assessed in the epistemological inventory piece, 12 of the 13 students showed epistemological shifts over the three-week period. Researchers looked over interview data several times and divided these cognitive shifts into three themes:

- Thinking about a historian's job increases disciplinary knowledge
- Students struggle with subjectivity/objectivity and relativism
- Students change their strategies and their ideas about what it means to read about historical events

This study suggested that explicitly teaching analytical strategies in reading historical documents positively correlates to increases in epistemological maturity. However, confounds do exist. For one, the researchers looked at data from classes they taught and selected the participants themselves, creating the possibility of a self-serving bias. The

small sample size also limits the application of findings to other settings. Also, the research does not consider specific skills that teachers might need to affectively facilitate lessons. In terms of how to teach for critical thinking in the secondary social studies classroom, this study examined undergraduate students, not secondary students whose cognitive maturity might be at a lower level. Nonetheless, this study did see better results than the previous study on perspective taking was examined, but no explicit instruction on strategies to do so were taught. This suggested that teaching explicit strategies might increase the effectiveness of teaching toward critical habits of mind in younger students as well.

Fostering environments conducive to the development of critical thinking entails teaching toward dispositions conducive to higher order thinking. Two of these dispositions that are closely related include being able to see things from multiple perspectives and building empathy. A study that looked at empathy and role taking in 6<sup>th</sup> and 9<sup>th</sup> grade students sought to examine these qualities in student by looking at stories that student wrote about moral conflicts involving himself or herself or a friend (Tirri, 2000). In this study 100 sixth grade and 94 ninth grade Finish students (n=194) from four different schools participated. Interest was given to the question of how emotional intelligence might affect dispositions associated with critical thinking. In terms of how to teach toward the development of critical thinking skills in the secondary social studies classroom, this study is important in that it looks at the development not of critical thinking skills specifically, but in the development of the dispositions of perspective taking and empathy building that are associated with critical habits of mind.

In these student-written stories, five themes emerged in the moral conflicts expressed.

- Harassing
- Peer Relationships
- Teacher Behavior
- Adult Behavior
- Common Rules

Student stories were assessed through a descriptive content analysis that focused on themes and social relationships. These stories were coded by the moral judgment they presented and separated into two broad categories: morality of rights and justice and morality of response and care, with the former addressing issues of inequality and oppression considered against an ideal of reciprocity and equal respect, and the latter addressing issues of detachment and abandonment considered against an ideal of attention and response to need. Harassing was the subject of most of these testimonies on moral conflict for 6<sup>th</sup> graders, accounting for 55% of the writings. 9<sup>th</sup> graders biggest focus was unjust teacher behavior, which accounted for nearly 50% of the stories shared. Differences were not only found between grade levels, but among boys and girls. Overall, the researcher's interpretation of the data indicated that girls showed a greater ability to empathize, were more care oriented, and more able to see conflicts in broader contexts. However, girls did show an increase in justice-oriented positions from 6<sup>th</sup> to 9<sup>th</sup> grade. Boys at both grade levels were more likely to be justice oriented, relying on deductive based reasoning in their approach to moral conflicts. Interestingly, the researcher's analysis of the stories of 9th grade students suggested that these students tended to look at broader meanings in their stories more than their 6<sup>th</sup> grade counterparts.

A problem with this study is that it did not specifically describe the prompts used for student writings, or if different students received different prompts or had a choice in deciding what prompt they responded to. A possible confound emerges here as the possible affect semantic variations in prompts might have on student responses is unknown. It is also possible that a self-serving bias may be present as the researchers openly indicate that they were attempting to corroborate their findings with previous research. In terms of how to teach toward the development of critical thinking skills, this study suggests that there might be particular themes -- harassing and unjust teacher behavior in this study -- that students can more readily connect with and be able to draw upon their own experiences and understandings in learning activities aimed at developing perspective taking and empathetic dispositions associated with critical habits of mind.

The relationship between identity and cognitive development – or critical habits of mind -- was examined in a study using Erikson's conceptualization of adolescent development and Marcia's later efforts to formulate identity status categories (Klaczynski, 1998). Social and cognitive predictors of identity status have been a topic of many studies. This study differs from many before it in that it looks at the degree to which adolescents employ rational or experiential information processing and how these attributes might be predictors of identity status. Rational processing was described as: conscious, effortful, analytical, slower, contextually based, logically justifiable, and empirically verifiable. Experiential processing was described as preconscious, holistic, automatic, crudely integrated, and often stereotypical. In terms of how to teach toward the development of critical thinking skills, this study's relevance is found in its consideration of the relationship of cognitive development to identity formation in the

adolescent because understanding this relationship may give insight into the degree that critical thinking skills are a product of experience or development. In other words, this study looks at how particular experiences of an adolescent student – or crisis – might affect his or her cognitive development and potentiate the development of critical thinking.

This study broke adolescent identity status into four categories.

- Identity Achieved: The adolescent has experienced a crisis and made commitments.
- Identity Moratorium: The adolescent is currently experiencing a crisis but yet to make a commitment.
- Identity Foreclosed: The adolescent has not experienced a crisis, but has a high degree of commitment.
- Identity Defused: The adolescent has not experienced a crisis and made no commitments.

An example seems to be of service here in explaining what these categories mean. In a college class I was in, a professor relayed a story she came across (Lorde, 1982). In this story, an ambitious young black girl ran in a school election for a student government post. The girls in the real life account thought the criteria for being elected was being the most intelligent of those running. She had been told many times by different people that she was very bright, and she believed she was the most qualified for the post based on this criteria. When the election took place and almost no one had voted for her, she was devastated. This event served as a crisis. In short, the way that she had been thinking about things bumped up against a reality where her race seemed to trump her ability and

diligence. This episode might be seen as the girl moving from an Identity Foreclosed status to an Identity Moratorium status as these events challenged her commitment to previous understandings. This study asserts that other research findings have convincingly demonstrated that students in achieved and moratorium statuses are more cognitively developed. This is congruent with Piagetian theories of learning that involve a process a learner goes through from equilibrium, into disequilibrium and, through accommodation or adaptation, back to a state of equilibrium. In short, as long as a way of thinking about something continues to work a learner will tend to continue with a particular way of thinking. In this story, the girl's idea that the school election was based on merit and ability bumped up against the reality of how the color of her skin played into her experience, bringing on a crisis. The old ways of thinking about the systems she interacted with were no longer working.

In terms of the difference between rational and experiential knowledge, past research has indicated that individuals relying more heavily on experiential knowledge tend to believe that heuristic responses are logical and often advocate less effective coping strategies than individuals relying more heavily on rational reasoning. This study, relying on a battery of questionnaires and inventories, looked at the relationship between identity status, rational/experiential processing, and formal operations ability. Three features mark formal operations skills, which the researchers believe are necessary before an adolescent experience healthy identification development.

- Ability to hypothetically reason.
- Systematic Introspection: The ability to systematically explore one's own thoughts.

- Logical future oriented planning.

This study relies on the theory that formal operations offer the cognitive tools to systematically envision possible futures and possible identities, facilitates increases in introspection and increases the adolescents ability to evaluate his or her goals and the compatibility they may have with his or her personality, motivation and abilities.

The forty-nine adolescent volunteers in this study were selected from a summer program that focused on critical thinking skills. They were predominantly from low socio-economic backgrounds, and 78% were from urban areas. Twenty-three were white, 14 were black, 8 were Hispanic, and 4 were of more than one ethnic background. The median age was 16.9 years with a standard deviation of 1.67 years, and 23 were female while 26 were male. These students were recruited for the critical thinking program from 350 applicants from the southeastern US based on essays they had wrote on the potential for critical thinking skills to contribute to civil life. Participants were not selected based on intelligence (as measured by an IQ score) but rather on the perceived ability to engage in critical thought as assessed by three independent judges of essays. In terms of the students' grade point average, a relatively even proportion of students whose grades ranged from 2.0 and 5.0 on 0 to 5 point scale were represented.

Data was collected from several tests: the Rational Versus Experiential Inventory (RVEI) the Test of Logical Thinking (TOLT) and the Thinking Dispositions Questionnaire (TDQ). Because of the limited size of the sample, subjects were not placed in discreet identity categories, but viewed as having tendencies toward dispositions. Results suggested that, to an extent, experiential and rational processing are independent. This corroborated with earlier research (Epstein et al. 1995). Additionally,

participants with higher foreclosed and diffused identity scores reported relying more heavily on experiential processing than on rational processing. However, although the authors of this study might be inclined to imply that this translates into higher abilities to critically think, this may only be true within a certain paradigm of knowing. For example, in neoclassical economic theory individuals are assumed to be rational economic beings, meaning that an agent will necessarily make individual decisions that are to his or her best economic interest. In other words, people are going to make individual financial decisions that reap him or her the greatest monetary return. An individual who always does this would simply be thought of as a rational economic person. However, most people do not always act this way, but instead make many economic decisions based on the needs of others, the environment, and society. Some economists might believe that these acts are not the product of a rational mind, but obviously, strong arguments can easily be made against this sentiment. Without an assessment of the particular questions that were asked of the participants in this study a clear understanding of what kinds of thinking was considered rational or experiential is unknowable. Participants would further need to give an explanation for their specific responses to know this for sure.

Rational processing was most closely linked to the two identity statuses at either end of the spectrum; identity achieved and identity defused. There was less of a link between rational vs. experiential processing and either critical thinking or formal operations. This study speculated that moving from experiential based reasoning to more rational reasoning will be accompanied by a shift in identity status from that of foreclosed and diffused to that of moratorium or achieved. While a cause and effect relationship

between rational processing and identity development was not made clear, the researchers speculated that the positive correlation between cognitive and identity development could provide the basis for formal operations which in turn might pave the way for developing dispositions toward critical evaluation, especially in the context of things relevant to the particular adolescent. Limitations of this study included the sample size, that it only dealt with a specific age group, as well as possible subjectivities previously mentioned. In terms of how this study informs the question of how to teach toward critical thinking in the secondary classroom, it suggested that teachers ought become increasingly aware of their students' lives, and capitalize on the experiences of students in teaching toward critical thinking. In other words, adolescence can be a tumultuous period where the individual experiences a number of crisis situations, and while this may not be a comfortable process for the adolescent, it offers the potential for cognitive growth in the arena of critical thought if a teacher recognizes growth in identity development and provide critical thinking learning opportunities that take the individual student's circumstances and experiences into account. This dynamic and complex approach requires a commitment on the part of the teacher to get to know their students as well as possible, and the skill to apply this knowledge within their day-to-day teaching practice.

