

Authentic Inquiry Pedagogy Implemented in Middle School Social Studies: Student and Teacher  
Perspectives

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**Abstract**

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This participatory action research study addressed questions of pedagogical strategies, motivation, assessment, and student choice surrounding an inquiry approach to teaching and learning in a 7<sup>th</sup> grade social studies classroom. Teacher and student data were collected over a 6-week inquiry project stemming from and directed by student choice. Data collected consisted of an anonymous questionnaire and survey, teacher journal, student self-assessment, and student exit slip. This was a mixed-methods investigation, heavily reliant upon qualitative analysis, and using “constant comparison” (Kathwohl) strategies data analysis began immediately. Data collected from students and teacher suggest a strong desire for inquiry and choice supportive environments.

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## Table of Contents

Abstract	
Acknowledgements	
List of Tables and Figures .....	iv
<b>Chapter 1 – Introduction to the Research Problem and the Study .....</b>	<b>Page 1</b>
Emergence of Inquiry Pedagogy and Issues for Research .....	3
What Inquiry Pedagogy Seeks to Accomplish .....	5
Introduction to Inquiry Pedagogy in Social Studies .....	7
Focus of this Research .....	9
Research Questions .....	13
How this Document is Organized .....	14
<b>Chapter 2 – Informing Literatures and Framing Ideas .....</b>	<b>Page 15</b>
Aspects of Inquiry/Effective Learning .....	15
Recognition and Motivation .....	17
Personal Choice .....	20
Summative and Formative Assessment .....	23
Theories and Models of Inquiry Pedagogy .....	27
Inquiry Pedagogy and Social Studies .....	32
Reluctance to Use Inquiry Pedagogy in Social Studies .....	34
What Inquiry Pedagogy Provides to Social Studies Teaching .....	39
Conceptual Framework .....	41
<b>Chapter 3 – Research and Design Methods .....</b>	<b>Page 44</b>
Setting and Participants .....	46

Procedure: Alternative Inquiry Project and Data Collection .....	49
Data Sources .....	54
Approach to Data Analysis .....	58
Data Quality and Design Limitations .....	61
<b>Chapter 4 – Findings and Results .....</b>	<b>Page 63</b>
A Recount of Student and Teacher Activities .....	63
Analysis of Recount .....	77
The Goal of School – From the Students’ Perspectives .....	80
Students’ Viewpoints on how they Experience Classroom Instruction .....	83
Inquiry Pedagogy as Desirable Learning Situations .....	86
What Students Think Motivates Them .....	92
Summary of Research Questions and Supporting Evidence .....	93
<b>Chapter 5 – Conclusions and Implications .....</b>	<b>Page 97</b>
What the Study Found .....	97
Learning Dynamics at Work in this Case of Inquiry Pedagogy .....	99
Building Intrinsic Motivation .....	100
Fostering Competency, Autonomy, and Relatedness .....	104
Fear of Freedom .....	109
Learning that is Simultaneously Powerful and Fun .....	111
Alternative Interpretations and Limitations of Study Findings .....	113
Implications for Practice .....	116
<b>References .....</b>	<b>Page 118</b>
<b>Appendices .....</b>	<b>Page 122</b>

Appendix A: Questionnaire .....	123
Appendix B: Teacher Observation Guide (Journal) .....	124
Appendix C: Student Survey.....	125
Appendix D: Student Self-Assessment .....	127
Appendix E: Exit Slips .....	132
Appendix F: List of Student Topics .....	133

## List of Tables and Figures

Figure 1 The Reflective Model .....	29
Figure 2 The Inquiry Cycle .....	31
Figure 3 Conceptual Framework .....	41
Figure 3: Example of Student Work (Primary Source) .....	71
Figure 4: Example of Student Created Power Point Slide .....	75
Table 1 Student/Teacher Inquiry Schedule and Noted Documents .....	51
Table 2: Partial Example of Student Note Template .....	68
Table 3 – Student Survey Results .....	82
Table 4 – Summary of Research Questions and Supporting Evidence .....	94

## Chapter 1

### Introduction to the Research Problem and the Study

People learn in many different manners. There is no single perfect recipe to learning; a person is unique and therefore so is his/her learning. Experts, throughout history, have studied and suggested the “best” or “new and improved” methods to teach and learn. Yet, educating young people is constantly and vigorously debated. Cycles of what is considered best practice in education ebb and flow as methodically as the tides. One thing is often overlooked though – the teacher and students’ reactions to such change and how this influences their learning. Few people like change being forced upon them; students are no different, especially as they increase in age and grade level. A student’s demeanor, effort, and overall zeal for academic work are often clearly communicated when topics and activities are introduced. Body language and verbal cues are easily evident the moment an assignment is given. When students are directed towards an assignment, remiss of their conception, it is often met with disdain. Many students resist, withdraw, or begrudgingly proceed lacking true enthusiasm for the assignment. This discontent influences performance and therefore success. Further concerning is that many curricula or educational theories, when proven effective through investigation, are consequently implemented by districts as if a panacea for *all* learners. Curriculum, however, and as discussed later, is frequently rebuffed as an encumbrance to authentic learning. In addition, the typical effectiveness of “new” curriculum wanes after a few years. Regardless of curriculum’s brief influence, these new mandated changes are habitually met with the same disdain from students as any other topic/instruction/change (Richardson, 1994, p. 6).

There is ample research regarding inquiry pedagogy; the concept is nothing new. Despite the amount of research on inquiry pedagogy, much of this information does not address those

people most influenced by it: the students. Additionally, teacher input is sporadic (Richardson, p.5; Hammer & Schifter, p. 444). Finally, research on inquiry pedagogy in science classes is fairly covered, so branching out to middle school social studies classrooms is a necessary step to further illuminate the unique characteristics of such pedagogy.

Through various informal observations over the past decade, I noticed that providing students choice, in classes using inquiry pedagogy, seems to change their reaction positively. This observation provided the impetus for the study reported in this dissertation. In this research study, I investigated the effects of inquiry in a social studies classroom and how giving students choice in setting their research topics affected their interest and effort in their learning of social studies. I explain inquiry pedagogy and potential constraints. Additionally, students and the teacher contribute personal reactions and thoughts regarding inquiry pedagogy. Finally, a connection is made between choice, inquiry, motivation, and fulfillment. Much research in pedagogy, or “best practice” instruction, reflects a change in some type of controlled assessment on content learning as a consequence of the manipulated input (pedagogy) (Richardson, p.5). My research study, while recognizing the importance of improved content learning, also attempted to demonstrate that non-academic factors influence students and what happens when we address those.

This investigation addressed the challenges facing inquiry pedagogy head-on. Inquiry pedagogy is a longstanding theory of education, which has frequently been dismissed by districts or teachers for various reasons. Some of the reasons, which are explained in more detail later, include notions of student ability to operate in this environment. Other obstructions involve notions of “coverage and control”; i.e. teachers’ control of students and the content delivered to them. I discuss the negative characteristics of inquiry pedagogy in the current research,

highlight certain models which attempt to moderate these, discuss key aspects of inquiry pedagogy, and explicate my project with supporting artifacts from the people directly involved in inquiry pedagogy. This research suggests new ways of thinking about how we teach social studies and, therefore, how students learn. Potentially, then, this research can notably influence the nature of school and assessment. If the end goal of public education is to foster intellectualism, but the current model does not engender this, then we must investigate different models of learning.

### **Emergence of Inquiry Pedagogy and Issues for Research**

There are many theories supporting education and learning. Inquiry pedagogy is one such theory. Historically, education was a religious affair, “The education of the young emphasized religious ends and incidentally served to perpetuate existing political, economic, and social organization,” (Massialas & Cox, 1966, p. 2). This approach to education supports factual, inert, “receptacle of information” pedagogy, and had little room for “inquiry”. If society only desired to maintain status quo, then the best way to do this seemed to make students memorize a canon of *incontrovertible* facts. Furthermore, “process” (teaching/learning as scripted/delineated method) has been emphasized to monitor best practice (Brown and Campione, 1996), “Understanding was required of neither the teacher nor the students. Skills hierarchies could be developed, basic exercises constructed, reinforcement principles laid out, and related assessments conducted. Much of what went on in the classroom could be scripted,” (p. 5). This pedagogical theory is a byproduct of early education research dominated by psychological-behaviorist-analyses theory (Brown, et.al, 1996).

A strictly laboratory-based and psychologically oriented theory of learning is not practical (Brown, 1994). The notion that students at a certain age in the same grade should acquire the same knowledge at the same time, an assumption of traditional education, contributes to the perception that schools are disingenuous and perpetuates apathy in many classrooms (Tyack & Tobin, 1994). However, as politics changed (especially the notion of freedom of religion), so too did the nature of schools (Brown & Campione, 1996), “citizenship has become the dominant intrinsic goal in education,” (Massialas & Cox, p. 3). Good citizenship goes beyond maintaining status quo; it goes beyond apathetic and naïve deference. Massialas, Sprague, & Hurst (1975) wrote,

Active participation in citizenship is based upon inquiry. Citizens who reflect upon important issues facing themselves and their society often question policy recommendations, social institutions, and social action; they want reasons in support of specific positions and activities (p. 2).

Concurrently with this shift in education’s purpose, methods of instruction and philosophies of learning similarly swung from repetition to critical thinking. In time, inquiry pedagogy emerged as a method to foster critical thinking, “Inquiry-based teaching transforms the aims of school from short-term memorization of facts into disciplined questioning and investigating,” (Wolk, 2008, p. 117). As an increased emphasis on understanding rich sources of content emerged, it became necessary that higher order thinking be returned as a subject of inquiry (Brown & Campione, 1996).

## **What Inquiry Pedagogy Seeks to Accomplish**

Inquiry pedagogy poses fundamental challenges to more established ways of teaching, and raises important issues for research. Copious amounts of research attempt to measure and define academic success, especially in the fields of motivation, pedagogy, and assessment, all of which are important components of best practice instruction (Nicholls, et. al, 1993; Ryan & Deci, 2000; Nolen, 1988; Dewey, 1910, 1902, 1900; Bruner, 1999, 1960; Banks, 1998; Moll, 1992; Black & Wiliam, 1998; Black, 2004; Freire, 1970; Brown & Campione, 1996). Central to many notions of effective or exemplary instruction is the notion that pedagogy both invites and accelerates students motivation to engage and do well. Intricately connected to this motivational issue are questions of control—who controls the learning agenda in the classroom, who exercises initiative in seeking out and organizing information and ultimately interpreting it. These issues are raised by inquiry pedagogy in dramatic ways, and they are the immediate motivation for this research study.

Dewey (1910) described inquiry (“reflective thought”) as, “Active, persistent, and careful consideration of any belief or supposed form of knowledge in the light of the grounds that support it, and the further conclusions to which it tends,” (p. 6). Inquiry pedagogy involves building hypotheses, searching for evidence, drawing conclusions, and evaluating the strengths of conclusions, “For this reason, the inquiry process is exalted as the highest form of higher-order thinking or critical thinking,” (Parker, 2009, p. 305). If students are expected to exit school as critical thinkers, as active citizens, then inquiry pedagogy is a model to foster this. Education, therefore, should create, “conditions for the individual to inquire into beliefs, values, and social policies and to assess the consequence and implications of possible alternatives,” (Massialas & Cox, 1966, p. 5). Inquiry leads to thought, and reflective thinking is the goal of education.

Inquiry pedagogy encourages the “active, reflective and social nature of learning” (Brown & Campione, 1996, p.2). Inquiry pedagogy, which includes choice, supports a more contemporary theory of teaching and learning. The nature of student choice in schools is somewhat controversial; can students choose appropriately or must we, as “omniscient” adults, decide what is best for them? The historically compulsory nature of school and subjects (Peck, 1995; Thomas, 2001) suggest the latter route has been taken to date, but it may not be the most effective route.

Students, teachers, and researchers frequently lament how the standard curriculum is too prescribed and leads to disengagement. Inquiry pedagogy invites students to pursue their own interests and create knowledge instead of memorizing someone else’s creation. Even purposefully crafted inquiry, in the many different ways that teachers could do so, is still directed by the teacher. This clandestine maneuvering is almost more damaging as it positions the students as inferior learners that must be manipulated to meet what the teacher feels as a higher purpose. Cloaked in the assumption that students need such a spark to facilitate learning, many inquiry projects start with the teacher proposing questions or problems which then direct student inquiry along a predetermined path. Inquiry in this manner is ripe with “deficit” philosophies of learning (Freire, 1970) and truly discombobulates students seeking more (growth, knowledge, wisdom, a higher caliber of education, etc.). This “banking concept” of education is morally corrupt and suspends authentic learning (Freire, 1970). Furthermore, this system is self-perpetuating, and is so engrained within students’ conceptions of learning that they resist attempts to adjust it. Investigating methods which foster true inquiry and student engagement, then, are needed. Studying a student’s inquisitiveness is a logical progression and fits perfectly well in the social studies model.

## **Introduction to Inquiry Pedagogy in Social Studies**

As early as Dewey at the turn of the 20<sup>th</sup> century, educators were contemplating “inquiry” in education. In *How we Think* (1910) and *Logic, the Theory of Inquiry* (1938) Dewey discussed inquiry in schools. He further created and expanded 5 stages in the process of inquiry:

1. The experience of an indeterminate situation.
2. The conversion of the indeterminate situation from a mere dilemma to a problem capable of articulation.
3. The establishment of hypotheses along with anticipated consequences.
4. The elaboration and testing of hypothesis.
5. The reestablishment of a determinate situation.

Thirty years after this, the United States Office of Education launched “Project Social Studies” in response to the recognized need to improve inquiry skills (Good, Farley, & Fenton, 1969). One of the first places established to foster this, The Social Studies Curriculum Center at Carnegie-Mellon University (CSSCC), created a 4-year high-school research project designed to specifically teach and compare inquiry skills versus traditional social studies instruction. The results of the study, further explained later, suggested that inquiry skills could be successfully taught.

Fenton continued to write over the following years about how detrimental traditional teaching and reliance upon textbooks is to learning, especially in a subject so vast and complicated as social studies. Contemplating the scope of social studies (a person, or a group of people, trying to interpret something in the past, often hundreds of years ago, and transcribe all of the thoughts, emotions, structures, and more into a few pages of a book), Fenton (1971) suggests this is an absurd notion ( p. 28). Furthermore, textbooks “perpetuate a number of practices which contribute to poor learning,” such as inflexible teaching/learning, content

coverage of facts, and unauthentic learning methods (p.29). This leads Fenton to suggest alternative social studies instructional methods are needed, specifically inquiry methods.

Inquiry in social studies first appeared in the 1960s, and Clements, Fielder, & Tabachnik (1966) were some of the early theorists in the field. In their preface they set the reader up immediately by stating this book is written for, “teachers who are interested in stimulating youngsters to think about the things they encounter that tell them about themselves and their world, its past and its present.” They continue stating that experienced teachers may find that these ideas cause them to “re-evaluate” their teaching approach and “re-appraise” conventional avenues and materials.

As inquiry distinguished itself from other forms of curriculum and instruction, and society reacted to global conditions (WWII, nuclear power, etc.), inquiry as a pedagogical decision was often shuffled out of the way for more direct forms of learning intended to ensure American children maintained or surpassed their international counterparts (Schubert & Lopez-Schubert, 1997; Richardson, 1994). In the mid-1960s numerous theorists (Massialas, Sprague, Hurst, Cox, Clements, Fielder, Tabachnick, and more) reported on the virtues of inquiry pedagogy again. However, potentially due to international tension at its peak, inquiry pedagogy was repeatedly dismissed. This roller-coaster life-cycle of inquiry continued through the turn of the 21<sup>st</sup> century, as researchers such as Wineburg, Seixas, Parker, VanSledright, and Barton further supported notions of inquiry in social studies. In the wake of legislation in 2001, inquiry pedagogy suffered another large setback and was again shelved in favor of more controlled pedagogies. Politics, as previously mentioned, play an enormous role in pedagogical decisions. As the need to compete with international standards increase, so too has the bureaucracy of schools. Despite copious amounts of research suggesting alternative best-practice theory and

instruction, attempts to reign in pedagogical control continue to hamper inquiry pedagogy as a formidable pedagogical method. My research endeavored to demonstrate that inquiry pedagogy is successful (students met standards of learning) and did so in a more equitable, authentic, and meaningful manner.

### **Focus of this Research**

Existing research studies on inquiry define, outline, and prescribe inquiry's attributes, but differ than my research in four ways. Primarily, my data came directly from the students and teachers involved in the process; their voice was the most prominent source of data. In addition to this, my research study covered unrestricted and absolute inquiry following student choice – the students pursued their interests; they were not guided along a path designed to meet the teacher's or some other third party's goal for their learning. The learning, and course it took, came from within the students (the teacher highlighted inquiry tools and methods to facilitate the learning of their topic). Both of these characteristics should positively contribute to theory and advancement of inquiry pedagogy as they are not currently present in social studies research on such forms of learning. Furthermore, I attempted to explicate how choice intermixes with classroom environment and motivating factors. Finally, my study investigated what classroom structures helped facilitate an inquiry classroom.

Inquiry pedagogy can be structured with various levels of student choice (a teacher may direct inquiry throughout a guided lesson, and provide the choices for students), but my research study posited choice at the outset of the process as well as throughout the project. Student choice permeated the inquiry process; the teacher relegated control of the student and/or project so that his influence was minimal. The teacher only intervened if a serious gap in knowledge was

presented by the students, and even in this situation he promoted resolution through questioning instead of directing.

My study investigated if learning Social Studies via an inquiry approach to teaching and learning fostered stronger or more positive results/behavior than a more "traditional" approach. Good, et. al (1969) define traditional social studies instruction well,

Many social studies courses in American schools are taught from a single, narrative text. History textbooks typically contain a chronological story of political, economic, social, and intellectual developments. Textbooks in the other social sciences explain the findings of political scientists, economists, sociologist, anthropologists, and geographers. Students are required to read the textbooks to learn those facts and generalizations which the authors have chosen to include. In class, teachers generally present short lectures to add to the students' store of information and to increase their comprehension of the significance of social science findings or conduct recitations to determine if the students have mastered the content of reading assignments and lectures. (p.31)

Inquiry pedagogy, as represented in my study, distinguished itself from this in many ways. Kuhn, Black, Keselman, & Kaplan (2000) define inquiry as, "an educational activity in which students individually or collectively investigate a set of phenomena – virtual or real – and draw conclusions about it," (pp. 496-497). In this model, students direct their own investigation, (based upon their own social studies interests) including questioning, planning, carrying out research, and reaching conclusions with little more than teacher guidance "on the side". Instead of the teacher (and the textbook) controlling and dictating the content and delivery of information, students embark on an educational journey that originates within themselves.

As noted above, inquiry pedagogy is not new, and it further varies in conception. The inquiry studies conducted thus far do not, in this author's opinion, embrace inquiry pedagogy's true potential. To cast off the restraints of traditional curriculum is a step towards inquiry, but without the relinquishment of control and power, this is not genuine inquiry. Genuine inquiry, as I distinguish it, must originate internally. This is its truest form and compels people to seek answers until satisfied. This is learning at its most fundamental conception; crafting lesson plans, then, to guide students to predetermined outcomes is not authentic inquiry. Middle school students (and other ages as well) recognize this artfulness and eventually further resist the situation. There is relatively little research that investigates if authentic inquiry can effectively be implemented within middle school social studies education.

Barton & Levstik (2010) suggest investigation is needed in developing "this kind of commitment" [giving up "coverage and control" – inquiry teaching] in future teachers (p. 40). My research study invited the teacher to share in the development of inquiry pedagogy and hear from his/her perspective about its evolution. VanSledright's (2010) recent title suggests we need to know how to teach methods of this nature - "What does it mean to think historically, and how do you teach it?" Additionally, he wondered how do we persist in this endeavor when faced with resistance from students, "Some will be reticent to shift their views from naïve trust in history texts," (p. 117). This further suggests research involving student viewpoints on this matter is needed. Wineburg's (2010) research on student perspectives and how they influence their historical conceptions is also an area of further study, "By investigating the history students bring with them to school, we can consider anew the role of the classroom," (p. 110). Kuhn et al.'s (2000) mostly quantitative research focused on inquiry in science, but concludes with, "more and different kinds of efforts certainly seem warranted, especially in view of the

enormous current interest in inquiry as a teaching method,” (p. 520). This supports Hammer & Schifter’s notion of teachers as invaluable contributors while investigating teaching methods, “It is essential to have contributions by teachers who are experimenting with new pedagogical practices,” (p. 444). Furthermore, when discussing student inquiry, they note, “Although there is a general consensus that student inquiry is important, there is little understanding or agreement regarding how to discern and assess inquiry or how to coordinate it with the more traditional but still important agenda of covering the content (Hammer, 1997),” (p. 458). Finally, Brown & Campione (1996) investigated students’ deep understanding of biology/science with great success, and noted that, “In principle, the same should be true of areas of the social sciences, but there is, at present, a paucity of developmental research to inform this endeavor,” (p. 21).

My research included students and the teacher as active participants in doing inquiry pedagogy research, and will therefore further contribute to inquiry pedagogy’s conception in K-12 social studies education. How do we know what we are doing is helpful (improves learning) AND inspiring to students? To fully grasp the scope of research which might influence people, we must include the participants’ thoughts and reactions regarding the change, “curriculum reform requires teacher inquiry into students’ knowledge, reasoning, and participation,” (Hammer & Schifter, 2001, p. 442). Educators need to know what students and teachers think about and feel about inquiry pedagogy. With this information, combined with the plethora of existing research supporting inquiry pedagogy, perhaps it will lead to its acceptance as a viable and desirable pedagogical method.

Students exhibit and express greater enthusiasm at certain assignments or points in their lives, and educators need to better understand what sparks this. If teachers understand what creates this enthusiasm, they might be able to foster it in the classroom in more authentic

manners. Middle school students frequently dismiss authority figures and the “lesson” they are trying to teach. Traditionally, teachers are authority figures (as are parents, police officers, administrators, etc.) and as such are not always welcomed. This creates a paradoxical strife – the students resist the teachers, but the teachers persist, which further contributes to resistance. Changing this relationship from one of authority (power) to one of reciprocity might significantly influence classroom environment. Students can still be successful, and learning can still advance, in such a setting. Various types of pedagogies might facilitate this, but specifically inquiry pedagogy distinguishes itself as a valuable method.

### **Research Questions**

1. How do middle school students perceive learning and their own motivation to learn in social studies taught through inquiry pedagogy, as compared to more traditional pedagogy?
  - a. How do these students compare the learning environments they experience in inquiry pedagogy with other environments they have experienced in the past?
  - b. In what situations have students enjoyed learning most? What made it enjoyable?
  - c. In what ways does student enjoyment of learning affect their demonstration and mastery of the topic investigated?
  - d. What motivates students to initiate investigation and further compels them to seek resolution, completion, and satisfaction?
  
2. What features of inquiry pedagogy in social studies classrooms make students and teachers most and least comfortable? Under what conditions in the classroom and school is inquiry pedagogy most likely to flourish?

- a. What structures or devices do students and teachers feel are helpful in creating an inquiry classroom?
  - b. What aspects of inquiry pedagogy present obstacles or struggles, and how do students and teachers address them?
3. How does participation in a social studies classroom taught through inquiry pedagogy influence students' grasp of content knowledge, motivation to engage with school learning, and development of critical thinking skills?

### **How This Document is Organized**

Having briefly introduced my research problem and what my research hopes to reveal, I will now take a more robust look at inquiry pedagogy and its relevant factors in Chapter 2. Chapter 3 introduces and delineates my research design and data collection tools. The fourth chapter further breaks down data and analyzes it. Finally, the fifth chapter returns to the literature and discusses the data relevant to it and further implications.

## Chapter 2

### **Informing Literatures and Framing ideas**

Education is ripe with theory and development. Forming various opinions and supporting research on best practices, people such as doctors, politicians, philosophers, parents, and more help contribute to this developing body of information. This is important to realize because education, especially with children, is a very emotionally charged endeavor. Many people from various different fields and academic disciplines develop research, and state opinions, on what are “best” for children. Sometimes these opinions can inhibit sound educational theory or obfuscate the lines between what is best for someone/thing versus what is best for the students. This chapter helps explain some of the pertinent research on pedagogy which will help advance inquiry in the classroom. Central to many theorists’ research on pedagogy, motivation is a key component. Recognizing students as important people, and not just naïve “children” helps foster motivation. A sense of autonomy and choice further influences motivation. When building an inquiry environment, assessment methods must be carefully attended to. Finally, a review of prior research on inquiry will illuminate how to best facilitate it in the future.

### **Aspects of Inquiry and Effective Learning**

Various streams of research—concerning motivation, choice, assessment, and other topics—inform the potential of inquiry pedagogy to engage students productively in their own learning. I review what these literatures highlight and how their findings build a foundation for imagining the possibilities for inquiry pedagogy in various subject areas.

School subjects are as much directed by states/bureaucrats as is school itself (Washington State Essential Academic Learning Requirements; U.S. Department of Education, NCLB/ESEA;

Black & Wiliam, 1998; Kaestle, 1983); Schubert & Lopez-Schubert, 1997). K-12 students have little, if any, input regarding classes and content. Administrators place students in classes and teachers are provided curriculum (frequently mandated) to impart. University of British Columbia professor Peter Seixas (1993) suggests that textbooks, no matter how well done, are even problematic. Textbooks limit options for inquiry, and perpetuate the myth that knowledge is reserved to what someone else already did and confined in a book (Clements, Fielder, Tabachnick, 1966, p. 62, p. 110). Supporting this critique of standard social studies instruction VanSledright (2002) discusses the lack of “interpretive paradox” (the required-but-denied connection between reality and interpretation, p. 1090) that exists in most K-12 history classes. This is a result of textbooks and teachers seen as the definitive authorities on the topic and contributes to students’ lack of interest and success in social studies education.

Research in classrooms where history is taught indicates that the primary concern there is with consuming and reproducing events and details found mostly in books, as though interpretive practices, be they engaged in by historians, teachers, or students, simply did not exist. The standard textbooks, combined with lectures delivered by teachers, are considered definitive (p. 1091).

Contradistinctly, inquiry pedagogy invites students to pursue their own interests and create knowledge instead of memorize someone else’s creation. Co-creation of lessons between teacher and student, or lessons that are carefully crafted and provide scaffolding by teachers, often designed to inspire inquiry, are not the same as the form of authentic inquiry that I investigated. Because both of those methods involve heavy teacher control, this creates a false sense of inquiry and maintains the teacher as a person with authority and knowledge, which the student does not have. Arguably, scaffolded and co-created lessons are better than some

pedagogical alternatives, but they do not create an environment of fully authentic inquiry.

Investigating authentic inquiry then is a necessary step in further developing inquiry pedagogy theory and practice.

### **Recognition and Motivation**

Education is a complex structure. There are physical and emotional constructs to manage, emerging from various people and places at different levels and points in time. Often, students' physical and emotional aspirations are dismissed in place of more authoritative sources of information from doctors or parents. This can create a source of antipathy, then, when helping educate children. Recognizing children as positive contributors, and empowering them with choice, helps build relationships and foster motivation. Furthermore, providing them feedback and opportunities for improvement supports this individualism and is more authentic to adult environments.

To understand how students might respond to inquiry pedagogy, a discussion concerning motivation to learn and student recognition is especially helpful. By recognizing that students come to school with motivating factors, and "funds of knowledge" (Moll, 1992), teachers can help students acquire new knowledge more effectively. Moll investigated students' knowledge and relationships in the home, and reflected on this significance in an educational setting. He noted the relationships created in households are based upon reciprocity and knowing the child as a "whole person," taking into consideration the "multiple spheres of activity within which the child is enmeshed." Whereas, in classrooms the relationships are thin and the teacher knows the student based solely on their "performance within rather limited classroom contexts." In school, "teachers rarely draw on the resources of the 'funds of knowledge' of the child's world outside

the context of the class-room,” (p. 133-134). Instead of trying to bequeath subject matter disconnected from students’ daily lives, Moll’s approach incorporates students’ knowledge and experience in the classroom for a more equitable and sustainable learning environment. Gay (1999) considered similar beliefs as “empowering” students as they take control of their educational interests.

Dialogue, instead of lecture, helps develop such relationships. Dialogue inherently suggests a conversation between individuals which is distinguishable between a person telling (lecturing) someone/others. In this manner, inquiry pedagogy embraces aspects of Palincsar’s (1986) work on reciprocal teaching. She suggests reciprocal teaching, dialogue, and scaffolding as a way to improve reading comprehension, “Reciprocal teaching is best represented as a dialogue between teachers and students in which participants take turns assuming the role of teacher.” This pedagogical decision invites co-learning and co-development of the topic. Inquiry pedagogy, as designed here – students teach the class their topic, shifts the power of knowledge to the students and supports a reciprocal relationship. It suggests teachers employing inquiry pedagogy might need to relinquish some control and welcome the students as knowledgeable contributors to the classroom (Moll, 1992; Freire, 1990; Palincsar & Brown, 1984). Fundamentally, teachers using inquiry in the classroom will have to accept and adjust to a more holistic approach to students, which will help breakdown the sanctity of textbooks and teachers as proprietors of knowledge, truth, and the “right” answer. Support structures nurturing this are abundant.

Ryan and Deci’s (2000) research on motivation helps foster this in the classroom. They suggest promoting strategies of *competence, autonomy, and relatedness* motivational schema in classrooms will be most productive. Ryan and Deci noted that people are motivated because,

“they value an activity or there is strong external coercion,” (p. 69). As strong external coercion is filled with negative consequences (both long term retention/knowledge and the power imbalance of such actions) (Freire, 1970), discovering valued activities is necessary. In addition,

Comparisons between people whose motivation is authentic (literally, self-authored or endorsed) and those who are merely externally controlled for an action typically reveal that the former, relative to the latter, have more interest, excitement, and confidence, which in turn is manifest both as enhanced performance, persistence, and creativity (Deci & Ryan, 1991; Sheldon, Ryan, Rawsthorne, & Hardi, 1997) and as heightened vitality (Nix, Ryan, Manly, & Deci, 1999), self-esteem (Deci & Ryan, 1995), and general well-being (Ryan, Deci, & Grolnick, 1995) (p. 69).

Feedback (positive communication, rewards, etc.) on a self-directed and valued activity, that engenders feelings of competence, enhances motivation for that action. Alternatively, negative feedback (big, red marks on papers, or low test scores) promotes diminished intrinsic motivation. Citing Fisher (1978) and Ryan (1982), the authors noted a sense of autonomy must parallel competency to foster intrinsic motivation for a task (p. 70). Additionally, the opposite of choice (pressure, directives, deadlines, imposed goals etc.) diminished intrinsic motivation. “In contrast, choice, acknowledgement of feelings and opportunities for self-direction were found to enhance intrinsic motivation because they allow people a greater feeling of autonomy (Deci & Ryan, 1985),” (p. 70). Intrinsic motivation is enhanced during a moment of “security and relatedness,” (p. 71). Stony and callous teachers, or a disengaged adult monitor, according to the cited study by Ryan and Grolnick (1986), contributed to a decrease in intrinsic motivation. Thus, the connection between relationships and intrinsic motivation must be addressed.

Teaching from a “funds of knowledge” approach, and stimulating feelings of “competency, autonomy, and relatedness” should be more equitable for all and support inquiry pedagogy. Sleeter (2005), building upon her work with Banks, Gay, and Moll wrote, “honoring and building on children’s connections to their cultural and linguistic roots and their community-based identities provides the best base for academic learning,” (p. 16). Inquiry pedagogy addresses motivation by highlighting choice and a student’s personal interest in success. It embraces students as knowledgeable and important contributors to the classroom learning environment as they not only choose their research topic but teach it as resident experts.

### **Personal Choice**

As a motivating factor, choice seems vital to maintain interest. If a person chooses to engage in an activity, this inherently suggests he/she is motivated to seek resolution/satisfaction. This relates to concepts discussed by Nicholls, Cobb, Wood, Yackel, Patashnick (1990) regarding *task orientation*. Task orientation suggests that people are motivated to finish something by gaining insight or skill with something that is personally challenging. This differs from *ego orientation* where people are motivated to succeed based on beating others or being the best at something. In their study of second graders and math motivation, Nicholls et. al. wrote, “Task orientation was moderately associated with beliefs that success depends on interest ...” (p. 118). Many students, at all ages, will struggle with focus/commitment, but in the proper environment choice (and thus motivation) is one factor which propels students to finish.