How does a student's conception of history and historical significant play into predilections conducive to critical thinking? A study that looks at how students understand historical significance focused on this question (Seixas, 1994). It was undertaken in a Canadian middle school and included 14 student participants. This study discussed issues in defining historical significance and analyzed the significance of questionnaires given to the participants. The researcher self-selected the subjects by

scanning 38 questionnaires and pulled from them what he thought to be diverse examples. Examples of questions include “[I]t’s very interesting to see the patterns of life and people’s beliefs,” and “I like looking at the cause and effect of certain events in history.” The 14 subjects selected were then interviewed more extensively.

The students in this survey were asked what they thought were the most important historical events. Two categories of responses emerged: narrative and analogical. A chronological understanding of how the past has led to the present, or the lasting effects of the past with the present and future indicated a narrative response. An analogical understanding was characterized by learning from past historical events so that the same mistakes might be avoided. The historical events that participants cited most were one or both of the world wars, Europeans reaching the western hemisphere, and the rise and fall of communism. The similar language of these responses suggested that students may have been merely reporting what they had heard. Other responses were about events of more local or individual relevance. An analysis of the findings in this study revealed some common characteristics of the surveys. They were:

- Students often talked as if history was now under control.
- War and international politics were the big issues.
- Themes like gender, labor, economics, diet, class and race were not mentioned as historically significant.
- Only a small percentage made connections between historical events and their own lives.

Student responses suggested that the personal significance associated with historical events was linked with better thinking and reasoning skills about history, as those

students who demonstrated historical thinking tendencies were also addressing historical topics and events that they were able to relate to their own lives. A problem found in this study was the lack of significant background knowledge in secondary social studies students' understanding of what doing history – or thinking like a historian -- is. These pieces suggest that historical significance might be built through beginning with history that holds personal meaning for the students and can help build knowledge that can then be linked with events that may not have previously appeared to hold much significance for the student. Perhaps the potential for this historical knowledge building is done a disservice when history is taught in a chronological fashion starting with a distant past that seems far removed from the lives of the students and slowly progressing to the present. Curriculum plans in history class that begin with the present appear to be a promising strategy for overcoming some of these barriers. Additionally, looking at history through thematic lenses like race, gender economy or diet may help increase historical and critical thinking in students by freeing them of misconceptions of what it is that historians do.

In terms of teaching critical thinking in the secondary social studies classroom – particularly in a history class –authentic interest may need to be cultivated in if strategies aimed at developing historic and critical thinking skills are to be successful. This study suggests that doing history that starts with the student, their real life interests and concerns, and building on those pieces, might generate more authentic interest, curiosity and desire to engage in learning skills associated with historical thinking and, by extension, critical thinking. However, the researcher self-selected the participants for the study, creating the potential for a self-serving bias that may have confounded the results.

Two studies that focused on seven 6<sup>th</sup> grade students (n=7) in northern Georgia asked how text comparisons and guest speakers influenced student's ability to look at historical events through multiple perspectives (Matsro, 2001. Mastro et al, 2001). For the first study, the researcher assessed student perspective taking through three data sources: interviews with the teacher and seven case study students, classroom observations, and written pieces produced by students. For the second, the researcher assessed perspective taking through an analysis of student presentations they gave at the end of the unit. These studies are relevant to the investigation of this thesis because perspective taking is a central disposition associated with critical thinking.

Students were found to have little prior knowledge about World War II in a pre-assessment piece that questioned students on some basic information associated with World War II, which was the topic that students were engaging in the unit. The study lasted for three weeks. In the textbook analysis, students looked at the nuclear bombing of Hiroshima and Nagasaki from greatly varying perspectives presented in both a common Japanese textbook and a US textbook. Additionally, two guest speakers, one Japanese and one US World War II veteran visited the class and spoke about their experiences during the war. The researcher compared how student increases in perspective taking, or lack there of, developed from varying activities. Specifically, the researcher wondered if the textbook analysis and guest speaker activities were more affective in triggering perspective taking in students than typical classroom activities such as lectures and worksheets.

The seven students included in the case studies were interviewed four times during the unit of study: before the unit began, after a typical classroom activity, after a text

analysis, and after the oral history activities (guest speakers). Interviews lasted about 15 minutes. Written pieces the researcher used included KWL sheets, student data sheets of textbook analysis, short essays, student generated interview questions for the guest speakers, and copies of student work and reflections. The first study's findings suggested that all of the students' knowledge advanced, but that only three of the seven students improved their ability to look at multiple perspectives. Perspective taking was determined by student's ability to compare and contrast differences in the different accounts they experienced, speak or write in the context of each, and give concessions and context to different perspectives. The second study looked specifically at student presentations at the end of the three-week unit. One of the students who advanced in perspective taking demonstrated this shift following the textbook analysis. The advancement of two other students' perspective taking ability was attributed more to the guest speaker visits. These attributions were assessed on the bases of interviews following a particular activity. In the second study, no students' presentation gave an indication that increases in perspective taking had taken place.

Based on the written work of students, interviews and class participation as observed by the researcher, all students were found to have gained in their knowledge on World War II. However, most students expressed that their teacher was the biggest influence on what they learned. For example, the teacher gave a lecture offering her perspectives that included an explanation for the US dropping of nuclear bombs. The teacher stressed that the reason the bombs were dropped was because Japan had a Samaria background and would therefore never surrendered without the bombs having been dropped. Interestingly, this view was not found in either textbook nor shared by either guest

speaker. Further, the author of the study was unable to find evidence to support the teacher's view. Nonetheless, this was an influential view repeated by several students in interviews.

Some interesting implications emerge in these studies. First, face-to-face encounters had more influence in developing student ability to look at things from multiple perspectives more than the text comparisons did. However, because the study only considered seven students, and the difference here amounts to one student, this data does not provide sufficient evidence to conclude that guest speakers are more affective in eliciting perspective taking than text comparison. Nonetheless, guest speakers do offer the potential for dialogue and discussion that a static text does not, potentially offering a richer environment for perspective taking to take place. In the second study of the same unit, students did not show improvement in perspective taking in their presentations. However, as the researcher suggests, this may have been due to nervousness and lack of experience in giving presentations rather than an indication of a lack of ability to consider multiple perspectives. Also, three weeks may not be an adequate amount of time to solidly develop the cognitive skills this study aimed at assessing.

The data collected in this study suggests that students were more influenced by their teachers perspective than those they encounter in either texts or unfamiliar speakers, even when those perspectives were not supported by other sources and quite possibly inaccurate. This demonstrated the importance for teachers to explicitly state the subjective nature of their own understanding when they are given, and also to authentically model the taking of multiple perspectives for their students, something that there was no indication of in these studies. Because perspective taking is an important

disposition associated with critical thinking, it seems that teachers need to go beyond their own particular historical beliefs and understandings – or at least suspend them – in order to model the critical examination of different perspectives for their students.

In terms of how to teach toward the development of critical thinking skills, this study suggested that both textbook analysis and guest speakers might be of value in developing these skills in students, as three out of seven cases saw increases in perspective taking over a three week period. As with many studies on critical thinking and the dispositions associated with its development, this study was short term and lasted only three weeks, which may be an inadequate amount of time needed to foster critical habits of mind or make concrete attributions to their development. Finally, this study also serves as a cautionary piece for educators as students appeared to be more influenced by misconceptions and historical inaccuracies offered by the teacher than by more accurate accounts in other pieces.

A study looked at how students (n-113) enrolled in freshman level courses at a southwestern university improved their critical thinking skills over a 14-week period when critical thinking strategies were explicitly instructed and modeled (Gadzella, 1996). Researchers asked if teaching and getting students involved in analyzing issues critically helps students develop effective critical thinking skills. This research is relevant to the question of how to teach for critical thinking in that it analyzed the development of critical thinking and focused on explicitly teaching strategies of critique. The age of participants was between 17 and 60 years with a mean age of 23.1 years and a standard deviation of 7.94. Twenty-eight percent were men and 72% were women. About fifty percent were freshmen, 34.5% were sophomores, 12.4% juniors and 2.7% seniors.

Participants were given an 80 item critical thinking test before the course and after. This test assessed critical thinking in the areas of problem solving, selecting pertinent information for solutions to problems, recognizing assumptions, formulating hypothesis, drawing valid conclusions, and judging the validity of inferences. The evaluative nature of these areas appeared conducive to skills associated with critical thinking.

Participants were found to have significant increases in critical thinking skills overall, with particular improvement in the areas of interpretation and evaluation of arguments ( $p < .006$ ). Some problems do emerge from this study. One is that students were not put into sub-groups based on age, so, even though results were congruent with similar studies that looked at high school students, inferences on how age might affect critical thinking are lacking. The absence of a description of the specific in-class instruction over the 14-week period further confounded findings, reducing certainty. Also, participants were awarded credit toward their course grade for participating in the study, so it is possible that students responded to test questions with that in mind. In terms of how to teach toward the development of critical thinking in the secondary social studies classroom, this study corroborated findings of other studies that showed that explicitly teaching approaches to and strategies for crucial thinking had a positive effect on students developing critical habits of mind.

A study that looked at student attitudes and how they changed over a term in college students ( $n=548$ ) enrolled in women's studies courses may be of value to consider here (Sevelis, J, 2000). Researchers asked if students with attitudes highly discrepant from the women's study message would demonstrate less attitude change when they deemed these attitudes as highly relevant. As with many topics dealing with systemic inequities, an

assumption that attitudes projected in dominant culture must be critically examined was an essential feature of this course. Of this sample, 90.5% were female, 80.2% were white, 6.5% African American, 3.9% Hispanic, and 4.2% fell in other ethnic categories.

Developing historical understanding involves an engagement with race, class and gender issues that have been highly influential in the historical trajectory of the United States. Part of educating for increases in democracy involves educating students to respect other voices, especially those who are and have been historically marginalized. Certainly, students bring with them their own set of understandings, and these may be informed by stereotypes and prejudices. This study is relevant to understanding how to teach toward critical thinking in addressing the attitudinal factors affecting dispositions conducive to critical thought, particularly in terms of empathy building and perspective taking.

Social judgment theory offers an idea of a latitude of susceptibility to a given message. This theory holds that the more discrepant an opinion or attitude is to that held by an individual the less likely the individual will be influenced by that message. In other words, if a message is highly discrepant with existing attitudes the message is likely to be rejected. However, from an analysis of pre-and post questionnaires – the data collecting instrument researched used -- this study found that students with the most discrepant attitudes to those of the program underwent the most attitude change. The data-collecting instrument measured the degree to which participants expressed an appreciation for and/or acceptance of beliefs and lifestyles that differs from their own. An additional factor here was how relevant each participant viewed the message, as those participants who deemed their opinion of high importance and also held contending

attitudes than those of the program showed less attitude change than those who originally deemed the message not as important, but who also held attitudes at odds with those of the program's, demonstrating the phenomenon of belief perseverance. Perhaps students that deemed the content and attitude as highly important but who held contending attitudes held preexisting social positions or beliefs perceived to be threatened by the course material.