Kuhn, Black, Keselman, & Kaplan (2000) define inquiry as, “an educational activity in which students individually or collectively investigate a set of phenomena – virtual or real – and draw conclusions about it,” (pp. 496-497). In this model, students direct their own research,

(based upon their own social studies interests) including questioning, planning, investigating, and reaching conclusions with little more than teacher guidance “on the side”. Learning is more than tests and grades and is too often hierarchical and dominant in inception (Freire, 1990, 1970; Bruner, 1999, 1960; Dewey, 1990, 1910, 1902, 1900). As Dewey (1997, 1938) suggested, a primary responsibility of educators is fostering opportunities for good habits, growth, and problem solving skills. If students and teachers together can outline attainable goals surrounding a personally interesting topic, then achieving the goals should constitute learning. Nicholls et. al. (1990) noted success in mathematics is dependent on interest, when trying to foster mathematics as a “meaningful, meaning-making activity,” (p. 111). Inquiry pedagogy promotes these best-practice theories by developing critical investigation techniques through a self-directed research study. This self-direction also necessitates and fosters metacognitive strategies.

Inquiry pedagogy encompasses multiple simultaneous processes at once. Metacognition is, thus, a central component of inquiry. White et. al. (2009) wrote, “To engage in successful inquiry, it is also essential that students learn planning, monitoring, and reflection techniques, (p. 177). Metacognition is engrained within inquiry pedagogy (Zimmerman & Moylan, 2009). As students progress through their own learning, functionally monitoring this progress is a necessary skill. White, et.al. wrote, “metacognitive expertise is needed in developing knowledge through inquiry,” (p. 177). Brown & Campione (1996) place reflection (metacognition) at the top of their principles for fostering a community of learners; reflection provides, “occasions for students to monitor their own and others’ comprehension, and reflect on progress to date,” (p. 19). Concurrently with this, there is evidence to suggest that metacognition facilitates transferring of knowledge from one domain to another, while also developing feelings of self-efficacy which promote motivation and persistence while learning (Bandura & Schunk, 1981).

Bruner (1999, 1960) suggested the purpose of learning anything (beyond the pleasure of learning itself) is so that it serves us in the future (p. 17). On the purpose of education, Dewey wrote,

It is its [education's] business to cultivate deep-seated and effective habits of discriminating tested beliefs from mere assertions, guesses, and opinions; to develop a lively, sincere, and open-minded preference for conclusions that are properly grounded, and to ingrain into the individual's working habits methods of inquiry and reasoning appropriate to the various problems that present themselves (p. 28).

In order for knowledge to serve us in the future, it must be "transferable". Transfer of knowledge then, both specific skills and general ideas, is a cornerstone of education. Dewey explicates transfer further, suggesting it is a double-movement,

a movement from the given partial and confused data to a suggested comprehensive (or ) entire situation; and back from this suggested whole – which as suggested is a meaning, an idea – to the particular facts, so as to connect these with one another and with additional facts to which the suggestion has directed attention (p. 79).

Bransford, Brown, & Cocking (2000) suggested transfer is best accomplished in conjunction with developing conceptual frameworks. In other words, people who develop a framework of learning/storing information are more successful with transfer, "A key finding in the learning and transfer literature is that organizing information into a conceptual framework allows for greater 'transfer'; that is, it allows the student to apply what was learned in new situations and to learn related information more quickly," (p. 17). Inquiry pedagogy is a

framework which can aid transfer. Linearly, then, a link emerges between inquiry pedagogy, motivation, metacognitive strategies, and transfer.

Inquiry pedagogy is, therefore, a positive educational endeavor and should not be readily dismissed. It constructively influences learning, and it nurtures student well-being (Massialas, et. al., 1975). A communal atmosphere is promoted as students and teachers construct and present knowledge together. This develops responsibility and respect in the classroom, as students are active participants in knowledge construction (Brown & Campione, 1996, p. 30). Supporting young learners in this manner might prove to be more meaningful compared to other hierarchical/domineering instructional practices. One tool that will help create this environment is formative assessment.

### **Summative and Formative Assessments**

While using formative assessments may help teachers be more supportive of young learners, they need to fully understand how different kinds of assessment have potentially different consequences for learning. Many schools and districts rely on summative assessments, which typically occur as something comes to an end, or is “summed” up (Black & Wiliam, 1998). As typically standardized, summative assessments are viewed as strongly “objective” and therefore fair, valid, and reliable. Over the latter part of the 20<sup>th</sup> century, however, objectivity has been scrutinized and redefined broadly enough to question this assertion. Attaching high-stakes to such tests engenders ethical questions when demographic considerations, which clearly influence student “success,” are taken into account. Furthermore, it essentially suggests that there is one right answer, one standard, and a one-size-fits-all approach to learning. Contemporary sociocultural philosophy questions this approach, especially regarding “at risk”

populations. Pellegrino, Chudowsky, & Glaser wrote, “These efforts [attaching high-stakes (advancement, special services, evaluations) to results] have particular implications for equity if and when certain groups are disproportionately affected by the policies,” (2001, p.24). Building upon Kuhn’s work on objectivity in 1970, Seixas (1993) supports his argument that objectivity is rooted within the social community that is investigating. Additionally, he suggests no matter how scientific (i.e. objective) research methods are they are still not truly objective. Students, who come from all kinds of backgrounds, with vastly different experiences, should not be expected to take and pass one test that is designed to meet populations’ peculiarities by aiming for some obscure middle ground (Resnick, 1995).

Summative tests imply that both learning and knowledge are fixed and stable. In other words, what was valuable 20, 30, 50 years ago is still important and applicable today and requires no more investigation. It allows for little difference in personal disposition or experience and assumes if the information is presented it can be learned. Wiggins (1993) asserted, however, it is difficult to determine what was actually learned versus memorized, “To rely on tests [summative] is to ensure that students’ ‘knowledge,’ not their intellectual progress as thinkers and producers, gets assessed” (p.40). Vygotsky (1978) describes this as assessing the actual developmental level as characterized retrospectively (the buds of development) while his Zone of Proximal Development (what a student can do with the help of others but not individually) characterizes mental development prospectively (the fruit of development) (p.86). This is one reason that summative tests are dubious at best. Knowledge, then, must not be defined by regurgitating dogmatic information, or simply passing the test.

Current summative tests provide very little information which teachers or administrators use to identify why a student is struggling; they simply show that a student did/did not get the

answer correct. This does not help the teacher or student address and overcome the learning difficulty. Important cognitive abilities, such as knowledge organization and problem solving are not addressed in many summative assessments. The “snapshot” assessments do not capture growth or progress over time – which is a goal of assessment (Pellegrino et. al., p.28), nor do they meet the needs of the multiple backgrounds which students bring with them (Resnick, 1995). Inquiry pedagogy directly confronts this model of education, knowledge, and learning.

Inquiry pedagogy originates within the student and growth is facilitated with the teacher as a guide, not a commander. Freire termed this commanding presence the “banking concept of education” where students come to school as empty vaults waiting to be filled with information from the teacher. Inquiry pedagogy inherently distances itself from this concept. By starting with a student’s interests, with him/her as the inquirer, teachers automatically embrace the student as an individual contributor to his/her learning. This immediately positions the student as co-developer of learning and reminds the student of his/her significance in learning and in the classroom. In this situation, formative assessment will be beneficial as it invites conversation around learning.

Formative assessment provides ample opportunities to address many concerns listed above and is very appropriate for inquiry pedagogy. Frederiksen and White’s (2004) research on inquiry and assessment support this statement,

To get a full picture of schools’ and teachers’ impact on students’ learning, however, accountability assessments need to include measures of significant work that students are undertaking in the classroom. . . . These are tasks that, by their nature, are not just demonstrations of students previously learned skills. Rather they involve students in

searching for new information and ways of working, and in incorporating such newly developed knowledge into their work. ... for example science fair projects or social studies projects. (p. 74)

Knowing students well, their likes/dislikes, their strengths/weaknesses, will be beneficial when making formative decisions with them regarding progress. Fostering inquiry pedagogy, then, necessitates working within a framework that values the complex and dynamic relationship between individuals and the environment/social setting. In this spectrum, theories are described as sociocultural, person-in-context, and/or situative. Varying in some degree or other, these theories are similar in the extent that motivation is particular to the combined factors of the individual and the immediate situation. Depending on your particular beliefs, one is more “systematic” (situational) and one is more “personal” (sociocultural/person-in-context). Learning how to create and nurture an environment which supports this is fundamental to good teaching and has a profound impact on true inquiry pedagogy (Brown & Campione, 1996).

Inquiry pedagogy complements these studies. It supports tasks which are appropriately chosen (based on student interest and level), (Brown & Campione, 1996) and assessments based on learning/growing instead of a prescribed “finite” knowledge base. Furthermore, the inherent interest and perseverance of a student will thrive and retention will be more likely (Clements et. al, 1966; Massialas et. al, 1975). Investigating inquiry pedagogy, thus, is of paramount importance.

## Theories and Models of Inquiry Pedagogy

Throughout education's history, scholars have examined inquiry pedagogy directly. Learning and inquiry are often investigated and advanced by educational researchers (Dewey, 1900, 1902, 1910; Bruner 1960; Bransford, 2000; White, Frederiksen, & Collins, 2009; Brown & Campione, 1996). Dewey (1910) described inquiry as reflective thinking. Inquiry begins with a state of perplexity and proceeds through an, "investigation directed toward bringing to light further facts which serve to corroborate or to nullify the suggested belief," (p. 9). This supports Parker's above explication of inquiry pedagogy as well. Inquiry pedagogy is often envisioned as an "inquiry cycle" (White, et.al., 2009; Wolk, 2008; White & Frederiksen, 1998). This cycle can be taught; critical thinking is not something that must be innate in a person. As educators, then, it is our responsibility to develop this.

Dewey (1900) devotes a chapter to "the need for training of thought." He wrote, "the work of teaching must not only transform natural tendencies into trained habits of thought, but must also fortify the mind against irrational tendencies current in the social environment, and help displace erroneous habits already produced," (p. 26). If it is necessary to train for thinking, then inquiry pedagogy is apropos to this purpose.

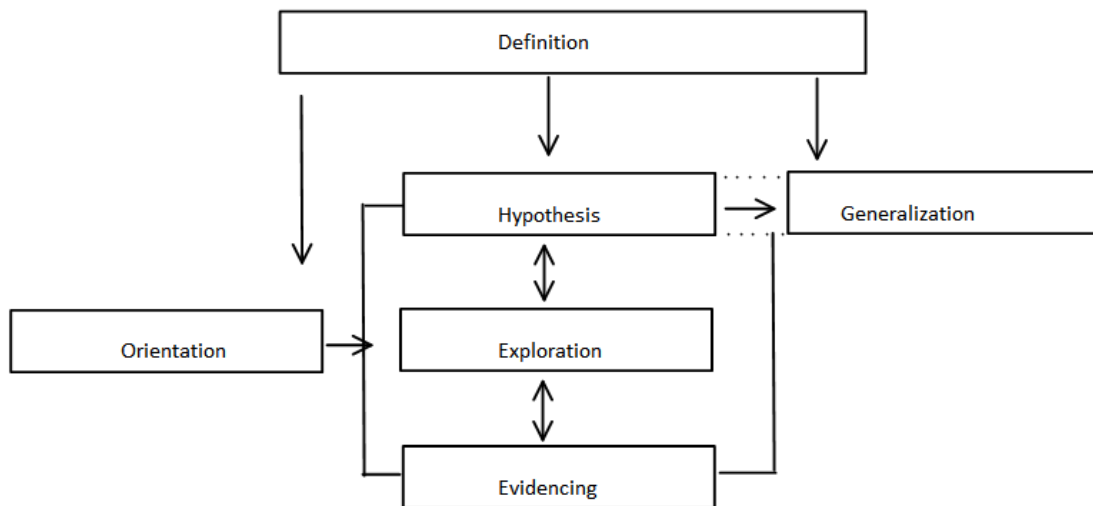
Three factors, according to Massialas & Cox (1966), influence inquiry pedagogy: the open psychological climate of discussion, using hypotheses to guide investigation, and the use of reliable evidence in reference to the hypotheses. The first factor is to begin with an open climate. Certainly, an open climate encourages free and equal expression, but it further necessitates that students' contributions be examined, "All points of view and statements are solicited and accepted as propositions which merit examination," (p. 112). This parallels teacher behavior

also. Part of the open climate, and the nature of inquiry (the pursuit of unanswered questions), suggests teachers do not know everything and will similarly share in the questioning and examining, “He [the teacher] acknowledges the fact that he also engages in reflective inquiry in an attempt to find truth as it finally appears,” (p. 112).

The second factor is the “reflective classroom” (their term for inquiry pedagogy), which creates hypotheses to maintain focus, “the hypothesis, devised as the instrument of inquiry, establishes specific focus and direction,” (p. 113). Perplexity, the authors suggest, initiates the derivation of hypotheses, and also helps maintain motivation. Inquiry pedagogy promotes “indeterminacy” and this compels students to persist until truth is discovered.

The third factor in the reflective classroom references fact to hypotheses. Facts are more than simply accumulated. Diverging from traditional pedagogy, where emphasis is made to acquire typically unrelated facts, inquiry pedagogy constantly judges facts based upon their reliability and relationship to the hypothesis. This data need not always support the hypothesis, but by referencing facts to a hypothesis, and seeking reliability (cross-checking information), the information becomes relevant to the investigation and students acquire sound inference methods and self-efficacy as their hypothesis is either supported or not during the process, “One of the prime aims of inquiry is to provide student with a sense of efficacy, with the belief that they have the skills to look critically at their environment and to a large measure control their own destiny and influence the decisions affecting them,” (Massialas et. al., 1975, p. 25).

Massialas & Cox (1966) thus created their “reflective model” (Figure 1) comprised of six phases: “orientation, hypothesis, definition, exploration, evidencing, and generalization,” (p. 115).



"The Reflective Model" (Massialas & Cox, 1966, p. 115)

**Figure 1: "The Reflective Model"**

Becoming aware of the problem/question/concern is the initial phase of orientation. This “springboard” can arise from text or prepared by the teacher. Eventually, this becomes focused on a certain question which necessitates investigation and prompts creation of the hypothesis.

The hypothesis clearly expresses a perceived relationship between certain phenomena under investigation. It represents, “search models which subsequently guide the students and teacher toward relevant evidence,” (p. 117). Creating a hypothesis is an important step for the student and teacher. In order to establish a clear route, careful consideration must be observed to avoid ambiguous statements or definitions.

Definitions are not only present in the initial stage of development; they will frequently occur throughout the investigation as new discoveries are made. However, operational definitions are necessary when authoritative meanings are vague (p. 118). Terms like “progress”

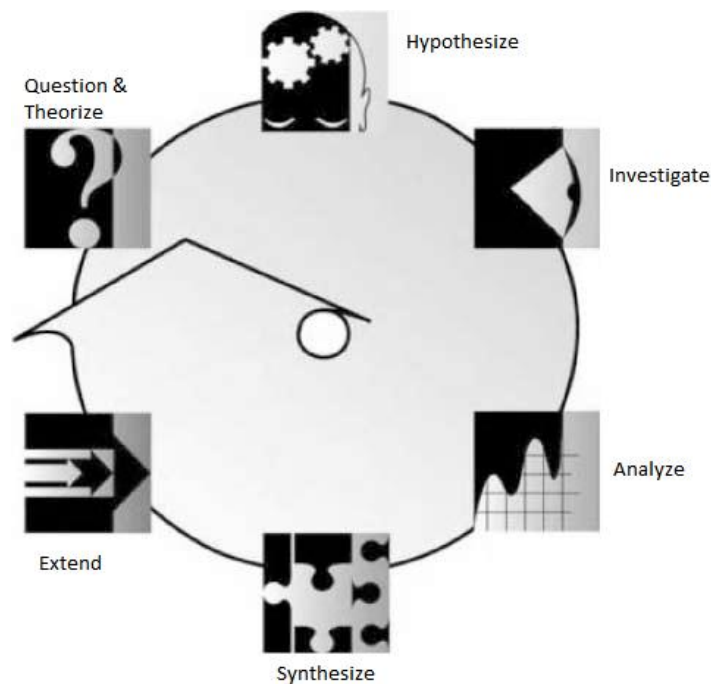
and “success” often represent such equivocal terms, and clarification should precede an investigation to avoid confusion.

Exploration is more deductive in nature than the previous three phases. “The finding of logically untenable grounds may cause a major reconstruction of the hypothesis at this time,” (p. 118). As evidence unfolds, new insights, or deductions, will direct the investigation as it supports/refutes the hypothesis.

Referencing empirical data for support and proof of the hypothesis occurs during the evidencing phase. The hypothesis will dictate the kind of evidence sought. Regardless of data supporting/refuting the hypothesis, “the end result of reflective analysis is the reaching of a conclusion or tested generalization warranted by available evidence,” (p. 119). An expression of an explanatory, causal, correlative, or practical generalization concludes the investigation. This statement characterizes the most rational solution to the hypothesis based upon all evidence. Any evidence which supports/refutes the hypothesis, or only in certain situations, must be present in the conclusion. Therein a generalization is not considered an absolute, but it is considered a tentative representation of reality.

The movement from hypothesis to generalization is not necessarily direct (Massialas & Cox, 1966; Massialas et. al., 1975; Clements, Fielder, & Tabachnick 1966; Dewey, 1910). The reflective classroom, however, needs to encompass all aspects of the model. In this sense, others have developed a “cyclical” pattern (White, Frederiksen, & Collins, 2009; Wolk, 2008; White & Frederiksen, 1998) emphasizing the inductive/deductive “double movement” (Dewey, 1910) within inquiry pedagogy.

The quest to answer their hypothesis is self-propelling, “The psychological climate prevailing in the classroom is characterized by ever-increasing degrees of interest in and motivation to resolve the indeterminacy,” (Massialas & Cox, 1966, p. 334). As students progress through personal inquiry projects, metacognitive strategies promote a learning cycle. Simply put, questions lead to research leads to answers (success) leads to more questions (cycle starting again). White & Frederiksen (1998) developed software fostering these skills called the “Inquiry Cycle” which, theoretically, has no official start/end, as shown in Figure 2.



White, Frederiksen, & Collins (2009)

**Figure 2. The Inquiry Cycle**

Regardless of the inquiry method, inquiry-centered discussions present a “challenging and rewarding experience for students and teachers alike,” (p. 135). Succinctly stating the “conduct of inquiry”, Clements et. al.(1966) listed three key principles of inquiry pedagogy: 1) the invention of an initial, motivating heuristic question; 2) the search for and the cross-examination of the “tracks” of human happenings; and 3) the construction of an account of the human drama that is being investigated, (p. 32). Throughout the strand of inquiry pedagogy, the above three characteristics seem to dominate the core guidelines.

### **Inquiry Pedagogy and Social Studies**

Social studies classrooms are felicitous for such pedagogy. Inquiry pedagogy particularly gained recognition as a new and insightful theory of social studies instruction in the 1960s, “the first major attempt to introduce ‘inquiry’ in the social studies vocabulary was made in a special issue of *Social Education* devoted to revising the social studies (April, 1963),” (Massialas, et.al., 1975, p. 227). Typically, social studies classes attempt to, “prepare children to be good citizens; social studies teach children how to think; social studies pass on the cultural heritage,” (Fenton, 1967, p.1). Inquiry pedagogy inherently teaches students how to think. The nature of inquiry (questioning, developing hypotheses, investigating, concluding, etc.) prompts discovery, and is directly related to what Dewey termed “reflective thought” as mentioned previously.

Social studies education is very well suited to maintain this structure, and, perhaps, may finally be the necessary source of its evolution. Inquiry pedagogy supports numerous educational tenets, but its inception is somewhat remiss in contemporary classrooms. Massialas et. al. (1975) note three styles of teaching: expository, opining, and inquiry. Many teachers assume they practice inquiry pedagogy, but according to the authors they are not. What they are

in fact teaching is the opening method, (p.21). This suggests that inquiry pedagogy is valued, but not practiced in its fullest appreciation.

Outlining inquiry in social studies, Seixas (1993) posits that students are absent from the community of learning through continual ambiguous and disenfranchised delivery of information, mostly provided by textbooks (even the most “well-written”). In contrast, however, “History teaching and learning might be conceptualized around students’ questioning of their own culture and experience, an investigation of the past that questions its traces and theorizes its legacy and import for the present, (p. 314). This approach embraces social studies as the history of meaning-making and fosters a community of inquiry comparable to what historians inhabit. Seixas finishes this section stating, “The history teacher has a demanding job in guiding this community,” (p. 315). Inquiry pedagogy might be more difficult for all involved: students, teachers, administrators, and community. The result (reflective though, how to think), however, should compel us to investigate it further.

VanSledright (2002), similarly suggested that what students have been doing/taught in “history” classes is not appropriate nor effective, “the results of the national Assessment of Educational Progress (NAEP) indicate that students continue to experience difficulty coming to grips with all of the details that they are expected to learn as they consume the products of historical practice,” (p. 1091). In contrast though, when provided opportunities to use their prior knowledge and review assumptions (even if misguided), students develop deeper levels of historical understanding. This process requires students to work with various types of evidence, interpret information, evaluate and corroborate sources, make sense of historical information and interpretations, and construct their own evidenced-based interpretation (p. 1092). VanSledright considered this activity similar to walking on “thin ice”. His study examined 5<sup>th</sup> graders

confronting the “interpretive paradox” (history’s problem of interpreting something in the past). He noted that many of their interpretations were “weakly grounded, but wonderfully imaginative,” (p.1103). Although the 5<sup>th</sup> graders did not develop the critical skills experienced historians hold, falling through this thin ice, as he described it, provided a “teachable moment” to discuss the limits of interpretation and evidence-use rules in historical inquiry. Furthermore, it exposed the community’s rules for arbitrating among interpretations both around historical inquiry and through extension to problems in the hallways or playground (p. 1103).

Barton & Levstik (2010) further provide clarification surrounding inquiry pedagogy in social studies classrooms. Similar to the other researchers above, they note that simply feeding students information and requiring them to repeat it is not an effective approach to learning history, “there is little point in simply transmitting a story of the past to students in hopes they will remember and repeat it,” (p. 35). They further promote an inquiry and investigative approach to social studies pedagogy.

### **Reluctance to Use Inquiry Pedagogy in Social Studies**

Similar to Seixas above, VanSledright suggests the difficulty of inquiry investigations is steep but warranted, “One needs to step out on the interpretive thin ice and fall through; to do so appears crucial to the learning process.” And,

Managing the dilemma appears to require grit and endurance, efforts to identify students who swing from one pole to another (from naïve trust to overgeneralized suspicion), repeated attention to the evolution of their historical thinking, and targeted efforts to challenge their assumptions and their resilient epistemologies (p. 1105).

Facilitating this process is strenuous; there are obstacles to address. VanSledright mentioned one is overcoming the traditional model of education and epistemology, “managing the interpretive dilemma would entail inviting students to give up the idea that we could get to the ‘truth out there,’” (p.1106). Social studies often involves interpretation of the past. Typically, in K-12 education, the interpretation is done for the students via textbooks/teacher (Black & Wiliam, 1998, p.22). This reliance on text books as the formal source of knowledge presents another obstacle (VanSledright, 2002; Clements et. al., 1966; Massialas & Cox, 1966). Not only is this difficult for them to ignore, as it’s been entrenched in their philosophy of learning early, but it confuses their notion of historical inquiry and how inquirers might need to re-interpret something based upon new evidence. For the teacher, dealing with the teaching-learning process requires, “considerable effort, deep knowledge of the subject matter and of students, and extended time,” (VanSledright, p. 1103). The struggle for teachers to battle content coverage and time is often not worth their effort to abandon traditional methods and venture into unknown territory such as inquiry pedagogy.

Offering an explanation for its absence, Barton & Levstik (2010) note two broad concerns: teachers are concerned with controlling student behavior and covering content (p. 38). Clements et. al. described constraints that originate “without” and “within” the teacher. Content coverage is a “without” constraint. Teachers are expected to cover content (this is without their control – a district/state compels them to do this), and this typically restricts the inquiry method (Clements et. al., 1966, p. 147). As outlined above, though, inquiry pedagogy can very effectively cover content. Controlling student behavior is a little “without,” but a lot “within” the teacher’s control (remember, inquiry pedagogy requires grit and endurance). Inquiry pedagogy suggests that teachers’ roles complementary to the learning process, as they have

traditionally been designated, must shift. Orchestrating a learning project with the students, and then providing students freedom to investigate this, inherently reduces the control a teacher maintains. This is a “within” constraint, the teacher must be willing to make this choice for inquiry pedagogy to be successful. Teachers must have the grit to dismiss some of their pride in always having the “right answer”, in always holding the resources, and in always controlling students. Tools and strategies can be developed to moderate this fear, but without teacher acceptance of these concerns and endurance in the face of them, inquiry pedagogy will not advance. To be an effective social studies teacher, Barton & Levstik imply an almost rebellious divergence from these concerns is needed.

Dewey (1910) provided some reasoning to inquiry’s lack of presence. According to Dewey, thought is the exercise of inference. This process involves a leap into the unknown. This is fearful, for the student, teacher, and administrator (Black & Wiliam, 1998). This leap and fear of the unknown is why Dewey proposed thought must be trained, and it also suggests why people are hesitant to promote inquiry pedagogy.

Bruner (1999, 1960) similarly suggests thinking should be a trained process. Bruner wrote, “it is certainly clear that procedures or instruments are needed to characterize and measure intuitive thinking,” (p. 60). This kind of “guessing” requires careful “cultivation”. As with Dewey, Bruner elicits the need for inquiry pedagogy, while at the same time describing peoples’ aversion to it.

But the pedagogic problems in fostering such a gift are severe and should not be overlooked in our eagerness to take the problem into the laboratory. For one thing, the intuitive method, as we have noted, often produces the wrong answer (p. 67).

Monitoring progress and appropriate learning is more abstract with inquiry pedagogy. It might be marginalized in teacher education programs because of its subjective nature. Furthermore, assessing inquiry projects will take more time and commitment, (Clements et. al., p. 167). Teachers accustomed to quick, succinct, summative assessments might resist this direction. Such assessment require teacher training, not only in typical pedagogical techniques, but in philosophy of learning as well. It situates the teacher in the position of mentor, not “sage on the stage”.

It requires a sensitive teacher to distinguish an intuitive mistake – an interesting wrong leap – from a stupid or ignorant mistake, and it requires a teacher who can give approval and correction simultaneously to the intuitive student (Bruner, p.68).

The nature of this, the subjectivity of it – teaching someone to be sensitive to distinguish an intuitive mistake – is a difficult process. It is far easier to pull out a textbook where someone else has already worked the problems out.

Bransford et. al. (2010) helped identify resistance to inquiry as well. In describing a certain teacher and her work as extraordinary, he wrote, “It requires a wide range of disciplinary knowledge, because she begins with students’ questions rather than with a fixed curriculum,” (p. 157). There are two immediate concerns apparent in this statement. First, a “wide range of disciplinary knowledge” is not readily available to most teachers. As a teacher who has witnessed a wide range of teachers, there is no special recipe to provide the range of knowledge Bransford suggests. Even he suggests this is impossible, as simply “arming” teachers with strategies that “mirror how she teaches” would not produce the same results. There are 20 year teaching veterans that don’t encompass this range of disciplinary knowledge, and there are

teachers with advanced degrees that similarly do not have the pedagogical/philosophical experience to be effective. Serious teacher education and reflection should, therefore, precede inquiry pedagogy for it to be influential. Hence, people responsible for a school district, or state educational office, presented with such dilemmas, discount inquiry as it is too difficult to monitor (assess).

Second, the problem of curriculum is tantamount to any inquiry pedagogy practice. There are many definitions of “inquiry”. Bruner might suggest that inquiry be built into curriculum. Others might protest that this structured inquiry is not inquiry at all. If we promote such free inquiry, then there is no fixed curriculum to follow. People in charge of education often resist this because of the first problem – the level/experience/knowledge of teachers is not always “high”, and it is too difficult to assess if a teacher/school is successful or not if each teacher/school does not use the same methods. Curriculum fosters conformity; an administrator need not concern him/herself with a teacher’s experience/knowledge if he/she follows a prescribed curriculum. The assumption is if companies create and organize curriculum well, then any teacher can do it and students will learn regardless of teacher skill, (Clements et. al., 1966, p. 147). In other words, inquiry pedagogy has no room in “formal” education because of these two trepidations. Dewey (1900) wrote,

There is no great difficulty in understanding why this ideal [external results, getting the right answer, regurgitate information] has such vogue. The large number of pupils to be dealt with, and the tendency of parents and school authorities to demand speedy and tangible evidence of progress, conspire to give it currency, (p. 54).

Bruner echoed with the “formalism of school learning” has devalued intuitive thought, (p.58). School requires some level of structure, all successful organizations do, but when dealing with people, not “widgets”, widespread formalization or standardization may not be the solution. With no dependable method to measure a teacher’s experience/knowledge, and no formal curriculum to follow, inquiry pedagogy becomes too abstruse to practice.

What this produces, in my experience, for teachers that believe in high quality instructions such as inquiry pedagogy, are interesting ways to incorporate it as much as possible. This is what Massialas et. al. (1975) refer to as the “opining” method of teaching. Opining invites students to share their opinions, and it is a more open style compared to the “expository” style they discuss. It is not true inquiry pedagogy because, “it lacks the underlying purposefulness and sense of direction that is central to reflective inquiry,” (p. 22).

### **What Inquiry Pedagogy Provides to Social Studies Teaching**

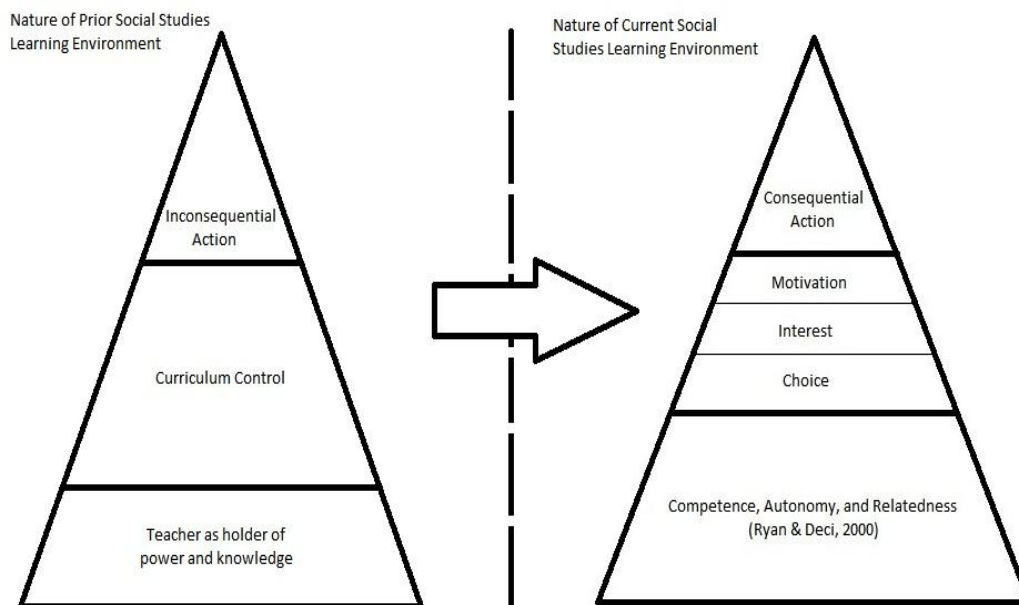
Despite the potential difficulty, perceived or otherwise, in using inquiry pedagogy in social studies teaching, there are some clear advantages. Developing these spirits in teacher education programs while simultaneously working to shift the paradigm of K-12 education and epistemology will help address certain concerns. Clements et. al. (1966) suggest beginning teachers, fresh from the angelic, theory-promoting research college, quickly revert to the “textbook-recitation-test” model when their values are subjected to the often cumbersome application of “teaching”, (p. 113). When young teachers learn about different pedagogies, when they are developing their educational philosophy, that is the time to nurture inquiry pedagogy. Beginning teachers, in their teacher education programs, need more experience dealing with inquiry pedagogy in application, not just in theory. Wineburg (2004) wrote, “One does not

repair a rickety house by commissioning a paint job; one brings in a back-hoe and starts digging up the foundation,” (p. 1412). To accomplish the goals described above, whether they are labeled “reflective thought”, “interpretive paradox”, or “inquiry pedagogy” necessitates a foundational shift in education, by all citizens.