No correlation was found between student attitudes at the beginning of the course and reports of a negative impact caused by course content. However, a correlation was found between the importance of the content reported by students and their experiencing a negative impact. In other words, if the subject was important to a student, they were more likely to have reported a negative impact. Attitudes at pre-testing and tolerance difference scores were negatively correlated ( $r = -.31, p < .01$ ). Perhaps this was due to the unpleasant realities of how women have been treated in many societies. If this is seen as unimportant or of little consequence, or if these issues fall victim to a just world hypothesis – that the world is fundamentally just or at least the best it might be -- it follows that it would be less likely to experience a negative impact. This study notes that students already holding attitudes similar to the program's themes have less room for attitude change than those with less congruent attitudes. Also, further research is needed to indicate whether these findings hold true for other areas of study involving inequities in race and class issues, or whether they can be applied to students at the secondary level.

In terms of how to teach toward the development of critical thinking skills in the secondary social studies classroom, this study suggested all students might make gains in empathy building and perspective taking. However, it also suggested that students that

held strong preexisting attitudes in contention with the message of the class were less likely to experience attitude changes. In other words, developing empathy and perspective taking seemed more challenging for students already holding strong beliefs at odds with a course of study, even when these beliefs may be based on unexamined stereotypes and/or prejudices.

A study conducted at the University of Guam asked what were the perceived influences of diversity experiences on critical thinking among UOG students (Inoue, 2005). This study is relevant to this thesis' question in its potential to increase understanding of how diversity experiences might affect the development of critical habits of mind, particularly in terms of empathy building and perspective taking. Focus groups were formed for data collection in this study and two topics were addressed in each of these focus groups: definitions of critical thinking, and the affect of diversity experiences on critical thinking. Group sessions were videotaped and analyzed by the researcher.

In terms of defining critical thinking, Inoue summarized the definitions that students (n=20) expressed as follows: "critical thinking might be the act of independently and systematically weighing evidence to make an evaluation and judgment, to determine merit, and to increase a desirable outcome using cognitive skills and strategies." This definition was then applied by participants in their engagement and discussion of the affect diversity experiences have on critical thinking. Three themes developed from student voices that Inoue labeled "biased generalization," "beyond black and white," and "teacher as facilitator."

Typical responses that fell in the “biased generalization” category indicated that students believed that people use stereotypes because of the easy application, that generalizations are wrong and dangerous, and that because many of the participants had dual-ethnic backgrounds they had a greater tendency to understand other cultures.

Typical responses in the “beyond black and white” category indicated that participants believed that, while the usual discussions of diversity involves the black and white populations, the term diversity extended beyond that for students at UOG. Participants also typically expressed that through both inside and outside of class activities they learned about facial expressions and body language they believed informed their understanding of diverse groups, and that being aware of differences in race and language from a young age had made them more practiced at cultural sensitivity and critical self-reflection. Additionally, students expressed that the learning about the experiences of older students at UOG enhanced their survival and people skills.

Typical responses for the “teacher as facilitator” category indicated that students believed that opportunities for interaction with their faculty, having their faculty know them, and learning their critical approaches to teaching had benefited the development of their critical thinking skills. Participants also indicated that effective teachers facilitate students to think critically and analytically, providing knowledge and applications useful in real world situations, as well as using a classroom as community.

This study, while case specific, suggested that the experiences that participants had with other students and their instructors, coupled with the disaggregation of understandings of diversity from broad terms of black and white to the specific and unique range of their own experiences positively influenced their critical habits of mind,

particularly in terms of multiculturalism. Participants in this study were undergraduate students, not secondary social studies students, possibly reducing the application of the findings. They are also case specific and emerge from a small sample size. Additionally, the critical thinking skills of participants was not measured, nor its development while attending UOG, so the actual level of critical thinking the students developed as a result of their learning at UOG is unknown. That being said, perhaps some of the results can be transferred to the secondary social studies environment.

In terms of how to teach toward the development of critical thinking in the secondary social studies classroom this study corroborated findings of other research on the importance of the relationship that students have with their instructors in developing critical habits of mind. It also highlighted the importance of teachers getting to know the individual students they work with and tailor instructional approaches and methods to better serve them. It also suggested that teachers ought disaggregate their own conceptions of diversity in the classrooms they interact with, and habitually practice critical reflection about their students and their teaching strategies.

An important question is what is the relationship between critical thinking and student achievement? A study asked this question and attempted to determine the significance between differences in critical thinking skills in college students (n=98) in freshman level courses who earned grades of A, B, and C (Gadzella et al, 1996). This study is important to the question of how to teach toward the development of critical thinking skills in the secondary social studies classroom as standardized measures of student achievement proliferate in determining the success of instruction in public schools in the United States. In other words, if a positive correlation between critical thinking and grades exists, then a

stronger argument could emerge for teaching critical thinking within standards driven school environments.

This study compared students' critical thinking skills in three courses with their final grade in the class. Twenty-six students were male and 72 were female and the age of students ranged from 17 to 60 years old. Twenty-two students received an A in their class, 49 received a B, and 27 received a C grade. Students were tested on five sub-categories of critical thinking including (i) inference (ii) recognition of assumptions (iii) deductions (iv) interpretations and (v) evaluation of arguments using the Watson-Glaser Critical Thinking Appraisal. Three main findings emerged from the data.

- In the sub-categories of inference and evaluation, A students had significantly higher scores than C students ( $p < .05$ ).
- In the sub-category of recognition of assumptions, both A and B students' scores were significantly higher than C students ( $p < .04$ ).
- On the overall critical thinking scores, A students' scores were significantly higher than B or C students' scores ( $p < .04$ ).

Data from this study indicated that student's with higher levels of critical thinking skills earned higher grades in the classes they took. This study does not indicate what subject matter was taught in these courses, or how different subjects or teacher methodology might affect the relationship between critical thinking and student achievement. This is important to the question of how to teach critical thinking in the secondary social studies classroom, as this inquiry is content specific and interested in instructional approaches valuable to developing critical habits of mind. Within the paradigms of this study, students who entered a freshman level college course with higher

critical thinking skills did earn higher marks in their class. It informs the question of this thesis by suggesting that teaching with a focus on developing critical thinking skills might not be at the expense of student achievement in terms of grades. However, the study does not indicate how the grades of students were assessed or measured, so an assumption that students with high marks ought be more advanced in critical habits of mind is unsupported.

Students are the central feature in teaching toward the development of critical thinking. This section has considered how identity development is related to cognitive skills, how secondary student are or are not able to empathize and consider moral dilemmas from different perspectives, how secondary student understand historical significance, to what extent different instructional elements affect the ability to consider things from multiple perspectives, and how attitudes are affected by preexisting understandings and exposure to issues of inequity in order to inform educative practices seeking to teach toward the development of critical thinking. In the previous section the role of teacher attributes were considered in teaching for the development of critical thinking. With these things in mind, this discussion now moves into the relationship between curriculum and teaching toward critical thinking.

### Critical Thinking: Classroom Qualities, Curriculum and Obstacles

Having looked at some of the teacher and student attributes associated with teaching toward critical thinking, we now move on into a discussion of curriculums that have been studied and their influence on developing higher order thinking skills.

What are the qualities of a thoughtful social studies classroom? A study looked at common indicators of classroom thoughtfulness and higher order thinking in diverse

social studies courses (Newmann, 1991). This study is relevant to this thesis' question because an understanding of the attributes of a thoughtful social studies class might offer insight into how to teach critical thinking in one. This study specifically asked "what results do thoughtful classrooms actually have on their proficiency in meeting higher order challenges in social studies?"

Data for this study was collected through a written test administered in 70 classes from 11 diverse high schools during a single class period. This written test included a two page document based on an actual court case involving constitutional rights of minor students. This task was seen as embracing higher order thinking because students were required to organize and interpret information in a new way to succeed. Students' essays were scored from 1 (unsatisfactory) to 5 (exemplary) and based on three elements: whether the student had taken an informed stand; provided persuasive reasons and; elaborated upon those reasons. Sixty-six percent of students received scores of 1 or 2 (Unsatisfactory and Minimal), 22% received scores of 3 (Adequate), 11% scores of four (Elaborated), and only one percent received a score of 5 (Exemplary).

Analyzing this data with the demographic data of the classes revealed that thoughtfulness is higher in classes with older students and in classes with larger percentages of higher achieving students, and lower in classes with a higher percentage of black students. Researchers offered a possible explanation for this that is supported by other research: that teachers' expectations for student performance influenced their teaching higher order thinking, that teacher expectations are determined largely by teacher assumptions about student ability, and that teacher expectation of student performance were influenced by student age and previous academic achievement.

Another factor may be in play here as well, that the specific symmetrical and syntactical nature of the test itself resulted in questionable results. In other words, the way that a test is designed and written may be more accessible to particular student populations than others and indicate a difference in language codes rather than in thinking skills. Researchers also suggested that in-depth knowledge is needed to effectively teach higher order thinking skills. Previously considered has research suggested that being explicit about teaching these skills might increase critical habits of mind. Perhaps results from this study would have been more promising if students had been explicitly instructed on the method and purpose of the test, and/or on specific strategies for approaching it.

In terms of how to teach toward the development of critical thinking skills in the social studies classroom, this study suggested that both teacher expectation, explicit instruction on critical thinking (or the absence of such), codes of language and content knowledge might all be factors in determining the degree to which social studies classrooms promote critical thinking – all elements that a teacher can influence and improve.

Another related study asked what qualities were associated with thoughtful social studies classes as well (Newmann, 1990). In particular, this study was interested in the highest levels of higher order thinking in the teaching of high school social studies; therefore Newmann selected departments that indicated the strongest amount of critical thinking practice to study.

Five departments from diverse high schools were selected for the study. The criteria for department selection was based on information received from participant

applicants that indicated a department emphasis on higher order thinking for all students, not just higher tracked students, courses in social studies with a preference for US history classes, departments that study topics in depth, the presentation of content as problematic changing or controversial, student engagement with problem solving and interpretation of information, and student reasoning about their views and receiving feedback on the quality of their reasoning.

Focus was also given to the individual teachers emphasizing higher order thinking skills the most within each department. To determine this, department heads selected three main courses taught by different teachers to be observed nine times over three visits. Classes were asked to illustrate as much higher order thinking as possible and include a class with a substantial population of lower and middle achieving students, a history class with a diverse range of students, and any other class that best illustrated an emphasis on higher order thinking. After selecting teachers within departments to participate in the study, teachers were asked to select lesson plans they believed placed the most emphasis on higher order thinking. Using an inter-rater reliability measure that compared the assessment of two researcher observers for each lesson, an inter-agreement rating well above 0.80 was established.