VanSledright (2002) suggested three benefits for continuing with inquiry learning. First, deep knowledge and understanding is critical, especially when that knowledge is constructed instead of delivered. Second, historical inquiry processes transfer to other messages in life which confront people daily. Next, as this was a community process, making the rule-development transparent was beneficial. Learning how rules are created and applied in different communities is a socially constructive process. Wolk (2008) highlighted numerous benefits to inquiry, some of which are agency, discovery, joy, creating, and more. Referencing Thoreau, Einstein, Shakespeare, Darwin, and Goodall, he wrote, “their inquiry was not pulled by a test, it was pushed from within,” and, “It should be what drives our schools,” (p. 116). After all of this, the most important goal of inquiry is when an individual student, “assumes the role of discoverer of ideas, one who knows how to define a problem, how to map strategies and collect relevant data, how to draw inferences and logical deductions, and how to build theoretical constructs,” (Massialas & Cox, 1966, p. 329). This is the type of reverence reserved for “citizen.” Investigating pedagogical methods fostering inquiry, then, is an important pursuit.

## Conceptual Framework

The current research suggests a link between choice, interest, motivation, and consequential action. This link depends upon supportive classroom environments based upon notions of competency, autonomy, and relatedness as Ryan & Deci (2000) detailed above.



**Figure 3: Author's Conceptual Framework**

The left side of the picture demonstrates a prior “typical” classroom for many students. The classroom foundation is based upon teacher knowledge and authority. Students are conceived of as “empty vaults” in which the teacher makes “deposits” of information into (Freire, 1970). The textbook is relied upon for the source of this information, especially if the teacher is not highly qualified. Curriculum sets the tone for activities, assignments, tests, and pacing for the year. In this environment, when students seek answers, the teacher or the book supplies it to them. An example might look like this:

Student: Did Hitler die from suicide?

Teacher: Yes, turn to page 117 and it explains it.

This minute example reinforces to the student that he/she is missing information, that the teacher and book have the knowledge and authority to supply it, and further perpetuates a pejorative and unbalanced system. Ultimately, this produces an inconsequential task. In this sense, the result of the year is a collection of miscellaneous information that was at one point deposited, but is most likely missing quickly thereafter. It is meaningless and disconnected for the student and is therefore inconsequential. The line separating the two distinct types of pedagogy is permeable; it will be impossible for a student to dismiss previous years' of education instruction and environment. The direction, however, is hopefully only one way as we make progress moving forward dismissing past misunderstandings.

As we move forward into a new pedagogy, things missing from the past are remedied - namely, an environment that embraces student individualism and supports students' existing knowledge as powerful building blocks is developed. The classroom foundation is based upon reciprocity and respect. In this situation, when students seek answers, the teacher, only when asked, will respond with questions intending to guide the student to discover the answer to his/her own question. Using the same short sample as above, the dialogue might produce something completely different:

Student: Did Hitler die from suicide?

Teacher: I'm not sure, where could we find the answer to this question?

This situation suggests that what students seek the answers to are difficult and challenging problems that even adults might struggle with. The teacher may or may not know the answer (since this answer is particularly debatable anyways), but regardless the teacher did not readily

supply the student with the missing information. Furthermore, the teacher invited himself into this quest (thus being able to support the student further if needed) and suggested the student already knew where to find the answer but just had to think about it a little further before rushing to the teacher for a quick answer. This supports building competence, autonomy, and relatedness in the classroom. This environment recognizes the importance of student contribution and choice in the classroom which engenders motivation and knowledge. Through building relationships with students, creating feelings of competence, and nurturing autonomy, students achieve excellence more holistically. An environment that fosters this is inquiry pedagogy.

## Chapter 3

### Research Design and Methods

This is a mixed methods, participatory action research study involving one middle social studies teacher and his four classes. Participatory action research is sometimes referred to as a “broad church, movement, or family of activities” (McTaggart, 1997, p.1). In this sense, church means, “community, solidarity and commitment; all are necessary to carry the arguments to confront the psychologizing and sociologizing of research and method and their engagement with social life,” (McTaggart, p.1). Social Psychologist Kurt Lewin, considered the inventor of the term, described action research as “proceeding in a spiral of steps, each of which is composed of planning, acting, observing and evaluating the result of the action,” (McTaggart, p. 27). This theory recognizes that plans investigating social conditions need to be flexible and responsive to situations. It is never possible to account for all circumstances, especially when investigating student thought and interaction in a school classroom, “Put simply, action research is the way in which groups of people can organize the conditions under which they can learn from their own experience and make this experience accessible to others,” (McTaggart, p. 27). Furthermore, “Participatory action research is concerned simultaneously with changing individuals, on the one hand, and, on the other, the culture of the groups, institutions, and societies to which they belong,” (McTaggart, p. 31). Schubert & Lopez-Schubert (1997) further support the need and validity for participatory action research, “Their [teacher-researchers] documented improvements provided more than mere private reflection; they resulted in altered public space. This, we assert, it is a form of action research that needs to be more fully recognized,” (p. 208). Richardson suggested teacher-researchers will improve teaching because they are as good as, if

not better than, researchers in producing more valid and relevant research in their own classrooms. Additional benefits to this design, citing Grinder (1981), are that it “reduces the antagonism between researchers and practitioners and motivate teachers to accept and use all forms of research in their teaching,” (p. 7). Teachers might discount research which attempts to remedy some type of assessment shortfall; it is often perceived as condescending to the work done in the classroom (Richardson, 1994; Schubert & Lopez-Schubert, 1997). Participatory action research helps reduce the likelihood of this occurrence.

A mixed-methods investigation was appropriate because it combined aspects of quantitative and qualitative research. All research is designed to discover meaning, and how people make sense of their lives. The primary goal of my study was to hear from the teacher and students themselves; it is for this reason that participatory action research utilizing mixed methods was important. This helped capture, “the essence of the situation,” (Straus & Corbin, 1998, p. 29).

There is always a chance participants may indulge a researcher with what they perceive the researcher wants to see or hear, however I do not think this was the case in this situation. Throughout the year, we all worked at creating an open and honest classroom environment. This was not the first or only chance students were asked to share opinions with the teacher. In fact, from the beginning of the school year, I emphasized how important it is in this class to share an opinion supported with an explanation. Furthermore, they knew all information was kept anonymous and would not be reviewed until the project was over and all assignments were graded; there was no incentive for them to feed me desirable answers. The questionnaire, survey, and self-assessments were not analyzed until their inquiry projects were fully complete. Exit slips were reviewed weekly, so that the teacher could better help address any concerns or

problems. They were not analyzed for research purposes until the project was over. Students understood the data gathered and analyzed might be helpful in contemplating future pedagogical decisions, regardless of which pedagogical method they favored.

### **Setting and Participants**

The setting for this mixed-methods study involved four, 7<sup>th</sup> grade, social studies classrooms taught by one teacher in a large school district in the Pacific Northwest. My panel sample was partly based on convenience. A panel sample was appropriate because the sample was retained throughout the investigation and all participants were questioned multiple times in multiple ways. It was a convenient sample because I investigated my four social studies classes, but my classes and my school are very diverse. Although convenience was a factor in choosing these classes, the diversity amongst my students made this choice more acceptable because they represent more than one demographic. I chose to investigate four of my social studies classes for various reasons: I already had access to these settings, and knew the participants; I already knew the school and broader learning environment; and, as the official teacher of these students, I was in an excellent position to engage in cycles of research and action, as participatory action research encourages. A convenience sample was helpful in this situation, because I already knew the school environment. I realize there are some limitations to this, primarily concerning the extent to which my findings can be reasonably applied to other settings – though this is not generally the main concern of action research. I only selected students from my school's population. However, because my school is very diverse, this helps ameliorate this concern. My school is very diverse and has a free/reduced lunch rate over 66%, and there are over 70 dialects represented. My data, therefore, more likely captured a wider range of student experiences and reduced the chance that results were only representative of a small demographic; “only with a

larger [diverse] sample is the chance factor minimized,” (Krathwohl, 2009, p. 162). A diverse sample further distanced itself from the concerns of a convenience sample not being representative of a large enough population to make any conclusions (Krathwohl, pp. 452-455; Merriam, 2009, p. 224).

A further potential limitation was that the participants were my students. This might suggest some type of bias or persuasion was used throughout data collection. Every researcher must be honest and maintain ethical procedures to mediate this concern. Analogous to church, participatory action research invokes notions of “ethics, morality, values, and interest,” (McTaggart, 1997, p. 1) which must be maintained and delineated. My procedures outline exactly what was done to ensure this result. Additionally, the types of data collected and triangulation of data helped reduce bias, “If you self-consciously set out to collect and double check finding, using multiple sources and modes of evidence, the verification process will largely be built into the data collection as you go,” (Miles & Huberman, 1994, p.267). McTaggart (1997) supported participatory action research similarly, “Validation is achieved by a variety of methods, including triangulations of observations and interpretations, participant confirmation, and testing the coherence of arguments presented [cross-referencing, journaling, etc.],” (p.37). Data was triangulated across student surveys and responses, student work, student self-assessment, and teacher observation.

Knowing the students well can be an asset. As their teacher, I *know* these students and did not need to “gain entry” as an outside observer (Krathwohl, p. 263). Hammer & Schifter wrote,

Teachers, similar to researchers, observe, collect data, inquire, and draw inferences about learners’ understanding and reasoning. They collect data by a similar range of means,

varying from multiple-choice questionnaires or exams to written and oral open-response questions to observations of activities. They draw inferences about a similar set of phenomena, from students' understandings to their emotional state, regarding them as individuals or as groups, with respect to their thinking and behavior in a particular situation, across a class of situations, or in general (p. 442).

Teachers, especially teachers motivated to reflect upon and improve their industry, as Schubert & Lopez-Schubert note, inherently "research" their classroom every day, though not necessarily systematically or formally. Those teachers are more synchronized with their students and are, thus, able to easily facilitate research. The relationship that is established is trustworthy and honest, which might not be present if other types of observation were used (covert participant observation, concealed observation, etc.). The students are comfortable sharing because of the rapport established, and this fosters authentic responses to questions. Rapport is necessary when studying people (Krathwohl, p. 299; Merriam, p. 106). As this rapport was already developed with my own students, I did not need to take the time to do this or worry about how well it was developed, which might be a concern in a non-convenience sample. In addition, student survey data and questionnaires were collected anonymously. Finally, the project was introduced as a different way of learning. The researcher's goal, of investigating how students felt about different kinds of learning environments, was shared. No prompts or innuendos of a "better" way to do something were given. Authentic and honest responses were stressed to help moderate any perceived bias.

From participant volunteers within each of my four classes, I collected data over a 6 week inquiry research project. Out of the 116 students, 70 students decided to participate in the study. From these 70, I highlighted 9 individuals from 4 different periods to more deeply analyze

survey and questionnaire data. These 9 students and data sources helped provide initial codes to sort through which were later analyzed more broadly with the remaining participants' data. Students were purposely selected to include 5 girls, 4 boys, and varying demographic characteristics (ELL, SPED, Caucasian, Hispanic, African American, European). This demographic selection represented the general breakdown of my classes, so it more authentically represented a typical class. Data gathered and analyzed consisted of daily student exit slips, anonymous student survey, student self-assessment, anonymous student questionnaire, and teacher observation. The teacher spent time with individual students daily to make sure the student developed an appropriate project as designed by the teacher and student. The teacher kept informal observational assessment data, and the students completed exit slips daily to help the teacher monitor the class' progress.

### **Procedure: Alternative Inquiry Project and Data Collection**

The traditional Social Studies curriculum students used in the beginning of the school year was published in 2007. Although it was recently published, it still contained many traditional structures (embedded reflections, discussion points, and questions at the end of the chapter) and themes (east to west settlement, European and male influence, etc.). Furthermore, it provided “everything” necessary to learn social studies, including a given body of information to master, a structure for thinking about social studies issues and principles, and a set of learning activities for to students to engage in. In other words, no one (teacher or student) needed to contribute an original thought that might stray from the curriculum. Social Studies teachers in the district are required to teach the standards, such as “creates and uses research questions to guide inquiry on an issue or event,” but there is no district mandated curriculum/method to accomplish achieving this.

In the beginning of the school year, the students progressed through the text as designed. In small groups, the teacher led students through the chapters sequentially, only straying from the text when student questions directed it. Rotating through three stations, the students engaged in reading, writing, and discussing the text through various activities, including short-answer questions, extended paragraph/essay questions, vocabulary building, and mini projects (a colonial journal, a brochure on America, a Movie Maker, etc.). Students worked on these activities throughout the first unit (5 chapters) of the text. This work was all created and directed through the text and the teacher. Students completed the work individually (but were encouraged to discuss and share ideas when working on the mini projects though) after they had read the text and been instructed by the teacher. By the third chapter students knew what kind of work to expect and had settled into a routine.

### *The Alternative Inquiry Project*

To create a distinctly different learning environment, which embodied an “inquiry” approach to social studies learning, I constructed a 6-week alternative project for these classes to take place after the previous curriculum work. The inquiry project distinguished itself from the traditional curriculum discussed above by presenting to students a challenge for them to become experts on a topic of interest to them. Students controlled their learning from this point on. They chose a topic to research (it had to be about American History/Social Studies), and students created the questions which they were interested in answering. We put the textbooks away (although they could be used as a source if their investigation called for it) and students had to find appropriate sources of information beyond what a teacher typically provided them. Inquiry pedagogy meets numerous state standards in Social Studies education, so the students,

administration, and parents were comfortable with the process. The inquiry project followed the schedule outlined in Table 1 below.

**Table 1:** Student/Teacher Inquiry Schedule and Noted Documents

	Monday	Tuesday	Wednesday	Thursday	Friday
Week 1	Introduced Inquiry/research processes. Rough topic selection	Discussed metacognitive reflection, self-assessments, formative assessment (Appendix D, E)	Introduce inquiry cycle. Begin final topic selection.	Review Inquiry cycle. Final topic selection (Appendix B, D, E)	Project/Data accumulation (Appendix B, D, E)
Week 2	Project/Data accumulation (Appendix B, D, E)				
Week 3	Project/Data accumulation (Appendix B, D, E) Student Anonymous Questionnaire				
Week 4	Introduce Essay/ Begin Writing				
Week 5	Essay Writing				Final Draft Due Create/Practice Presentations
Week 6	Create/Practice Presentations	Present	Present	Present	Student Survey

Inquiry Introduction (Week 1). I presented the project as student directed research. I further stated this is what adults do when they want to learn/know about something more. I introduced the inquiry process developed by White, Frederiksen, & Collins (2009) (Image 2 –

Ch. 2). We further discussed how this process will be helpful for them to follow throughout their investigation.

In addition, we discussed metacognition and how it relates to their self-assessments and progress. The structure of the inquiry cycle requires metacognitive skills, so the teacher needs to ensure the students understand this conception, and perhaps provide tools/resources to ensure students' metacognition. Throughout the inquiry project, as I engaged individual students discussing his/her work, I referred to this task as being metacognitive. Furthermore, I introduced the daily Exit Slip. Students completed Exit Slips daily which helped support the metacognitive learning process.

Finally, we discussed formative assessment and how it will be used to help students reach their goals. Formative assessment is often new to students; they are not usually able to return to an assessment and revise it. Students are typically unaccustomed to assessing their own work in progress as a way of improving it.

Project Creation (Week 2). Students began by thinking of some topics they were interested in regarding American History/Social Studies. I told the students it could be anything they wanted as long as it connected to a topic in American History or Social Studies. During the initial stage, these were broad topics such as World War II. Next, I met with the student individually and reviewed the topics, focused on one topic (see Appendix F for topic list), and developed one large, broad research question. From this research question, students created a list of smaller, narrower, sub questions related to the larger topic to investigate. The goal of this process was that students took the lead on their project. The teacher's role was to be a gentle facilitator that nodded the students towards researchable questions appropriately developed to meet the needs of that individual student.

Project (Weeks 2-5). I distributed an Excel document that had space for questions, multiple potential answers, references, and follow-up thoughts/questions. The questions they created facilitated their investigation of the larger research question and helped the students begin their project. This list of questions developed into a working document; as students sought answers to their initial set of questions, many found more they needed/wanted to add or some they wanted to remove. Students worked off of this running list of questions they created. Students were encouraged, as they progressed through the project and learned more about their topic, to add, change, or delete (cross-out, not really “delete”) questions as they met or didn’t meet what they were seeking. This process was done quickly and easily on their laptops (where their questions were saved, and where their research was done) and further supported a metacognitive cycle. It also helped form a general outline for students to follow throughout their investigation and provided quick succinct discussion points when meeting with the teacher. I could quickly see which questions they had answered (and how well they were answered) and further query why some were blank or crossed out. Students were encouraged to use this, or develop a similar format on their own. Additionally, students completed daily exit slips. This was a metacognitive tool to help them and the teacher monitor progress. The teacher’s role during this time was to monitor student progress towards successful completion of the goals developed previously. Very little conversation involved the answer being “right” or “wrong” but, rather, mostly focused on things like what could be added or removed to make it stronger. During this time, students also completed an anonymous questionnaire regarding their opinions of education, learning, and the different learning styles.

Conclusion (Week 6). The final outcome for the students, once they were satisfied they had answered their research questions and were ready to teach us their topic, was their written

report, which they turned into a presentation or “consequential task” (Brown & Campione, 1996). The report and task were a celebration of the project; they were not meant to be a final assessment. The learning experience was stressed as the most significant event, not the completion of the report or presentation. The teacher co-created rubrics with students to assess both the report and task which highlighted the process and development of the work as well as its culmination.

Survey and Self-Assessment (Week 6). Students completed an anonymous survey upon completing their project and presenting it. It further helped illuminate student conceptions of learning styles as pertinent to the above research questions. Finally, after the survey, students completed a self-assessment based upon the state learning objectives. This attempted to demonstrate and reinforce that their learning met numerous standards and that their knowledge is meaningful and powerful. It was not used for any academic (report card) scores or grades.

### **Data Sources**

I have yet to meet a student who has not experienced traditional instruction. This experience, combined with the current inquiry project, provided students a chance to reflect on their own learning, their personal likes/dislikes, and allowed them to affectively rate/rank the learning methods via surveys. Data methods utilized provided a good basis for personal narratives while supporting qualitative and quantitative analysis.

Student survey data (Appendix C) were anonymously collected and stored so names were kept secret until after the project. Using anonymous data helped reduce sampling concerns regarding bias and also supported authentic data as students were more apt to comfortably share information. Data from these surveys consisted of rankings of their learning followed by a brief narrative explanation. Survey questions were organized to reflect ordinal data. Questions asked

students to rate their feelings/response on an ordinal scale but also included a space for students to “explain” their rating. This provided both immediate scoring opportunities and numbers to tabulate while at the same time gathered potential qualitative data to later investigate why the student scored the question that way (Krathwohl, p. 571). This information was triangulated and helped support other data sources. The Survey was passed out at the end of the project, after the students wrote their essays and taught the class about their topics. These data helped expound what students thought/felt about both inquiry and traditional approaches to education (Krathwohl, p. 248).

Anonymous questionnaires (Appendix A) were also administered about week 4. A questionnaire was appropriate because such qualitative data are more open-ended and less structured (Merriam, p. 90). Additionally, anonymous questionnaires helped ameliorate concerns of teacher-student influence. These questions ranged from describing past learning experiences, to reflecting upon the benefits or detriments of certain learning scenarios. This information provided student explanations about what they like/do not like about education and teaching, as well as information on how students think they learn best. This information was triangulated and helped support other data sources.

Students completed daily Exit Slips which were collected every week. This was a metacognitive tool that helped the student and teacher support each other throughout the project. Students were asked to reflect upon what they learned and did that day, as well as any comments or questions about the process. They were encouraged to be specific; in other words simply saying, “I learned about Benjamin Franklin today” was not acceptable. Exit slips provided further evidence of student understanding and growth throughout the project. An exit slip response was not anonymous; it was a communication tool between the teacher and student and

needed to be open so that any concerns could be handled appropriately; however, they were not analyzed for this research until the student project was complete. Exit slips were not something new to my students – they had previously done similar tasks throughout the year. In this case, they were just a bit more formal (instead of handing me a scrap of paper on the way out of class, they filled out a document and turned it in once a week). Communication in this manner was very common (students were encouraged to query teachers via email whenever necessary), so students were comfortable sharing information this way. Communication between teacher and students helps create a powerful learning environment and supports building reciprocal relationships (Ryan & Deci, 2000; Palincsar, 1986)

As important as it is to hear from the students themselves, hearing from the teacher while implementing inquiry pedagogy is also crucial. Informal observational assessments (Appendix B) included amounts of time focused on a project (as observed using a checklist format chronologically) as well as comments/conversations recorded by the teacher during student work times. These data were helpful in explicating student motivation, self-efficacy, and general “zeal” for education when compared with survey and interview questions (Krathwohl, p. 260).

Analysis of teacher observations and reflections helped clarify any pedagogical decisions and further illuminated student actions. Teacher observation also provided insight into inquiry pedagogy as a functional tool in middle school social studies classrooms from the teacher himself and, therefore, reduced the likelihood of its abandonment when promoting and designing it. Using an informal observational assessment and developing a standard format for teacher reflection and designating certain times to do so, reduced the demands placed upon the teacher as a participant-observer.

At first, this was done daily, but as students progressed through the research projects, and became more familiar and comfortable with the role change, teacher reflection became less robust as a daily occurrence. Upon completion of every class period, I took about 5 minutes to write down comments, observations, and questions about the class's participation. To assist in this process, I carried around a clipboard with student names on it that I could use to jot down comments, concerns, or anything that surfaced relevant to the project. At the end of every day, I reviewed these comments and added further notations as seemed pertinent. This was an easy format for me to follow. At the end of every class there is a transition time, and the information from the clipboard and what was still on my mind was quickly retrievable.

Teacher reflection will be an invaluable source of information when analyzing inquiry pedagogy. As previously noted in the above research discussion, resistance to inquiry pedagogy comes from many different locations, one of which is the teachers themselves. If teachers struggle implementing a new pedagogical direction such as inquiry, then inquiry or whatever pedagogy attempted will fail again. Teachers need to understand the history of the pedagogy, strategies on how it can best be implemented, and how it will be effective; this information is often well received when it is thoroughly researched and stems from a peer. Mandated change from external sources has demonstrated that change is sometimes hurtful and produces teachers who are "recalcitrant" (Richardson, 1994). Furthermore, research and data from teachers is sometimes considered the only valid form of education research (Carter, 1993). Good, qualified teachers know their students well (Schubert, et.al., 1997). "They draw inferences about a similar set of phenomena from students' understandings to their emotional state, regarding them as individuals or as groups, with respect to their thinking and behavior in a particular situation, across a class of situations, or in general," (Hammer & Schifter, 2001). Participatory action

research from teachers can have profound influence both in the classroom and to the education field in general.

Student Self-Assessments (Appendix D) were collected at the end of the project and briefly analyzed. As these were more a tool for the students, there was little attempt to make this a researchable tool. However, students were asked to explain where/when/how they met the state standards which did provide some analytic evidence. Self-assessments are a powerful motivating tool for students and help support a copacetic relationship in the classroom (Wiggins, 1989).

This abundance of data provided a rich amount of information from students and the teacher. One of the missing pieces of inquiry pedagogy research is data from the “front line” resources themselves – students and teachers. These data help fill this missing segment and further illuminate inquiry pedagogy from a different perspective.

### **Approach to Data Analysis**

Data analysis began immediately (as soon as the project started) via the teacher journal and followed constant comparison techniques as described in Krathwohl (p. 278). Constant comparison “intertwines data gathering and analysis from the outset.” It involves successively gathering data, analyzing it, using that analysis to guide more data gathering, analyzing that, and so on until additional effort brings no new learning ...”, (p. 278). Repetition of these patterns helps discern core concepts and then leads to a theory describing the phenomenon. In essence, this process is a narrowing down, a whittling of data into sizable units of analysis. This initial analysis ends when the researcher feels *saturation* – when new observations cease to add much insight (p. 281) – has been met. This all leads to “grounded theory” as Glaser and Strauss (1967)

termed it, “a theory or explanation grounded in observation.” Constant comparison creates a cyclical/spiral pattern, consisting of questions, observations, analysis (maybe a few revolutions) proceeding to theory development, theory testing and analysis (perhaps a few revolutions here as well, as tests support/abandon theories), and finally conclusions. Teacher reflection was the only source of early data; the survey and questionnaire were not presented until the project was over half-way completed. This reflection provided ample early data for research as well as helped facilitate the project’s success in the classroom as careful monitoring and adjusting was needed.

As soon as the project was completed, I imported the previously recognized 9 students’ questionnaire responses into Excel and continued with constant comparison (now able to compare their responses with my observations). I had some initial predetermined codes, but I wanted the data to speak for itself so I really began by seeking emergent codes. I proceeded to thoroughly read through the qualitative data looking for key words that suggest how a student thought or felt about the question posed.

When the survey was completed at the end of the project, I tabulated this information. Continuing in Excel, I aggregated scores and organized student explanation of scores. I counted the number of students who rated question 1 a “1”, then the number of students who rated question 1 a “2”, then who rated it a “3” and continued on for all of the survey questions. The numbers gathered provided further evidence of student feelings towards learning and inquiry pedagogy. Next, I copied in the 9 previously selected students’ qualitative responses to the survey questions. The survey explanations were grouped and coded as well as sifted through for further concept and theory development. This now provided 3 sources of information in Excel, plus the teacher journal to continue comparing information. Excel works similar to Krathwohl’s “cross tabulation” tables (p. 589) and was very helpful when comparing survey information. It

further helped to create a visual flow chart/diagram, as Miles & Huberman (1994) suggest, to organize data and seek relationships within it.

The data sources collected and analyzed were felicitous. This process could also be referred to as “open coding” (Strauss & Corbin) which was supported with “triangulation” (Merriam, 2009) from other data (are these codes also represented in other data). Open coding, which is, “The analytic process through which concepts are identified and their properties and dimensions are discovered in data,” fostered this (Strauss & Corbin, p. 101). Student surveys consisted of ordinal categories (Likert scale) and a space for explanation. These categories were charted and compared with other students’ responses. These data were triangulated with questionnaire responses, teacher reflection, exit slips, and student self-assessments. This involved, “comparing and cross-checking data collected through observations at different times, or in different places, or interview data collected from people with different perspectives or from follow-up interviews with the same people,” (Merriam, p. 216). Furthermore, “These patterns and regularities become the categories or themes into which subsequent items are sorted,” (Merriam, p. 181). As themes developed, I began to see if data could fit into the themes, and if not, where/what these data meant by circulating through this analytic process again. Strauss & Corbin labeled this as axial coding preceding selective coding (P. 143) which then helps form a theory.

According to LeCompte & Preissle, a vivid reconstruction of the culture studied is necessary (p. 235). This requires the researcher to separate, for analytic purposes at least, the empirical meanings he/she developed over the course of the investigation. To recreate the culture of the classroom requires interpretation, which can be subjective, so it is important to recognize and be aware of this. To address this, different types of data were collected

(questionnaire, survey, exit slips, self-assessment, and reflection), and different viewpoints included (different students, and the teacher's). With varied data types, and using constant-comparative and triangulation methods mentioned above, a more rounded picture of classroom culture emerged which was less subjective to any particular observations I made individually. Additionally, "Observation is like a flashlight: It reveals only where it is directed," (Kratwohl, p. 261). If I had only observed the class, I might not have discovered the in-depth information necessary to reveal any insights, nor would it have provided much objectivity if it were only one person's observations. Therefore, by observing, interviewing, and reflecting, I was more likely to develop a robust reconstruction of the culture than simply relying on one data source.

### **Data Quality and Design Limitations**

Data from participants can sometimes be problematic. To ensure data are accurate and authentic, various methods need to be present. Different sources and different types of data were collected in this study. Over 60 students responded to each of three different data types (questionnaire, survey, and exit slips), which were triangulated amongst each other, and with the teacher's journal reflection. The survey and questionnaire were both vetted by my peers to help ensure they were clear and void of bias as much as possible. With the high diversity at this school, a fairly large sample size of almost 70 participants was necessary to better illuminate data trends. Others might argue that it was limited by teacher-student dynamics, but participatory action research is fairly dependent upon a solid relationship, which is better facilitated when the researcher and participants have previously constructed one. Although data originated from different sources and consisted of different types, a semi-structured interview might have produced an even richer source of information. As this project was designed, however,

anonymity was required until the student work was completed so questionnaires were used in an attempt to retrieve information from students in place of interviews. A limitation with any questionnaire or survey is the inability to follow up. As the survey tried to incorporate similar questions as the questionnaire, the survey in a manner followed up on the questionnaire. Additionally, the directions for the questionnaire instructed students to answer questions in at least 3 complete sentences and explain their reasoning. This encouraged students to go beyond simple statements. Finally, the surveys contained a few lines beneath each statement for students to explain why they rated the statement the way they did. Explaining their answers and ratings with multiple sentences, thus, eliminated the need for follow-up interviews.

## **Chapter 4**

### **Findings and Results**

Before we review the data, it will be helpful to highlight the process we went through. This section begins by explaining how this project unfolded and then delves into further discussion of data. This study attempted to gather information from students about how they perceive education and its daily function concerning their learning both in general and in their response to this social studies class. Additionally, the study analyzed information about how the teacher implemented inquiry pedagogy in a social studies classroom and how this approach affected the learners' experiences. After careful review and consideration of all data sources, several themes emerged from this research which will be analyzed forthcoming. First, an analysis of students' views of school, its purpose and goals, helps inform and direct any decision this or other social studies teachers might make to change their way of designing curriculum and conducting learning. Second, an analysis of the role of power in education, where it comes from and who controls it, further influences classroom changes. Third, an analysis of how inquiry pedagogy helps monitor power in classrooms and additionally supports motivating environments.

#### **A Recount of Student and Teacher Activities**

Students had spent the previous three months proceeding through a traditional social studies curriculum. The teacher provided small lectures, led small discussions, and sequentially followed the book and assignments. My research project asked them to reflect upon this (as it was there more immediate experience) as well as their other educational experiences in comparison to the inquiry project.

Before I introduced the inquiry project to the students, I prepared a simple Word document to help them develop their topics and questions. It was very simple with some short directions and space provided for them to follow the directions,

“Over the last 7 years of education, and 12 or so years of your life, you have seen and heard of some pretty exciting or interesting things. This is now a chance for you to investigate them. Think of some American History/Social Studies topics you are interested in learning more about, and create a list of at least 5 topics that you would like to investigate. In the space provided below, and in no more than 2 complete sentences, list 5 things you are interested in and why you are interested in it. These topics must have something to do with American History or Social Change, but this covers a very large segment of information. For example, you might want to learn more about World War II, or the development of iPhones, either of which will work. When you have your list, save it, and email it to me. I will discuss your topics with you today or tomorrow as we begin the research project.”

After a short discussion with the students answering questions about the project, I emailed this form to the students and told them it must be turned in by the start of class tomorrow (many of them completed it and turned it in within 10 minutes). As recorded in my journal, questions ranged from clarification (Juana [all names are pseudonyms] asked, “How long do we have to do this?”) to bewildered restatements of their task (Victoria said, “Wait a minute, you’re going to let us do what we want?”). Clarification questions were expected, and quite simple to answer as the project details had been planned prior to this moment. The more disorientated questions which attempted to restate the new direction were a little harder to field, because I did not want to squash any immediate enthusiasm. I did not want them to assume they instantly had absolute

and unencumbered free reign of the classroom and their learning, but I also wanted to make sure they understood the new roles between teacher and student and how this new project incorporated freedom, learning, responsibility, and choice together. So when questions like Victoria's surfaced I delicately responded with phrases such as "Sort of" and then reiterated the project parameters ("You get to investigate and present any topic of your choice, as long as it can be related to American History or significant social change in the U.S."). Many students asked why it had to be about the United States, and I replied with things like, "This is a U.S. Social Studies class, so we have to focus on that. However, there are MANY topics that you can relate to studying U.S. society. For example, if you want to focus on Russian history, there is a significant portion of this that relates to U.S. history, specifically in the decades after World War II. We can get creative with how this relates to U.S. society." Every class asked questions that both clarified specifics and attempted to understand the new classroom dynamics further.

The next day I introduced them to the word "metacognition" and what this means. Many of them realized they are metacognitive frequently but never thought that it was something important or unique. As we discussed metacognition and how it will be important, I introduced tools (Daily Exit Slips, Student Self-Assessment, and Note Template) that I had previously designed to help them be more metacognitive. These tools were also used as springboards for teacher-student discussion; when I conferenced with them these were the tools I asked to see.