The most frequent attributes of a thoughtful classroom were found to be

- Sustained examination of a few topics rather than superficial coverage of many
- Substantive coherence and continuity
- Students given an appropriate amount of time to think and to respond
- The teacher asked challenging questions or structured challenging tasks
- The teacher was a model of thoughtfulness

- Students offered explanations and reasons for their conclusion

However, some elements associated with critical thinking were observed very rarely including the following:

- Socratic questioning
- Integrating student experiences into the lesson
- Teacher trying to get students to generate original ideas
- Teacher questioning of authoritative sources
- Students engaging in thoughtful discourse with other students

Lessons were not the only influence affecting the thoughtfulness of a classroom, though. A regression analysis indicated that differences between teachers accounted for 54% of the total variance critical thinking levels while differences among schools accounted for about 26% of the difference. The data that associated older students with increased thoughtfulness was inconsistent. Also, the proportion of students in the lowest, middle and highest thirds of school achievement had no relationship to higher order thinking. However, researchers associated lower levels of higher order thinking with higher proportions of black students, and higher levels with increases in Hispanic populations, but there was a very small overall proportion of minorities in observed classes and differences between teachers and schools made these findings insignificant.

Results from this study suggested that grade level, required courses and student achievement level might not need to stand in the way of teaching higher order thinking. Also, students were more engaged in thoughtful classes. A problem with this study is that it relied on observation, but did not formally assess the critical thinking of each student in studied classes. It also was based on classes determined to place the most

emphasis on higher order thinking, so students may have been more practiced with engaging higher order thinking. In terms of the question of how to teach toward the development of critical thinking in the secondary social studies classroom, this study identified both areas that appear to indicate a thoughtful classroom as well as identifying areas that teachers can focus more on to increase the effectiveness of developing critical habits of mind. In both cases, this study suggested that embedding these qualities into curriculum development and lesson facilitation can increase critical thinking in secondary social studies students.

Another study compared two groups of 8<sup>th</sup> grade students (n=66) in a mid-west school (Kleg, 1986). This study looked at how well students thought about and understood concepts introduced in a unit on minority groups in the United States. The concepts introduced included prejudice, discrimination, scapegoating, stereotyping, minority/majority, and xenophobia. A control group and an experimental group were assessed. Students in both groups had approximately the same IQ and SAT scores. Students were mostly white and came from protestant backgrounds. There was an uneven gender distribution in the control group, with more boys being present than girls. Classes for both groups were observed over ten class periods lasting 50 minutes each and assessed through a 50-item test on the concepts introduced over the unit.

In the control group, the class was introduced to a list of minority groups and given information on inter-group relations. Examples of concepts were given, but no formal definitions were provided and no examination of attributes was explicitly considered. Also, no activity or discussion involving examples and non-examples of these concepts were given. Emphasis was placed on contextual information as provided in text

narratives. In the experiment group, an explicit introduction of concepts and related generalizations was presented. After this presentation of concepts and attributes associated with them, students recorded these concepts and listed their attributes. Students further defined these concepts in complete sentences using attributes and examples and non-examples.

Based on data collected from a 50 item test, 30 of which addressed the concepts that were taught and 20 items that addressed related concepts, researchers findings suggest that the experimental group learned more than the control group and that they were better able to infer understandings of related concepts not presented. This finding corroborated with virtually all of the research on concept instruction that has found teaching concepts explicitly is an effective strategy for increasing student understanding. Explicitly teaching concepts might be a good way to introduce a unit. However, by itself it does not necessarily encourage critical thinking. It does provide students with some concrete information that may serve as background knowledge so that activities and discussions involving higher order thinking may be successfully facilitated. This study suggested that direct concept instruction could be a useful strategy in scaffolding students toward higher order thinking. Certainly, if students are unfamiliar with concepts embedded in a unit of study they will be at a disadvantage to think critically about related issues and histories. In terms of the question this thesis approaches, this study suggested that teaching concepts can be effective in increasing student understanding of materials. However, the development of critical thinking skills might require a further augmentation of curriculum through an authentic application and/or evaluation of concept-driven student understandings. In other words, this research suggested that it couldn't be

assumed that teaching with a concept-based methodology promoted critical habits of mind solely on its own merit.

A study looked at how multimedia-supported learning environments might scaffold critical reasoning about history and social issues (Saye, 2002). Eighteen 11<sup>th</sup> grade students (n=18) from a southeastern city participated in this study. This study asked how embedded hypermedia resources and scaffolding in a multimedia-learning environment might mitigate some of the obstacles to critical-reasoning about ill-structured problems. It is relevant to this thesis' question both in terms of considering specific curriculum approaches conducive to the development of critical thinking as well considering obstacles in teaching these habits of mind.

Researchers used an integrated hypermedia learning environment called Direct Point (DP) and a problem based unit to use in conjunction. Content of DP focused on the African American civil rights movement and included two components: and interactive database of multimedia content resources related to the civil rights movement and scaffolding tools to support collecting, analyzing and evaluating historical evidence and presenting conclusions. The database has three theme-based strands: (a) legal challenges (b) non-violent protest and (c) Black Power. Each strand has seven or eight events associated with it, each of which included a introductory essay, a timeline, and associated documents (primary and secondary texts, images, audio and audiovisual media). Students were placed in the roles of civil rights leaders immediately following the assassination of Martin Luther King and asked what strategies should be pursued in 1968 to continue the struggle for a more just and equal society. Students worked collaboratively.

Researches collected four types of data: (a) outcomes data on culminating group presentations (b) student interviews (c) student paths through the database and (d) classroom observations. Student presentations were given a 1 (poor) to 4 (exemplary) rating based on their ability to locate information, construct a synthesis, connect data in meaningful patterns, reason effectively, support a position, and reason dialectically. The mean score for all participants was 2.82

This study identified five competencies demonstrated by those groups most displaying higher order thinking skills and critical reasoning:

- Thinkers must have empathy: an ability to view the world from the perspective of another.
- Thinkers need to be able to apply abstract concepts to specific situations.
- Thinkers need to be able to infer beyond limited data to draw conclusions.
- Thinkers need to be able to engage in critical discourse aimed at clarifying understanding about an issue.
- Thinkers need to be able to apply evaluative criteria to develop defensible decisions (or positions) about a social problem.

This study had two approaches to increasing critical thinking: hard scaffolds and soft scaffolds. Hard scaffolds were defined as tools embedded in the curriculum and included computer story boards and text hyperlinks so that students might construct a non-linear approach to their knowledge building. Soft scaffolding was seen as teacher responsiveness to situations, innovativeness and flexibility in the spontaneous flow of classroom activities.

This study suggested four scaffolding techniques to develop critical thinking: concept attainment, metacognition, procedural understandings, and strategic application of knowledge. Students were deliberately exposed to conflicting accounts that encouraged the re-conceptualization of the nature of historical narratives, promoting the idea that texts are human creations so that students might begin looking for subtexts and constructing social contexts. This approach was found successful in guiding students through approaches to making better decisions, or formal operational skills. However, students were not successful in seeing patterns across different sources of information. The authors of this study concluded that teaching toward critical thinking is a dynamic act that requires a substantial knowledge base, appropriate teacher responsiveness (missing in the observations of this study) and the need for teachers to work together in order to maximize effectiveness. In terms of how to teach toward the development of critical thinking skills in the secondary social studies classroom, this study suggested that using multi-media might be an effective tool in teaching higher order thinking skills, many of the same obstacles to teaching critical thinking exist whether multi-media technology is used or not.

A pilot study asked how digitized primary sources help foster historical thinking. It was conducted using seven middle and high school teacher participants (Tally, 2005). In this study, students analyzed online documents and their critical and historical thinking was assessed. This study finds relevance to the question this thesis engages in terms of how technology might be used as a tool in the development of historic, and by extension, critical thinking. Students of the teacher participants chose to examine one of three images from the turn of the 20<sup>th</sup> century and led through primary documents related to the

images. Participating teachers were recruited from a sample of a survey of 358 teachers.

The criteria for selecting the teachers were:

- Needed to be teachers of the humanities (history, social studies or language arts).
- Teachers at the middle or high school level.
- Have had to work with students around primary sources during the previous year.
- If possible, needed to teach both at remedial and advanced levels.

The questions that this study attempted to answer were (i) how do students describe their current history or social studies class? and (ii) What historical thinking skills do these students exhibit?

Students were led through an on-line step by step process of reading primary documents they has not been exposed to previously. Teachers were instructed how to facilitate the learning experience, including a scripted introduction. 159 students (n=159) from six classes in four different schools completed the on-line activity. 53% were female and 47% were male; 47% were in grades 6-8 and 53% were in grades 9-12. 80% were in regular classes and 20% were in Advanced Placement classes.

Sixty-eight percent of students stated that this digitized approach was different than history classes they had experienced in the past. Three things were consistently cited here:

- Using technology to learn in new ways.
- Working with primary sources to gain a deeper understanding of history.
- Learning independently as well as in small groups.

One student said that “[w]e use the computers a lot more than we ever did in my other history classes. Our assignments are always more interesting when we use computers,

and I'm learning how to research things more efficiently.” Additionally, 87% of students reported that they had learned more in this class than previous classes. Of course, this is self reported and may reflect a desire for students and their teachers to appear in a positive light.

Many teachers and researchers have postulated that only higher ability students are capable of engaging in historical and critical thinking. However, this study found that even students labeled as remedial demonstrated this kind of thinking. For example, although students may have less background knowledge and grammatically correct writing skills, student responses indicated that the same type of thinking was occurring in students labeled advanced and students labeled remedial. One advanced student, when looking at one of the images (a photograph) presented in the online activities, wrote that “[y]ou see a big difference between the business-looking environment of the background and the dead horse laying in the road in the foreground. I think someone made this to show the gap between rich and poor during the 1900’s.” This statement inferred thinking about the source, or sourcing the material. Another student labeled as advance commented that “[t]he building up the street seems to be more well kept. Are people richer in that direction?” This demonstrated inference and question posing skills. A remedial student wrote that “[a] dead horse. There isn’t lot [sic] of money to feed the horse, or take care of it. It’s very unsanitary conditions,” indicating an inferring that may not have taken into account the well maintained buildings in the background of the photo suggested in the statement. Other written responses indicated this as well.

A few implications were suggested in this study.

- Students can apply historical thinking to primary sources without prior instruction about a particular historical era or context.
- Students tend to feel more invested in their learning when they have structured opportunities to critically examine and construct meaning from primary sources.
- Appropriately scaffold instruction with primary documents can lead to students engaging in historical interpretation and document analysis.

While the findings of this study are promising, the researchers indicated that a challenge to address is increasing teachers' abilities to analyze primary sources and scaffold student learning. Additionally, much of the data collected for this study was self-reported. However, these types of activities seem valuable in encouraging critical thinking and examination skills in students. I have experienced the use images and photographs as a learning tool in several college level courses. These experiences corroborate with the findings of this study, as robust discussions have followed that exemplify critical habits of mind. These were whole-group activities, and it seemed that the thinking of one student would trigger thinking in others. In terms of this thesis' question, these elements suggested that critical thinking about primary sources does not only need to be an individual or small group activity, but an open discussion where the process of critical inquiry is modeled in an authentic way where all student can witness and participate in the process. This study also suggested that digitized and online sources had the potential to serve as effective tools in developing critical habits of mind.