Students completed Daily Exit Slips and turned these in weekly. The directions for this tool stated that in no less than 4 complete sentences students reflect and report on what they learned to advance their research project that day. When I introduced them to this tool, I reviewed acceptable and unacceptable responses so they knew how to use it and what I was

expecting. Furthermore, in the off chance I was unable to conference with a student that week, it provided an informal source to check-in on students.

Students were encouraged to review the self-assessment worksheet throughout their project as needed, but we also reviewed it during individual conference times. This was not a formal evaluation, but since it listed the state standards in social studies it was a tool designed to help the students recognize they met academic requirements while hopefully feeling a sense of accomplishment and recognition of self-worth along the way. As recorded in Exit Slips and my journal, many students expressed doubt along this journey. Gabrielle wrote on day 6 of this project in her Exit Slip, “I’m not sure if I’m doing this right. It’s hard to know what I should take a note on. There is SO much information on MLK. Today I learned he was not a doctor like we think of but he was a PhD doctor – I don’t know what that is.” After reading this entry from Gabrielle I was able to show her on the self-assessment specific learning objectives she was meeting as well as help her move forward in her project. From my Journal on day 11 I wrote how I helped Bill recognize the importance of what we were doing by using the standards from the Self-Assessment, “Bill wasn’t sure how learning about Hitler was helping him be a better student, especially how it helped him learn about the US. I showed him our state standard 4.2 which relates to understanding causal factors and how they shaped major events in history. As we discussed the connection between Hitler, Nazis, Israel, The Cold War, the KKK, Racial Conflict, and 9/11 the role Hitler played in all emerged for him.” The self-assessment tool helped these two students, and others, recognize the value of their knowledge, learning, and effort while progressing through their inquiry project.

On day 3 I introduced them to the inquiry cycle described in Figure 2 (p. 31). We discussed how this process will be helpful and repetitive. This helped them understand different

stages they would travel through. In addition to the inquiry cycle discussion, I began reviewing with students their previously submitted list of topics. This was the first day of such conversations, and really helped clarify for those individuals what he/she was embarking upon. Through individual student conferences, students clarified their topics, narrowed them down, and then began writing a series of questions they wanted to know the answers to about their topics. This list of questions was completed in a simple Excel document that I had prepared for the students previously (see Table 2). It consisted of 3 columns and unlimited rows (students could expand as needed). The column headers from left to right were: question, note/answer, reference (see example below). At this point in the school year, the students were very familiar with technology and new how to add/delete/move data freely. They were instructed for every question they asked to find notes/answers and track the reference from them. Additionally, they were encouraged to add, modify, or delete questions as they learned more about their topics, but all of these changes were to be tracked in an effort to provide further conversation and clarification during individual conferences. Eventually, these notes would be incorporated in and expanded upon in their essay.

**Table 2: Partial Example of Student Note Template**

<p>DIRECTIONS: use this to help keep track of your research. SAVE this to your S DRIVE frequently, and back up to your MY DOCUMENTS.</p>		
<p><b>Questions</b> - Please copy/paste/write your questions here. Pay special attention to the 5 Ws (Who, What, When, Where, Why, and "How")</p>	<p><b>Answers</b> - Please write your answers here. Make sure you have completely answered the question - you need more than one source to do this. You might need more space/boxes than provided.</p>	<p><b>Resources</b> - Keep track of all of your resources here (books, websites, etc.)</p>
<p>1. When was the Model T introduced?</p>	<p>The Model T was introduced on October 1, 1908.</p>	<p><a href="http://en.wikipedia.org/wiki/Henry_Ford">http://en.wikipedia.org/wiki/Henry_Ford</a></p>
<p>2. How did people like it?</p>	<p>I think that people liked it a lot because it was cheap which means everyone could afford it, and it was large enough for a family and for an individual to drive and care for.</p>	<p><a href="http://en.wikipedia.org/wiki/Henry_Ford">http://en.wikipedia.org/wiki/Henry_Ford</a></p>
<p>3. How much did it cost, and did the price drop or rise?</p>	<p>it cost 825\$ when it was introduced and the price dropped every year.</p>	<p><a href="http://en.wikipedia.org/wiki/Henry_Ford">http://en.wikipedia.org/wiki/Henry_Ford</a></p>
<p>4. Did the government appreciate what Ford was doing?</p>	<p>yes because, President Woodrow Wilson asked Ford to run as a Democrat for the United States Senate from Michigan in 1918.</p>	<p><a href="http://en.wikipedia.org/wiki/Henry_Ford">http://en.wikipedia.org/wiki/Henry_Ford</a></p>

Finally, once the students and I had our first individual conference and they created their list of questions, they began seeking answers to their questions - doing the research. This was the beginning of the “fun” for many of them as they experienced independence in school for the first time. Amy wrote in her exit slip on day 4, “Finally! It’s about time you let us start working! ☺ No more study guides and no more book! Yay! Also I am very excited to learn more about Rosa Parks. I got to learn about her a little last year, but not enough.” Further recorded in my journal were exclamations of joy from many students. Nicolas said, “Finally I can work on my own.” Maria told her neighbor, “It’s so cool I get to research dance and fashion,” and giddily clapped her hands together as she began. Alex exclaimed, “Yes! I can’t believe I get to research cars!”

The students spent the next 4 weeks researching and preparing their essays. During this time, I circulated around from table to table conferencing with individual students. I tracked which students I met with and any observations or comments that were noteworthy on a prepared Excel document. Things I were looking for or listening for included marked excitement, copious notes, different websites/references, or the lack thereof – frustrations, angry expressions, minute notes, minimal references, etc. I tried to rotate around the room in order so that I could interact with all students. Each student received as much time and help as he/she needed. This meant one student, in one particular instance, might need 2 minutes of my time. The next time around this same student might need 10 minutes.

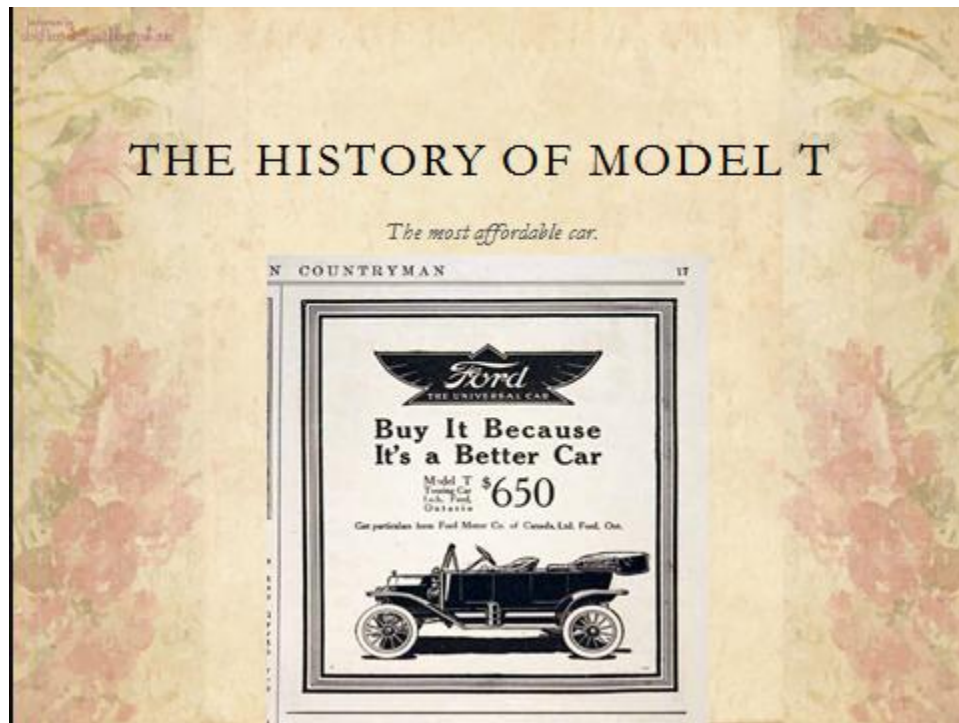
Our discussions varied depending on the needs of the moment. As students struggled to adapt with their new found freedom, some wanted to “wait for the teacher to help”. This was an understandable position, but it could have seriously delayed their work and would not have contributed to some of the overall goals of inquiry pedagogy (developing autonomy and

competence). This was frequently dealt with during the first week of research. Students were instructed to write down all concerns/problems that were not of immediate concern (“I just lost all of my work” would be one such concern) and these were reviewed during individual conferences. Ultimately, I found myself conferencing with an average of 10 students a day, so most students had the chance to talk with me at least twice a week.

After the first week of researching, students had already begun to move away from “needing” the teacher. As noted in my journal, “Individual conferences this week are shorter in length – I’m getting to more students and have time to sit longer with ones that really need it. Students seem to be taking good notes. Some students think they are ‘done’ with notes already. As I look at their references I remind them they need more than 1 and prompt them to expand their answers and go into more depth. For example, Bill had a note: Hitler died 4/30/45. That was all he had on his death. As his death is somewhat controversial, I prompted him to look into it further and suggested he search in Britannica Online and check out a book from the library (his references at this point were only Wikipedia).”

The second week of research (days 6-10) mostly consisted of expanding their information. For many students, they had not yet moved beyond Wikipedia, so there were multiple trips to the library. My help primarily involved facilitating the quest for reliable sources on the internet. This conversation might have entailed discussing a “blog” or an individual person’s opinion versus a more authoritative site (national geographic, discovery, history channel, etc.) and the importance of cross-checking information. Although I did not require primary or secondary sources specifically, for many students our conversation included a recommendation to search for primary sources. For example, Alex researched automobiles and started with the Model T. He found a primary source advertisement and used this to support his

claim that the Model T was so popular because many people could afford it, since the price of the car actually went down after the first year of production. He used this advertisement as his opening slide (see Figure 3).



**Figure 3: Example of Student Work (Primary Source)**

Since most students started their research in Wikipedia, not only did this provide a source to cross-check, but most articles in Wikipedia have a reference list also. This was a great tool for my students to begin their research with and helped direct their further inquest into their topic.

Before beginning their essay rough draft (about day 15), students had to consult with me. This was not a gate-keeper moment, but it was designed for two things. First, the students all had to answer how their topic significantly influenced U.S. society, and second that they had fully answered all of their questions. I did need to make sure they supported the first requirement, but the second was up to them. If they felt they had enough information to teach the class about their topic, and answer questions from their peers about the topic, then they could

begin writing their rough draft. For many students this was more of a “gut-check” moment as they asked themselves: do I know enough to present it to my friends? Many of them, as recorded in their exit slips and my journal realized they were not quite ready. Abby wrote in her exit slip, “I feel like I’m done but every time I look back at my info I find something else to add. Sometimes it’s something new, and sometimes it helps me learn more. I’m not sure I will be done in time.” Additionally I noted in my journal, “Nicolas asked me if he was done today. When I said, ‘I don’t know, have you fully answered all of your questions?’ He said ‘Yes.’ I replied with, ‘If you think you know enough about your topic to teach your neighbors, then you can start writing your rough draft.’ Nicolas responded with, ‘I better keep looking then.’ I was prepared to review his work at this point, and redirect him if he didn’t come to the same conclusion, because after conferencing with him yesterday I did not suspect he was ready today.”

This did present a slight dilemma for some students. Some students (I noted 7/~120) in my journal) were unsure if they had enough information to proceed. Six of the seven students I would classify as very diligent students (all had “As” in their classes) and I knew they wanted to make sure they earned a high grade. This is when, during individual conferences, I had to coax them into writing as they were clearly hesitant to cease information gathering. When doing this, I told them if you realize that, while doing your rough draft, you are missing information, you can still add it, but it is about time to start writing a rough draft, to start organizing your notes. This helped assure them that they were not really ending anything, but they were just evolving from one stage to another. I think the 7<sup>th</sup> student was nervous about writing an essay. When I reminded him that he had been writing essays all year long in language arts and to use those strategies and skills now, this seemed to assuage his angst. Additionally, I repeated that this was

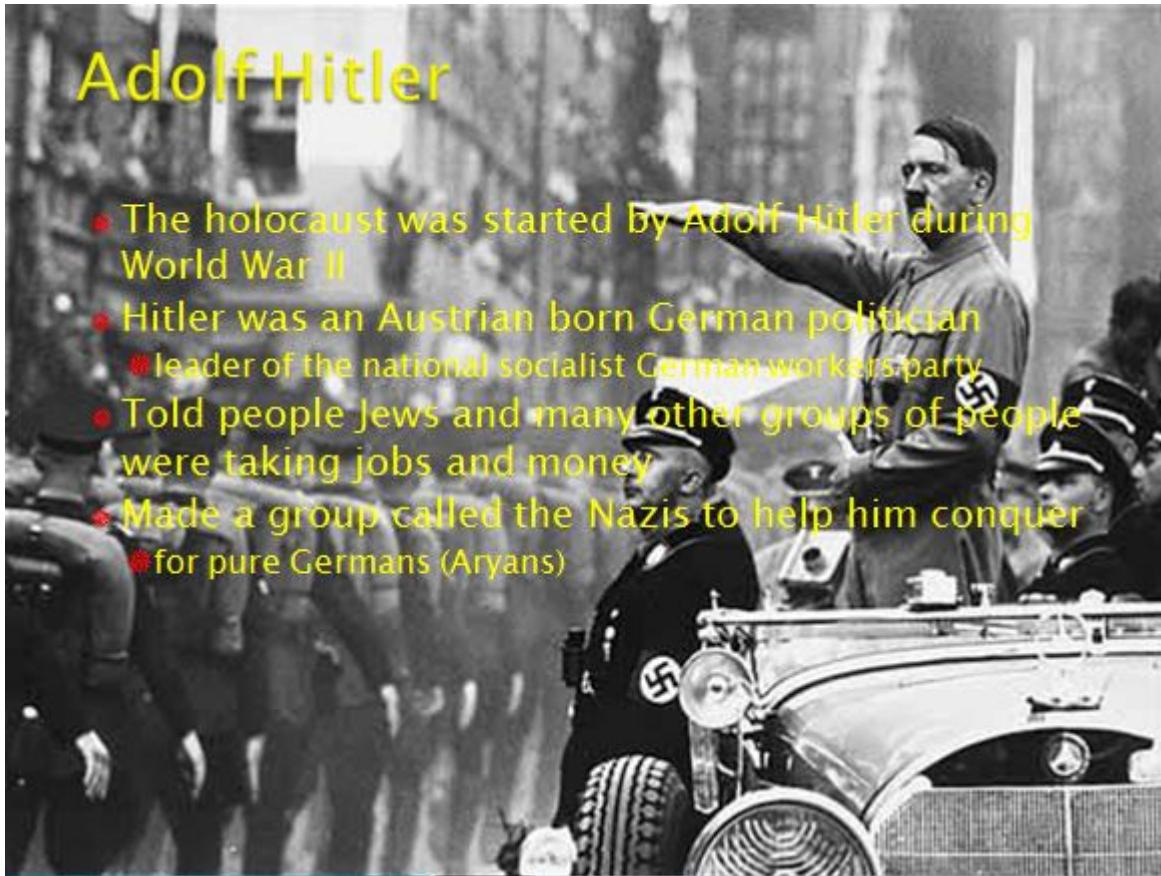
just a rough draft and he would receive editing and revising suggestions from peers and myself to help him write a strong essay.

As students began writing their essays, I provided a template for them to work with. Basically it showed them how to turn their questions into topic sentences and their answers (notes) into supporting details. This was slightly familiar to them as they had done this in previous essays, but the template and review were helpful. Once the students were all writing their essays, there was a brief lull in my involvement.

When they finished their rough drafts, they were instructed to send it to me and a peer for editing. In the meantime, they should be carefully editing one or two of their peers' work as well. Students were familiar with editing work from their language arts class, so this was not something I needed to instruct them in. My workload dramatically increased at this point. Luckily, not every student finished their rough draft at the same time, and most of these essays were less than 3 pages of typed work (the requirement was to have at least a 5 paragraph essay, including an introduction suggesting the topic greatly influenced American Society, 3 supporting paragraphs, and a conclusion). The student work was very well done; there were very little edits I had to include. The edits varied from student to student and included the gamut of edits from writing conventions to clarification of information. There were very few edits that suggested vital pieces of information were missing (in my journal I noted a total of 9/~120 students who I prompted to add more details and include more information) and many of the students had already exceeded the minimum 5-paragraph requirement. This suggests the students worked well individually and had the skills necessary to produce quality work.