Analyzing primary sources and media literacy are often closely related. The thinking skills that accompany each encompass many of the habits of mind associated with critical

thinking. A study looked at the relationship between critical thinking and media literacy (Feuerstein, 1999). This study focused on three hypotheses:

- Students who receive media literacy instruction will show greater gains in the continuum of media analysis than like peers who do not receive such instruction.
- Low and medium level achievement students will improve their analytical and critical thinking skills proportionally more than their higher-achieving peers.
- As students increase their experience with media literacy they will demonstrate greater proportional gains in media analysis and critical thinking skills.

This study involved 273 (n=273) participants from Haifa in northern Israel aged 10-12 years. Participants were divided into a control group (n=154) and a research group (n=119) three classes from six schools. Each class had 20-30 students. Both groups had a distribution of socio-economic status among participants ranging from low-medium to medium-high. The classes were studied for 1-2 hours a week for a total of 30 hours each. The research group classes had teachers that were specially trained and under the supervision of a media literacy expert. Data was collected from media literacy pre and post tests, media and language tests, class observations, teacher questionnaires, interviews with media teachers, and focus group interviews with pupils. Students underwent a pre and post-test. The post-test was administered after a 2-month summer break so retention rates could be better judged.

This results of this study indicated that the research group gained better media literacy skills than the control group. The experimental group's mean test scores increased from 4.8 to 7.11 on a 10.0-point scale while the control groups' mean scores on the same test went from 2.4 to 3.19. Interestingly, increases in achievement scores was

greatest for students coming from a low socio-economic background. The researchers do note that this group had a better teacher who had intensively instructed the students on language and media production. This teacher had students engaged in well-structured media production as to be entered into a school competition as well. This explanation for the achievement gap, that teachers who had training in teaching media literacy and who had students create an artifact similar to texts they were considering, corroborates with other theories and research that student engagement is an important element in learning. Perhaps students producing a media message are more able to engage in critical examination of media sources through this experience. Other than the difference in teachers, the researchers did not explain what factors might have resulted in the segregation different socio-economic groups.

In terms of how to teach toward the development of critical thinking skills, the kinds of thinking assessed on the measurement devices in this study mirrored critical thinking skills, particularly in terms of evaluative skills. This study suggested that teachers explicitly trained in media literacy might be more effective in teaching the critical habits of mind associated with it. This study also suggested that incorporating small group video productions in media literacy studies where student created persuasive messages could be integrated, and in the context of social studies curriculum, might be a powerful activity in the development of higher order thinking skills in the secondary social studies classroom.

A study that looked at four cases focused on the relationship between pedagogy and critical thinking (Tsui, 2002). Specifically, it asked what instructional methods increase critical thinking in students. This study is relevant to this thesis' question because

identifying effective approaches to teaching critical is fundamental to its development. This study collected data through observations and interviews. Fifty-five interviews (n = 55) took place at four colleges involving administrators, educators and students at each site. Twenty-eight classes were also observed for 50 minutes each. Interviewees were randomly chosen from an e-mail list. For this study, critical thinking was defined and assessed as the ability to identify issues and assumptions, recognize important relationships, make correct inferences, evaluate evidence or authority, and deduce conclusions.

The locations considered in this study were purposefully chosen to include two that had a high mean score in student self-assessment of their own growth in critical thinking, one of which was highly selective in admitting students and one that had low selectivity. The other two institutions had low mean scores in student reported growth in critical thinking skills and, like the high-mean institutions, one of these had high selectivity for admissions and one had low selectivity.

The findings of this study as measured by a comparative analysis of instructional differences included the following:

- Cooperative exploration, divergent thinking, higher levels of student responsibility and self-reflection, and greater social and political awareness were found in the two institutions with higher levels of critical thinking.
- Greater degrees of faculty enthusiasm for teaching and faculty perception of teaching as a process of mutual learning were associated with higher levels of critical thinking.

- Low faculty confidence in students' abilities and potential was identified as a serious impediment to critical thinking.
- Critical thinking is linked with educational modes that place an emphasis on writing and rewriting.
- Assessing the work of peers may be conducive to critical thinking.
- Class discussion appears to be linked with the development of critical thinking skills.
- The average number of questions posed in a class is higher for classes with higher levels of critical thinking.
- Students at institutions where critical thinking was more prevalent were more likely to respond to questions posed by their classmates.
- Critical thinking was linked to an emphasis on writing and re-writing.

One problem with this study is that instructors and students knew when they would be observed in advanced and this may have influenced the content of the classes observed. Also, the measurements used to collect data were subjective. It also partially relied on self-assessment of critical thinking, which cannot be considered a direct measurement of critical thinking. Additionally, this study was conducted at post-secondary institutions, limiting the transferability of findings to the secondary level. That being said, this study informed the question of how to teach toward the development of critical thinking by collecting and analyzing data that suggested several specific practices and attributes were possessed by classes engaging in critical thinking.

A case study documented substantive epistemological and behavioral shifts in one female student through analyzing data from field notes, classroom artifacts, a response

journal, student writings, and transcriptions from interviews, interviews with teachers, and anecdotal notes (Trzyna, 1997). This study found that the personal narratives that the student wrote were intimately connected to her development of critical thinking.

The course that this student was in was an interdisciplinary class that focused on listening to and validating marginalized voices from minority groups. Being a minority, the participant in this study indicated through her writings that she felt that a space had been made for her to voice her thoughts. The researcher suggests that this allowed the student to discover that she was a source of knowledge herself, as well as capable of making determinations about knowledge she experiences from others. In addition to this space for her voice to be heard, this student's exposure to stories about the effects of oppression on individuals of minority groups sparked a passion in her. Her writings reflect a trajectory of critical awareness and thinking that went from being a quite and passive student, to becoming outraged and saddened by stories of oppression, to engaging in more sophisticated thinking that gave attention to new dilemmas and alternative ways of understanding materials and narratives, to a sense of self efficacy where the student redefined herself as an active agent of change.

The researchers speculate that one of the main reasons for the participant's change increases in efficacy and thinking skills was because of the discoveries she made in her connections with others. This involved the integration of subjective and objective knowledge. This suggests that teachers interested in education as a transformative process might increase effectiveness by providing opportunities for reflective critiques on issues of race, class, gender and ethnicity. This student was able to bring her preexisting experiences, knowledge and understanding into the classroom where a space was

provided for her to participate in knowledge building, and this seems crucial in her cognitive and emotional development during this course. Of course, this study is only of a single case, and therefore cannot be generalized.

Collaborate learning methods have been linked with several dispositions associated with critical thinking. A study compared how well 48 tech students (n=48) split into two groups of 24 with each receiving similar content, one administered using individual learning practices and the other adopting cooperative learning strategies, demonstrated critical thinking skill (Gokhale, 1993). Researchers asked two questions. First, will there be a significant difference in achievement on a test comprised of “drill and practice” items between students learning individually and students learning collaboratively? Second, will there be a significant difference in achievement on a test comprised of “critical thinking” items between students learning individually and students learning collaboratively? This study is relevant to the questions of how to teach toward critical thinking as it considered the effect that different instructional approaches might have on teaching critical thinking.

The average age of the students was 22.5 years, ranging from 19 to 35. Eight participants were female while 40 were male. Forty-five of the participants had no background in the content covered. Both groups received a lecture simultaneously to decrease extraneous variables. After the lecture, students in the individual learning group were given a worksheet to work on for 30 minutes and the academic task was explained to them. After the 30 minutes, the students were then given an answer sheet and 15 minutes to compare the worksheet and answer sheet. After this, participants in the individual learning group were given a test that had 15 drill-and-practice items whose

cognitive demands required knowledge, comprehension and application, and 15 critical thinking items whose cognitive demand required synthesis, analysis, and evaluation.

After the lecture the 24 students in the collaborative learning group split into self-selected smaller groups of four and given the same worksheet. These students received clear instructions on the academic task as well as an instruction sheet that indicated the important elements in collaborative learning. Students were also encouraged to discuss why they were thinking what they were when considering solutions to problems.

Students were given 30 minutes to discuss the worksheet in small groups, with explicit instruction given for every group member to have space to share their thinking.

Afterwards students were given the answer sheet and had 15 minutes to discuss the work they did on the worksheet. Then the students were individually tested with the same 30-item test given to students in the individual learning group. Students in the collaborative learning group were told that their grade would include both an individual and group component, with their score being determined through averaging their individual test score with the average of the 4 member group they worked with.

For the first question – “will there be a significant difference in achievement on a test comprised of drill and practice items between student learning individually and students learning collaboratively?” -- students in both the individual and collaborative groups scored equally well on the drill-and practice portion of the test ( $p > 0.05$ ). For the second question -- “will there be a significant difference in achievement on a test comprised of critical thinking items between students learning individually and students learning collaboratively?” -- statistical significance was found for students’ scores on critical

thinking items between the individual learning and the collaborative learning groups ( $p < 0.001$ ).

This was congruent with prior research and theories on collaborative learning. One explanation for this is that students were more likely to engage in critical habits of mind when they were exposed to different interpretations of the same information. In a questionnaire given to students in the collaborative learning group after the test, students indicated that they felt that the group work had helped them better understand the materials and stimulated their thinking process. Also, students in this group often shared that the group format reduced their anxiety toward problem-solving tasks. A couple of students indicated that they felt they had wasted a lot of time explaining the materials to others as well.

This study indicated that collaborative learning might improve student's ability to use some critical thinking skills. However, the content of the materials students learned consisted of some basic electronics information that is uncontested in the scientific community, and participants were in a post-secondary environment, diminishing transferability into the secondary social studies classroom. Another problem with this research was that students were given a written test where responses could have been a repeat of what they heard another student say in the small group discussions rather than an indication of the thinking that that student was engaged in. Diversity issues were also not addressed, and since participants self selected their groups, a potential confound emerged. Nonetheless, these findings are promising for designing collaborative methods of instruction designed to increase critical habits of mind.

In terms of how this study informed the question of how to teach toward the development of critical thinking in the secondary social studies classroom, it suggested and confirmed that collaborative learning might be a valuable model of teaching critical thinking. Also, this study's indicated that the design and purpose of collaborative learning was explicitly taught, an important factor in several previous studies that looked at critical thinking. It therefore suggested that it might not only be the collaborative versus individual variable that effected results, but that being explicit in the design and goals of instructional design in instructional methods might be significant as well.

Another study examined the use of simulations in a teacher education program (Sottile, 2004). It asked the question what are the prominent themes and characteristics of an effective simulation in a teacher education program. Researchers hypothesized that results would be consistent with past research and related to cooperation, communication, motivation, problem solving, and self-efficacy. In terms of teaching for critical thinking and this thesis' question, cooperation and problem solving are activities that have been suggested to be potentially conducive to the development of critical habits of mind. This study looked at how communication (cooperative learning) and problem solving might be approached in the context of specific curriculum (a simulation) and gains its relevance through this.

Twenty-five pre-service teachers participated in this study and divided into five groups. Data was collected through observation and class discussion. To begin the simulation, the instructor described a struggling family situation and the individual members of that family, and gave students written descriptions and information about the case. Student groups were then given roles as the family, the attorney for the children,

the children's teacher from school, a psychologist and an advisory board who would give recommendations to the judge, who was the instructor. Participants were required to use specific information from previous learning in the program and apply it to their groups' assessment and recommendations. The case that was the content of the simulation was based on an actual case. Student groups were allowed to communicate with each other.

Groups who ranked the simulation as effective also reported a sense of support and cohesiveness among group members. Researchers observed that students also demonstrated a good ability to apply previously studied materials in the context of the simulation, and during the debrief component of the activity evaluative tendencies were observed in students. Student achievement was also observed to have increased over the course of the simulation.

The findings of these studies are self-reported by the researchers, and a formal assessment piece is lacking. Observations of the simulation and the de-brief discussion are the only sources of data. That being said, the apparent effectiveness and success of this simulation may have been a result of several factors that are corroborated with other studies. These include:

- Students working collaboratively
- Students possessing a solid knowledge base applicable to the activity
- Giving groups specific roles that inherently have oppositional and mediating dynamics
- Engagement with authentic Ill-structured problems
- Specific roles

In terms of how to teach toward the development of critical thinking in the secondary social studies classroom, this study looked at pre-service teachers, not secondary students. However, researchers formulated a hypothesis based on other research, so it seems likely that the findings are transferable. This study suggested that simulations could be an effective strategy to teaching toward critical thinking and that the specific pieces of how the simulation is structured might be indicators of the potential success of this approach.

Another study considered barriers to teaching critical thinking (Onosko, 1991). It asked “Why is it so difficult to make classroom activities more intellectually challenging?” and “What barriers foil teachers’ efforts to promote student thinking?” This study is relevant to this thesis’ inquiry in that it addressed challenges that teachers might need to face in teaching toward the development of critical thinking skills.

Data was collected for this study through in-depth interviews and questionnaire responses from 16 departments nationwide that included 56 teacher participants and department chairs and principals from each institution. This information was analyzed alongside nearly 500 informal classroom observations and research literature. A number of barriers to the promotion of higher order thinking were found. These included:

- **Teaching as Knowledge Transmission:** the dominant goal of classrooms is for students to reproduce knowledge with an inordinate emphasis placed on student acquisition of products of authoritative inquiry rather than student participation in inquiry.

- Broad superficial content coverage: students and teachers are often under pressure from many sources to cover a vast terrain of material. When discrete information and knowledge is seen as paramount, it follows that an increase in the quantity of acquiring this knowledge often becomes central to instruction.
- Teachers' low expectations of Students: This analysis is corroborated by other research considered here in.
- Large number of students: researchers suggested that large numbers of students per class and per teacher engenders real and imagined classroom management problems, especially when leading whole group discussions. Task monitoring of small group activities and discussions was indicated to be a barrier as well.
- Lack of teacher planning time: teachers were suggested to use lower level thinking activities when strapped for time in this study. The time consuming nature of finding and developing appropriate materials and lesson plans was cited in the study.
- A culture of teacher isolation: teachers were often not in collaboration with other teachers within their departments and schools in collectively placing an emphasis on teaching higher order thinking skills.

Much of the findings in this study are corroborated with previous research. A previous study's finding at odds with this and other study – that class size and planning time were not significant factors in teaching higher order thinking skills might be due to difference between teachers. In other words, teachers experiences and skilled in teaching critical thinking may be able to achieve high levels of thoughtfulness even with a higher number of students and less planning time. In terms of how to teach toward the

development of critical thinking in the secondary social studies classroom, this study provided a solid set of factors that teachers might consider and address in increasing the effectiveness of developing critical habits of mind in their students. In other words, it provided a reference of obstacles that teachers might consider when to orchestrate thoughtful classrooms.

This section has considered a number of studies. It looked at research associated with the qualities curriculum and obstacles associated with and facing teaching toward the development of critical thinking. It looked at expectation levels, scaffolding techniques, instructional differences and methods, individual student identity and epistemological development, authenticity and relevancy, empathy and perspective taking, as well as several barriers. This information will now be summarized in the final section of this chapter, followed by a concluding chapter that revisits this thesis' question and preceding chapters in light of this review of professional literature addressing critical thinking.

### Summary

Several themes emerged in this review of research and will now be addressed beginning with one of the more prevalent pieces: teacher expectation of students learning. A controversy on what students are able to engage in critical thinking exists in the literature. Sometimes this is made explicit and directly addressed, and other times it appears as unstated assumptions influencing a studies' discourse. Some researchers came from a perspective that the focus of critical thinking should be placed on students deemed gifted (Dixon, 2004). Other studies placed a priority on teaching all students critical habits of mind (Feuerstein, 1999; Tally, 2005). Research also indicated that an emphasis on critical thinking was more likely to be aimed at higher grades and students with a

history of academic achievement. These students were often thought to be those capable of engaging critical thought, and that other students were not capable (Ladwig, 1991). Teacher expectation of student achievement was so often linked to teaching for critical thinking that it was discussed in one form or another in well over half of the studies reviewed in this chapter.

There may be many factors in the relationship between teacher expectations of student achievement and teaching for critical thinking. First, it seems obvious enough that if a teacher does not engage students in activities and lessons where critical thinking might develop – out of a belief that students are not capable of critical thought – then students will not be at a loss of opportunity to develop critical thinking skills. So the first thing to assert, is that not teaching for critical thinking results in its not being developed, and this appeared to often stem from teacher beliefs that students were not capable of critical thinking.

Several models of cognitive and identity development considered in this review incorporated a framework that conceptualized a series of developmental stages that learners chronologically proceed through (Allen, 2006; Hynd-Shanahan, 2004; Tirri, 2000). Low levels of teacher confidence in students could be a result of a well-informed reasoning using these types of developmental models. However, participants in another study were not in the upper grades of secondary schooling, but younger students in the 4<sup>th</sup> and 5<sup>th</sup> grades, and many students here were assessed to be engaging in critical thinking, informed reasoning and perspective taking (Dixon, 2004). While these younger students were labeled gifted, it seems problematic to believe that nine-year-old high-track students are more capable of engaging in critical thinking than the average seventeen-year old

high school student. Indeed, one study found that grade level might not be an obstacle to teaching critical thinking (Newmann, 1990). Nonetheless, the studies here indicated that critical thinking is more often taught to high-track students in both primary and secondary grades.

Teacher expectations of student achievement often appeared to be based on the assumptions of teachers. These assumptions seemed to fall into two categories: assumptions about students and assumptions about what it is to critically think. In the case of the former, the studies showed that critical thinking is often approached as a can-do or can't-do thing. In other words, students were often thought to have the capacity to critically think or not. This perspective further rests on a teacher's assumptions about critical thinking itself. If a teacher does not consider the possibility that critical thinking might be experiential in nature as well, meaning that learning to critically think might be more about being exposed to and having the experience and practice of engaging in critical thought than it is about the particular age or academic background of a given learner.

As discussed in chapter one, conceptions about critical thinking can be obfuscated when using the words higher-order thinking. This term implies a hierarchical order that must be traversed in advancement toward critical thinking. In terms of education in public schools, it suggests that only those students who have successfully traversed this course are capable of engaging in critical thought. Further, teachers might not be well informed on exactly what critical thinking is, and may well not be critical thinkers themselves. Because of this, many teachers may be at a disadvantage to teach critical thinking. As research suggested that classrooms where teachers had been explicitly

trained in critical thinking were more likely to demonstrate critical thinking in students (Ladwig, 1991).

These two features – teacher expectations of student learning and teacher assumptions about students and critical thinking – can be closely linked with another factor influencing teaching critical thinking: the content knowledge of the teacher (Makler, 1994). Some studies suggested that critical thinking requires a solid base of knowledge to work from (Saye, 2002; Sottile, 2004). As mentioned above, this should not only be seen as applying to the subject of a given class, but to how well a teacher is versed on critical thinking itself. In terms of content area, particularly in history and other social studies classes, a teachers understanding and conceptions of the discipline seem to be of influence in teaching critical thinking in several studies (Dixon, 2004; Hynd-Shanahan; Mastro, 2001; Onosko, 1991; Seixas, 1994). Teachers who were inclined to see history as a set story, or a learning of facts, dates and events, or even postulating a correct and true account of the past, were less likely to engage students in critical thought. And this makes sense. The nature of critical thinking is antithetical to these types of conceptions of history, and largely divorced from what it is that historians actually do (Seixas, 1994). Needing a solid base of content knowledge to work from in order to engage in critical thought is just as important for students as well. This may have influenced researchers assessments of levels of critical thinking in these studies.

Researchers in many studies indicated that explicit instruction in the design, purpose, rationale and strategy approaches in teaching toward critical thinking had a positive correlation with observable critical thinking skills in students (Gadzella, 1996; Gokhale, 1993). These studies suggested that being explicit about why and how lessons are

constructed and facilitated could increase the effectiveness of lessons embedded with critical thinking objectives. Examples included teaching methods of sourcing, selecting information, recognizing assumptions, formulating hypothesis, as well as having students learn about the rationales and purposes of particular instructional approaches such as cooperative learning and problem solving. However, not surprisingly, teachers appeared unable to do this if they themselves are unclear about why they are teaching the way that they are or what they were teaching (Makler, 1994). It seemed that teachers being explicit about critical thinking and methodological strategies increased the effectiveness of their instruction.

Several of the factors addressed so far in this section might affect another feature researchers contributed to the development of critical thinking skills: how a teacher conducted classroom discussions and what questioning strategies he or she used (Dixon, 2004; Minstrell, 1993; Onosko, 1991; Sottile, 2004). These strategies include posing questions that illicit critical thinking skills, allowing appropriate wait time, having students share their answer with another students, having students write down their responses to questions before sharing with the whole class, writing student responses where the whole class can see without teacher assessment, and allowing the student or student who offered a response the opportunity to challenge their own idea first. They also require that a teacher be knowledgeable in their content area and engage in and model critical and historical thinking themselves. Additionally, fostering an environment of trust where students felt supported in their learning – where it was okay to take risks in engaging content – was linked to more thoughtful classroom discussions.

Many particular activities were looked at in the studies considered in this chapter. These included diverse guest speakers, text analysis, student presentations (Mastro, 2001; Mastro et al, 2001) simulations (Sottile, 2004) online learning (Saye 2002; Tally, 2005) and media production (Feuerstein, 1999). Some of these activities were reported to have more success than others, but what seemed to be more important than the particular activity students were engaging in was how they were engaging in it, and how the teacher engaged in it with them. With that in mind, teaching for critical thinking requires that teachers design into their activities purposeful strategies and approaches – many described above – to any particular activity. Studies suggested that teachers interested in teaching for critical thinking need to consider less about the specific activity and more about how this activity is facilitated, and how they are approaching the learning themselves. Studies suggested that when students engage with diverse peers, teachers and perspectives inside and outside of class they are more likely to engage in perspective taking and critical habits of mind (Jackson, 2003; Inoue, 2005). However, this seemed to require an engaging in authentic dialogue and discourse with diverse people and perspectives more than just a superficial coverage. Again, this might tie back to social studies teachers' engagement in – or absence of – historical and critical thinking themselves.

Some researchers suggested that empathy and perspective taking are at most a prerequisite to both learning and teaching critical thinking and at least are influential dispositions in the development of critical thinking (Ferreira, 2000; Hynd-Shanahan; Inoue 2005; Jackson, 2003; Kleg, 1986; Mastro, 2001; 2005; Saye, 2002; Sevelis, 2000; Tirri, 2000, Tsui, 2002). In other words, students and teachers not able to consider the

experience and perspective of others, of contradicting narratives, of diverse and sometimes oppositional voices and peers might be at a disadvantage in terms of teaching and learning critical habits of mind. With this in mind, this thesis now moves into the fourth and final chapter where the discussions of previous chapters will be synthesized with the research engaged in this chapter.

## CHAPTER FOUR: CONCLUSION

### The Historical Trajectory of Critical Thinking

The imperative to foster and cultivate critical thinking skills in today's young people is central to any progressive pursuit seeking increases in social and economic equity through our public education systems. As our world gets smaller in terms of communicational and transactional potentials it also witnesses increasing divisions of social, political and economic interests. Bridging these divides and working toward a more just world requires working across difference, increasing understand of and empathy for multiple perspectives, and toleration for ambiguity. Ideally, critical thinking embraces the mental faculties and habits of mind these phenomenon necessitate.

As the political landscape of our democracy continues witnessing the advancement of neoliberal economic policies of recent decades, an amplification of voices calling for mass privatization in an attempt to implement a theoretical ownership society, and the resulting rise in economic and social inequities, today's young people increasingly face oppressive profit-driven systems that routinely reduced individuals and groups to the dehumanizing statuses of labor capital and consumer. This is especially true for students coming from generational poverty and historically marginalized groups. The thinking skills required in the development of efficacious habits of mind are crucial to cultivate in our young people if gains in social equity are to be achieved, for "the most effective kind of domination takes place when both the dominant and dominated classes believe that the existing order, with perhaps some marginal changes, is satisfactory, or at least represents the most that anyone could expect, because things pretty much have to be the way the they are (Miller, 1978)."

While slavery and territorial expansion are episodes of the past, a more insidious type of oppression has manifested in the advanced capitalist society witnessed today. In terms of our public schools, this often manifests in inequities both between schools and within schools. In the case of the former, inequitable funding and resources between schools is commonplace and affect the poor and minority populations the most. In terms of within schools, tracking programs inherently deem some students more capable than others. While there is no doubt a differentiation of ability levels among students, the reality that poor and historically marginalized groups are so often tracked at mid and lower levels is an unpleasant and highly visible reminder of the continued systemic inequities and marginalization facing so many young people today. When people engage in critical thinking they are ideally engaging in habits of mind with an ultimate purpose found in an attempt to understand knowledge, ideas and peoples in a more objective way for the purpose of solving problems or improving conditions that individuals and society face. However, if empathy and compassion are not present, this vision is in vein.

It is no coincidence that pedagogies emphasizing critical thinking have emerged as more diverse populations enters into non-hostile common learning environments. In early America only select young people – largely white non-poor individuals – had the opportunity to receive even a primary education. The institutionalized ideologies of the time often attributed this to the capabilities of oppressed peoples, quite similar to tracking practices in today’s public schools. Over the course of our nation’s history, the freedom struggle has been associated with historically marginalized peoples acquiring the knowledge and problem solving skills to bring to light and force a dialogue representative of these voices. Further, bringing in these voices has increased the potential for

privileged groups to better understand the historical and systemic factors that have resulted in the vast social and economic inequities of our society. In short, considering the perspective of others from an empathetic and compassionate disposition can be valuable for all. Oppression hurts everyone, and a critical understanding of it is necessary in combating it.

Several aspects of the current research on critical thinking support this. In fact, a substantive portion of the research considered in chapter three made claims of the need to embed respect and empathy for others in the development of critical thinking skills. To be concise, effective critical thinking requires the suspension of egoistic and self-interested predilections. It requires an ability to critique and reflect upon the self, a willingness to acknowledge past misconceptions, and a desire to identify present subjectivities and misapprehensions. Critical thinking is ultimately an authentic and ongoing process and habit of mind that learners continually and increasingly become into, not a set of discreet skills wrought for academic advancement or validation.

Perhaps the most important aspect in the relationship between the research literature and the historical trajectory of the purposeful inclusion of critical thinking in public schools is found in the unveiling of inaccuracies and misapprehensions embedded in dominant ideologies and philosophies positing that our shared human experience is atomistic in nature. Further, this understanding crosses the boundaries of any particular way of knowing, and can be validated through a multitude of epistemological approaches, including empiricism. The research literature continually highlighted the importance of the inclusion of multiple perspectives, the value diverse voices, of learning collaboratively, of fostering an environment of trust and respect in the development of

critical thinking. These inclusions never appeared to hinder the development of critical thinking, and usually appeared to increase the effectiveness of teaching critical thinking skills. As discussed in the first chapter, an intersubjective understanding of the human experience is well supported by empirical understandings in biology and psychology. Bringing this approach into educative modes exemplifies the process of critical thought as it strives for increases in equity, justice and democratic ideals for all people. Teaching for critical thinking in the social studies offers an avenue for developing solutions to the problems facing our families, community, society and world.

### Recommendations For Classroom Practices

Although the focus of the previous section largely dealt with critical thinking in terms of social studies content and issues, critical thinking can be a goal of all disciplines. This section, which gives recommendations for classroom strategies in how to teach for critical thinking based on the professional literature, will begin with general recommendations that could be applied in any subject area. It will then address the social studies classroom in particular.

The first thing I would recommend that teachers do in order to promote the development of critical thinking in their students is to know how, why and what they are teaching themselves. The professional literature has strongly suggested that one of the biggest obstacles in teaching for critical thinking is that teachers are themselves struggling with content and process. This is true in terms of understanding the concepts that one is teaching (Makler, 1994) in terms of understanding and being able to relate the purpose and goal of particular curriculum choices to students (Raudenbush, 1992) in terms of understanding critical thinking itself and effective strategies in its instruction

(Ladwig, 1991) and in terms of the specific content area they are teaching (Dixon, 2004). A teacher is not going to be able to teach what they do not know, and they are not going to be able to model critical habits of mind if they are not in possession of them themselves. That being said, I think it is fine to learn with students. Teachers need to consider themselves co-learners with their students, not the holders of knowledge for whom the students are the recipients (Onosko, 1991). This is key.

My next recommendation would be to abandon low expectations of student achievement and hold an expectation that all students can increase their thinking skills (Sevelis, 2000; Tally, 2005). And along with this, I would recommend that teachers be cautious when assessing that students are not developmentally capable of critical thought and consider an experiential based model when approaching critical thinking (Dixon, 2004; Tirri, 2000). Students need experience and practice in developing critical habits of mind -- and they need these skills modeled -- whether they are at the primary level or the graduate level (Ferreira, 2000; Sottile, 2004). I think that a major problem here is the interchangeability of the terms critical thinking and higher order thinking. There are many critical thinking skills and dispositions associated with them that can be developed in students at the secondary level without a mastery of more traditional skill sets or a history of academic achievement (Newmann, 1991).

Next, I would recommend getting to know one's students – as learners and as people – to the best of one's ability. This is important for a variety of reasons. First, it demonstrates that a teacher is interested in and concerned for their students (Ferreira, 2000; Inoue, 2005; Onosko, 1991) and models empathy for others. Knowing one's students' interests and background is also essential to bringing in materials and activities

that are relevant and engaging, an important element in designing lessons conducive to the development of critical thinking (Feuerstein, 1999; Sottile, 2004; Tryzyna, 1997). Knowing one's students can also be key in having students solve authentic real-life ill-structured problems that are relevant to their particular lives. Knowing one's students is also important in terms of knowing where they do have solid knowledge bases, and it is here that teachers can push critical thinking and students can be witness to their own cognitive development.

I also recommend that teachers interested in developing critical thinking in their students continually develop Socratic questioning skills that illicit critical reflection in students (Dixon, 2004; Minstrell, 1993; Newmann; 1990; Saye, 2002; Tsui, 2002). Part of this is being able to suspend one's perspective, seeing it as changing and subjective, not coming to conclusions for students, and engaging in reflective practice.

In terms of the secondary social studies classroom, my recommendation here is for teachers to both model and teach for the development of historical thinking (Seixas, 1994). This means challenging authoritative voices and considering multiple and oppositional historical narratives and perspectives. It means considering the motives and applications for and of particular historical accounts. Most importantly, it approaches students as historians, not the receivers of historical information, and scaffolds them toward agency in participating in the social and historical setting that they exist in. And again, it also entails that teachers consider themselves learners too, that they continually develop and expand their own understandings and knowledge base, and that they are willing to change their perspective and beliefs when new information becomes available.

## Future Research and Closing Thoughts

The biggest recommendation I have for future research is to look at the long-term effects of teaching for critical thinking over an extended period, and how these habits of mind affect the lifelong learning of students. There is a lot of information about critical thinking in terms of particular strategies, curriculum, methodology and skill sets, yet an understanding of the long-term effects on how teaching critical thinking translates into the development of empathetic and concerned citizens actively participating in the democratic process is unclear. Coming from a perspective that the goal of teaching for the development of critical thinking is ultimately found in increases in social and economic equity, and the promotion of democratic ideals, the lack of this information makes hopes of this very speculative in nature.

The secondary social studies classroom offers a unique and promising venue for fostering dispositions conducive to critical thought. These dispositions include perspective taking, truth seeking, empathy building, open-mindedness, analyticity, and cognitive maturity. The main disciplines associated with secondary level social sciences (history, civics, economics and geography) offer immense potential for applying teaching practices aimed at increasing critical thinking skills within these particular content areas.

Young people growing up in the United States today are more than ever exposed to a corporate media system that is not only antithetical to the tenets of critical examination, but whose ultimate imperative lies in the accumulation of wealth for an elite few. Television, newspapers and radio stations increasingly conglomerate into vast and powerful entities that expound a narrow and particular perspective whose underlying motives lay not in the welfare and sustainability of our broader society and world, but

instead in the short-term interests of individual profit seeking entities. A citizenry well grounded in critical examination as a habit and power of mind is a central and crucial component to increases in democracy. More importantly, critical thought is a democratic imperative in protecting society from tyranny and oppressive forces. Teaching for increases in democracy, therefore, requires teaching for critical thinking.

As I write this the United States is involved in extensive offensive and/or pre-emptive military operations in several international arenas. The echoes of practice-bombs sound through my home office window from the military base located maybe 10 miles to the east. Oil company profits are at record highs while the gap in economic equity grows at an increasingly rapid pace. Over one third of the world's population lives on less than two dollars a day, with more than a billion more living on less than five dollars a day.

Domestically, a very small percentage of our population controls most of the accumulated wealth. Over forty million US citizens lack health care and the average real wage continues to decline. Meanwhile, several key leaders have referred to the current military ambitions as "the long war," warning that it may last for an entire generation.

And, in terms of our public schools, young people who will soon be interacting as adult citizens with our society are subjected to tracking and educative modes often absent of practices conducive to the development of concrete skills needed in participating in our democracy and habits of mind potentially offering avenues to work through the real life struggles they face. Further, many students are negatively affected by systemic systems of oppression they often see as irrelevant to their own experiences, and that are not examined in their education, as if those problems and realities had been solved and were a thing of the past. Instead, our nation's young people often experience a sorting

mechanism that seems designed to serve the established economic power systems. In short, when teaching practices do not encourage and cultivate critical thinking, the students subjected to our compulsory primary and secondary educational institutions are likely to be fitted into an inequitable system rather than developing into citizens interacting with and influencing that system, thus undermining the democratic tenets so idealized in our society. Critical thinking, inside and outside of the classroom, is crucial to increases in justice, equity, sustainability, and challenging the systems that threaten the world and its inhabitants. A better world is possible. And it starts with caring about other people.

## REFERENCES

- Allen, J. & Razvi, S. (2006). Students' perspectives, levels of epistemological understanding, and critical thinking dispositions related to the use of case studies in an educational psychology course. *American Educational Research Association*.
- Aronson, E. (1995). *The social animal*. New York: W.H. Freeman and Company.
- Bell, D. (2004). *Silent covenants: Brown v. board of education and the unfulfilled hopes for racial reform*. New York: Oxford University Press.
- Dewey, J. (1966). *Democracy and education*. New York: Free Press.
- Dixon, F., Prater, K., Vine, H., Wark, M., Williams, T., Hanchon, T., & Shobe, C. (2004). Teaching to their thinking: a strategy to meet the critical thinking needs of gifted students. *Journal for the education of the gifted*. 28(1).
- DuBois, W. E. B. (1992). *Black reconstruction in America 1860-1880*. New York: Atheneum.
- Erikson, E. (1968). *Identity youth and crisis*. New York. W. W. Norton and Company.
- Feagin, J. (2001). *Racist America: roots, current realities, & future Reparations*. New York: Routledge.
- Ferreira, M. (2000). Caring teachers: adolescents' perspectives. Reports – Research. ED 441 682.
- Feuerstein, M. (1999). Media literacy in support of critical thinking. *Journal of Educational Media*. 24(1).
- Gadzella, B. (1996). Differences among course grade groups on critical thinking. *Southwest Educational Association*.

- Gadzella, B. (1996). Teaching and learning critical thinking skills. *International Congress of Psychology*.
- Florida House of Representatives. 2006. HB 7087 Engrossed 3. Page 44.
- Freire, P. (2006). *Pedagogy of the oppressed*. New York: Continuum.
- Gallese, V. (2003). The roots of empathy: the shared manifold hypothesis and the neural basis of Intersubjectivity. *Pschopathology*. 36:171-180.
- Gallese, V. (2004). Intentional attunement: the mirror system and its role in interpersonal relations. Available:  
<http://www.interdisciplines.org/mirror/papers/1/printable/paper>
- Gallese, V., Keysers, C., & Rizzolatti, G. (2004) A unifying view of the basis of social cognition. *Trends in Cognitive Science*.
- Gokhale, G. (1995). Collaborative learning enhances critical thinking. *Journal of Technology Education*. (7)1.
- Goldman, A. (2004). Mirror systems, social understanding and social cognition.  
Available: <http://www.interdisciplines.org/mirror/papers/3/printable/paper>
- Gradstein, M. (2005). *The political economy of education: implications for growth and inequality*. Boston: Massachusetts Institute of Technology.
- Graves, K. (1998). Outflanking oppression: African American contributions to critical pedagogy as developed in the scholarship of W. E. B. DuBois and Carter G. Woodson. *American Educational Research Association*.
- Hynd-Shanahan, C., Holschuch, J., & Hubbard, B. (2004). Thinking like a historian: college students' reading of multiple historical documents. *Journal of Literacy Research*. 36(2).

- Inoue, Y. (2005). Critical thinking and diversity experience: a connection. *American Educational Research Association*.
- Jackson, M., & Wasson, D. (2003). Critical thinking requires critical doing: an analysis of students multicultural experiences within Freire's framework. *Universiteit Van Amsterdam Graduate School of Teaching and Learning*.
- Jean Piaget. 1988. *Education for democracy, proceedings from the Cambridge school conference on progressive education*, eds. *Kathe Jervis and Arthur Tobier*.
- Jensen, R. (2006). Unenlightened in the sunshine state: what a new Florida law says about America's fears. *Special to the Star*.
- Keyesers, C., & Perrett, D. (2004). Demystifying social cognition: a Hebbian perspective. *Trends in Cognitive Science*. 8(11).
- Klaczynski, P., Fauth, J., & Swanger, A. (1998). Adolescent identity: rational vs. experiential processing, formal operations, and critical thinking beliefs. *Journal of Youth and Adolescence*. 27(2).
- Kleg, M., & Carter, T. (1986). Direct concept instruction in US history.
- Knight, G. (1989). *Issues & alternatives in educational philosophies*. Berrien Springs, Michigan: Andrews University Press.
- Ladwig, J. (1991). Organizational features and classroom thoughtfulness in secondary school social studies departments. *Theory and Research in Social Education*.
- Leming, J. (2003) Where did social studies go wrong? Thomas B Fordham Institute. Retrieved January, 10 2007 from <http://alumni.cc.gettysburg.edu/~s330558/schooling.html>
- Leming, J. (1998). Some critical thoughts about the teaching of critical thinking. *The*

- Social Studies*. 89(2).
- Liston, D. (1988). *Capitalist schools: explanation and ethics is radical studies of schooling*. New York: Routlage.
- Magnet, M. (1993). *The dream and the nightmare: the sixties' legacy to the underclass*. San Fransisco: Encounter Books.
- Makler, A. (1994). Social studies teachers' conceptions of justice. *Theory and Research in Social Education*. 22(3).
- Minstrell, J., & Stimpson, V. (1993). Creating an environment for restructuring understanding and reasoning. *Office of Educational Research and Improvement*.
- Myers, D. (2000). *Exploring social psychology*. Boston. McGraw-Hill Higher Education.
- National center for history in the schools. 2007. Overview of standards in historical thinking. Retrieved January 10, 2007, from <http://nchs.ucla.edu/standards/thinking5-12.html>.
- Newmann, F. (1991). Classroom thoughtfulness and students' higher order thinking: common indicators and diverse social studies courses. *Theory and Research in Social Education*.
- Newmann, F. (1990). Qualities of thoughtful social studies classes: an empirical profile. *Journal of Curriculum Studies*. 22(3).
- Office of Superintendent of Public Instruction. (2007). Retrieved January 10, 2007 from <http://www.k12.wa.us/curriculumInstruct/SocStudies/socstudiesskillsEALRs.aspx>
- Ogawa, M. (2001). Building multiple historical perspectives: an investigation of how middle school students are influenced by different perspectives. *American Educational Research Association*.

- Ogawa, M., & Field, S. (2001). Realities of the introduction of multiple historical perspectives during a middle school study on world war II. *National Council for the Social Studies*
- Onosko, J. (1991). Barriers to the promotion of higher-order thinking in social studies. *Theory and Research in Social Education*.
- Raudenbush, S., Rowan, B., & Yuk, C. (1993). Teaching for higher-order thinking in secondary schools: effects of curriculum, teacher preparation, and school organization.
- Ring, T. (1993). Self-confidence and critical thinking skills: changes during the student teacher experience. *Mid-South Educational Research Association*.
- Saxe, D. (2002). On the alleged demise of social studies: the eclectic curriculum in times of standardization – a historical sketch.
- Saye, J. & Brush, T. (2002). Scaffolding critical reasoning about history and social issues in multi-media supported learning environments. *Educational Technology, Research and Development*. 50(3).
- Seixas, P. (1994). Students' understanding of historical significance. *Theory and Research in Social Education*. 22(3).
- Sevelius, J., & Stake, J. (2000). Attitude change in women's studies students: the effect of prior attitude and attitude importance. *American Psychological Association*.
- Sonnby-Borgstrom, M. (2003). Emotional empathy as related to mimicry reactions at different levels of information processing. *Journal of Nonverbal Behavior*. 27(1).
- Sottile, J. & Brozik, D. (2004). The use of simulations in a teacher education program. *Hawaii International Conference On Education*.

- Spring, J. (2005). *The American school: 1642 – 2004*. Boston: McGraw Hill.
- Tally, B., Goldenberg, L. (2005). Fostering historical thinking with digitized primary sources. *Journal of Research on Technology in Education*.
- Tirri, K. (2000). The development of empathy and role-taking skills in pupils from grades six to nine. *American Educational Research Association*.
- Trzyna, G., Miller, S. (1997). A case study of learning in an intergrated literature-history class: personal narrative, critical reflection and Kris's way of knowing. *National Research Center on English Learning and Achievement*.
- Tsui, L. (2002). Fostering critical thinking through effective pedagogy: evidence from four institutional case studies. *The Journal of Higher Education*. 73(6).
- US Government. (1992). Effects of curriculum, teacher preparation, and school organization. *Office of Educational Research and Improvement*. CRC-P92-146.
- Van Hover, S., & Yeager, E. (2003). Challenges facing beginning history teachers: an exploratory study.
- Vygotsky, L. (1987). *Thinking and speech*. New York: Plenum Press.
- West, C. (1993). *Prophetic thought in postmodern times*. Monroe, Maine: Common Courage Press.
- Zinn, H. (1992). Interviewed by Barsamian, D. for Zmag.org. Retrieved January, 10 2007 at <http://www.zmag.org/zmag/articles/barzinn.htm>.