Upon receiving feedback from peers and myself, the students began finalizing their essays. Although this assignment was teacher directed, it was also used to support their own

student directed presentation. They chose what method and tools they wanted to use to teach the class about their topic, and the essay they created was the foundation of this presentation. The essay and the presentation made up the bulk of their grade for this assignment, with the presentation slightly outweighing the essay (I wanted them to feel/understand that their work, what they created by their own choices, was very valuable). Most of the students went with a very familiar PowerPoint presentation, as shown in Figure 4. A few students created a movie in Movie Maker, and I had one student who performed a skit. I prepared a very simple rubric that covered all types of presentations which basically stated content needed to be clearly and accurately represented and student needed to be prepared to answer relevant follow-up questions. During this time, my role was to help navigate the software tools that students were using. All of the students had worked in Power Point and Movie Maker before, but maybe not to the extent they wanted for this presentation. Organization was one of the biggest problems they struggled with, not with the flow of information (since this was already accomplished in the essays), but how to create a presentation that was not too busy but still had the necessary information.



**Figure 4. Example of Student Created Power Point Slide**

Students did an excellent job throughout this project. Presenting it was perhaps the most difficult (as recorded in their Exit Slips and my Journal). Although students were very content to work on their projects and share with their neighbors for weeks, physically standing in front of the class and sharing it was very disconcerting. Amy wrote in her exit slip, “I know my topic well. I have been studying her for a while now, and I can answer almost any question about her. But I am freaked about telling the class about her. I hope I don’t say something stupid.” From my journal I wrote, “Despite me reviewing presentations with the class, providing a rubric, giving an example presentation, and allowing plenty of time to prepare and practice, many students appear very nervous about presenting. Vanessa said today, ‘I’m so nervous. Like, I can talk to you about it, but standing up there is just different.’ I asked her did she know her topic

and she said ‘Yeah, but I’ll probably forget it all when I get up there.’ This was a common occurrence in all classes (average of 6 comments/class regarding nerves/presenting). I reassured Vanessa, and other students, that they know their topics, that they’ve been studying them for almost two months, and that presenting is nothing more than sharing what you know. Furthermore, I suggested that knowing your topic (not memorizing) and practicing (in front of the mirror, to a friend or relative, etc.) will greatly increase their confidence and success. When presentations finally occurred, most students effectively shared their knowledge with the class. There were a few students who relied upon their slides too much, and a few slides with poor design choices, but overall every student presented successfully. The average grade for presentations, based upon the rubric, was 82%, which is further supported in students’ self-assessment data that they met their goals as well as state standards in Social Studies. Amy wrote in her self-assessment regarding analyzing multiple factors and sources to formulate a thesis in a paper or presentation that, “Yes, I met this standard. I researched Rosa Parks, including different stories about her, and wrote a 3 page essay about her. Also, I prepared and presented a Power Point to my class about how she changed American society.” Students felt valued in this process. Zack wrote about realizing he has “the power to learn what I want” and Demi wrote about having the “freedom” and “responsibility” of choice. They realized their interests were important and could lead to significant learning. Victoria wrote that choosing her own topic will help her learn better because, “it’s what is important to us.” Aliyah supported this notion stating her learning will, “go on and on until I learned everything I wanted.” These notions of value and significance are abundant in the data.

Information from the students proved to be very helpful throughout the inquiry project. Students often share opinions, which can sometimes be inappropriate, but rather often they can

significantly influence classroom dynamics. Through creating an environment that promotes student voice, and further listening to students' voice, the inquiry project was more successful. A review of the available data further supports this notion.

### **Analysis of Recount**

As previously mentioned above, when students discovered they were about to “cut the tie” to the teacher, they expressed some anxiety. In hindsight, this should have been expected. For most of their educational career, students were connected to their teacher through a myriad of emotional and physical ties. Students are very familiar with being told what to do. Nick, on day 3, wrote in his exit slip, “I don’t know what to do. I asked Mr. B to tell me what to research and he said NO. I don’t know what to write down. I think I’ll ask Bill.” Manuel also wrote in his exit slip, “I like this, but I don’t like it. It is a lot easier when we are told what to do. I don’t know what to research, but the book is boring too. This is more fun because we are talking, but I don’t have things that are important to study.” When I asked Vanessa why she was scared to research something she was interested in she said, “I don’t really like being told what to do, but it is so much easier. Like, you’re the adult, shouldn’t you tell us what to do? I mean, we’re the kids and just, you know, don’t know anything.” These statements, and others, suggest students at this level have become reliant upon textbooks and teachers as sources of knowledge and guidance, and furthermore that their own knowledge or skill is questionable.

This early trepidation surrounding freedom was ephemeral. I equate it as approaching the face of a mountain a rock-climber is considering ascending; gazing up at the task above, a young climber might think it impossible. However, once on the mountain the task becomes less doubtful as progress and height (gains) are made. Within a week of researching their topics,

student expressions changed from uncertainty to enthusiasm and confidence. Clearly they began to trust themselves with such a learning adventure. Manuel, after deciding to research Vietnam (which he arrived at on his own accord the day after his first noted concern), had multiple notes on the topic and was asking me critical questions, “Why did they go so far away to fight?” and, “Would you have gone over there to fight?” From initial fear of freedom and doubting his abilities, to asking critical conceptual and important questions in a week’s time is tremendous progress and supports inquiry pedagogy’s development of self-worth while boosting content knowledge simultaneously. It is easy for teachers to quickly run to the assistance of students when such direct questions are asked, but this is where restraint and stamina further compel prodding of inquiry pedagogy’s characteristics. I could have quickly and succinctly answered Manuels’ questions where he would have been satisfied, and moved on to another student (thus reverting to the traditional assumption that teachers have all of the answers and should provide students with them). However, instead of answering the question and walking on, I sat next to him and addressed his first question with a question of my own. Hence returning his query to himself and supporting the critical, reflective, and internal nature of inquiry pedagogy. After dialoguing about the distance and cost of equipment, travelling, etc. (thus satisfying my own teacher-ness that he understood, or was in the process of understanding, the location of Vietnam in the world and the nature of fighting a prolonged war there), I asked him what were they fighting over? He replied with, “something about this word (he tried sounding out Communism).” I asked him to tell me more about that (Communism) and he said he wasn’t really sure. I directed him to the embedded link which took him to a page on Communism, and we chatted about it briefly. This caused him to write down some new questions about Communism on his note-taking page and further seek answers to them. This process lasted

fewer than 5 minutes, but it spawned an entire new set of questions highly relevant to his topic, which he fully addressed in his paper and presentation to the class. It is doubtful that a quick and readily supplied answer to his initial questions would have produced the same outcome.

Upon reviewing Manuel's exit slips, he commented on this very occurrence, "Today I asked Mr. B if he would have fought in the war but he didn't answer me. I think he would have because he teaches social studies. He also asked me about communism and I wrote down more questions. I'm glad to learn about this war. I never really heard much about it before and I never knew what communism was before today." Further review of Manuel's self-assessment tool, regarding a state standard designed to support understanding different perspectives and interpretations of historical events, demonstrated his success in this endeavor. He answered this goal with, "Yes, I met this standard when writing about communism and why the US fought against Vietnam. The US did not like communism and thought it bad. They thought it would take over the world, so they fought to stop it. They also thought they were protecting Vietnam people from a bad leader. Also that's why we fought Iraq because Saddam was bad."

Comments like this help support inquiry pedagogy as developing a more profound feeling of self-worth and motivation pertinent to a learning environment. As students continue developing and learning that their own interests, skills, and knowledge have merit, they further realize they are capable learners and valuable contributors in the classroom. As the rock-climber gains height on the mountain, and overcomes obstacles, so too does the student as he/she finds successful answers to his/her questions, both reassuring and compelling the adventurer to proceed. In this sense, then, and according to students, the goals of school could foster this adventure, or not.

## **The Goal of School – From the Students’ Perspectives**

In reflecting on the learning experience described above, in contrast to other more traditional experiences, students offered their views on the goals of schooling. Here, their questionnaire responses were especially insightful. Students view the goal of school as helping them be successful. For many students, this meant academic success, notably in the means of earning high grades. Other students felt the goal of school was to develop future skills that would help them be more successful.

Question five on the questionnaire inquired about the goal of school. Many of the students’ responses had some type of “directed” approach to school. Amy said the goal of school is “to teach students.” Demi, Jasmine, Jesus, and Victoria also all had part of their response involving educators teaching them. In contrast to this, because the goal of schools to teach is vastly different than the goal of schools is to facilitate learning. Aliyah wrote, “They (the school) should only be concerned with the learning of the student.” Regardless of this overarching core philosophy of education, students also shared numerous “best practice” strategies. Amy wrote of the need to differentiate instruction in order to “teach in the best way possible.” Demi highlighted the future value of what students need to learn is most important, “In school we waste a lot of time learning things we will not need in our future.” Erik also stressed building knowledge now that will help improve “success in the future.” Amy furthered the notion of future as she explained directed teaching should lead to improved grades, which will help with advancement to high school and beyond. Jesus and Victoria included ideas of varied instruction; building in games, field trips, hands-on activities, dialogue, and projects are all important goals of education. A few students also suggested beliefs of building social norms. Jasmine wrote of being on your best behavior and treating people fairly. Zack also mentioned

behavior, “I could achieve them (goals) by doing all of my work and staying out of trouble.”

Supporting this notion of social norms, Erik mentioned schools should foster “confidence and responsibility”.

Many of their answers imply that future success and life skills are what is important to them. This supports notions that learning must be meaningful and authentic. It further suggests that students believe school is important to their future, not necessarily in subject knowledge only but also in social norms. Student survey data also supported these results. Results for the Survey are presented in Table 3.

Rating for the “I like being in school” statement was positive; 62/69 (90%) students replied, and of those 46/62 (74%) rated the statement a 4(21) or 5(25). Erik explained his “5” rating with, “I like being in school mainly because, what a future it can bring later on in life. It’s like a ticket for the upcoming days.” Most students included something positive about learning and socializing in their responses. Evante rated his a “4” and wrote, “I like being around peers most of the time and I get a good education at the same time”. Survey question 2 (I think learning is important) also supported the notion that students think school is important to them. This statement had the most responses (all 69 participants) and 57/69 (83%) rated it a 4(12) or 5(45). Miguel explained his “4” with, “Learning is important because it can help us later on in our lives.” Jasmine wrote after her “5”, “because it can help you get through life.” These two students, and 27 others wrote something about learning helping them in life, not necessarily specific at what parts of life. Another group of students (21) wrote how learning will help them in the future also, but specifically related to job success and money. Demi defended her “5” with, “because education is the main foundation of life; if you don’t have a proper education you

can't find a job that pays well. Money is a need that you have to have in order to survive.”

Evante wrote after his 5 about his belief in education's link to earning a “white collar” job.

Table 3: Survey responses.

Question	Student Responses (1=low/disagree; 5 = high/agree)					Total	4 and 5 (positives)
	1	2	3	4	5		
I like being in school	1	2	13	21	25	62	46/62
I think learning is important			12	12	45	69	57/69
School is fun		9	18	17	16	60	33/60
Social Studies is fun	2	1	12	21	24	60	45/60
Being able to investigate my own interests is fun		2	14	13	34	63	47/63
Being able to investigate my own interests will help me learn better	1	2	11	22	24	60	46/60
I can push myself to learn when I want		4	8	16	32	60	48/60
Total		18	91	126	205		

Undoubtedly, most students feel that education is important and like being in school. Only 3 students rated “I like being in school” below a “3”. One student’s reason was that there was too much work. Another student’s reason was he would rather be doing something else more fun, and the third student did not leave an explanation. Although 3/62 is not a bad ratio this survey suggests almost 5% of students do not like being in school. These same 3 students did not rate “Learning is important” low, in fact all students rated this statement a “3” or higher. This discrepancy further suggests that although students think learning is important, whether it’s important or not might not be enough to keep them in school or engaged. Perhaps the manner in which these students are taught, coupled with the subject, might address this discrepancy.

## **Students' Viewpoints on how they Experience Classroom Instruction**

Students' questionnaire responses also shed light on the way they experience classroom instruction across the school day. Students' views of a typical school day can be summarized as entering a classroom and being directed by a teacher to complete some task. In contemporary educational research, this is a highly disconcerting theme because it suggests a strong power imbalance and perpetuates a knowledge deficiency.

Question 1 of the questionnaire asked students to describe how they think school is operated. Predetermined codes I sought consisted of words or phrases that would support notions of control by others (directed, systematized, scripted) as well as physical characteristics of the learning environment (classroom layout, materials). Of the nine questionnaires analyzed for question 1, all of them had some type of phrase suggesting a lack of control by students. Aliyah summed up her school day knowledge well. She wrote, "you go to your classes and do what the teacher tells you." Demi said she "receives" instruction "straight from the teachers" who "explain" it to her. Victoria and Erik also used the words "receive" and Erik added "from the teacher" and "teachers teach us from the book." Jasmine wrote about a teacher telling us how to do something, as did Jose, "teachers just tell us what to do." Many of the students commented on the routine of school. Erik wrote, "School every day (to me), is always expected." Evante supported this feeling with, "Every day it's the same steps. ... The day goes on in a specific order every time." Zack further discusses routine, "They do the same thing in a typical classroom too." Zack, it seems at least, has experienced moments in classrooms that are not "typical" and offers some hope that divergence from routine is not as omnipresent as appears. A few students also commented on the physical environment. Amy wrote, "They usually stand in the front of the class and have us take notes." This supports a traditional method of

teaching/learning and situates the teacher as the “sage on the stage” and the student as an empty vault awaiting deposits. Jasmine also reflected a similar feeling, “A teacher standing up in front of the class telling us how to do something or giving us something to read.” Jesus and Victoria hinted at this when they both mention receiving instruction (direction) from “the board” (suggesting the class is organized so students face the board – the front of the room).

All of the above student responses to this question support school as a highly directed, and organized system. Their role is to come and “receive” instruction from a source of knowledge. This is supported with comments received and recorded in my journal. I noted on day 4 of the inquiry project both the confusion and excitement from the students about being independent, “Many students asked me today to tell them what to do – where to go, what to write down, how much, etc. This is very disturbing to me, that when ‘let loose’ they flounder. Other students simply dove right into searching for their answers. Most students went straight to Wikipedia and typed in the main subject they were investigating. Furthermore, there were many expressions of excitement about finally beginning, as well as about learning something about their topic. Vanessa said, ‘I had no idea computers were so old.’”

Further anecdotes from my journal support the variable responses during the initial days of the project. When the students began creating their list of topics/questions, more than one student bluntly asked “can you give me questions?” Nick asked, “I can’t think of anything, can you give me a topic?” Bill, a very bright and charismatic student, knew what topic interested him, but could not come up with questions. He said, “I know I want to research Hitler, but I don’t know what to ask about it.” Vanessa said, “This is scary; I don’t know how to do this. I don’t know what to write down.” One student, Manuel, even said he was nervous because the old way was, “nice and comfortable.” These statements, and others of similar nature, further highlight

the nature of schools as interpreted by students as directing and controlling, as if they were lacking something that the school could or will provide them. Realizing I wanted to have solid data about student interpretations of traditional pedagogy versus inquiry pedagogy (as delineated herein), I provided prompts in the questionnaire for them to respond to asking about what is good and bad about such directed forms of instruction compared to freer forms.

Question 6 of the questionnaire depicted a very directed, scripted, and traditional routine of school – the teacher tells you to read a chapter in the book and answer questions at the end. Student responses to the “good” part of the prompt almost all consisted of something about “learning.” Aliyah answered, “our reading and answering skills will improve.” Amy wrote, “The good is that you are learning.” Jasmine succinctly responded with, “I don’t think there is anything wrong with that situation.” Erik seems to think there is a slight connection between this activity and learning, “you might learn something by reading this chapter ... you would have to remember the text to answer the questions.” Jesus also wrote about “learning something.” Victoria’s answer suggested this activity also manipulates classroom behavior in a certain way, “The good about it is the kids are quiet and can focus.” Demi simply wrote, “There is no good thing” which led directly into the “bad” part of the response for her. She continued with,

Kids don’t like randomly reading a chapter from a book; we need something interesting like a game or project. What makes it worse is we have to answer questions which I hate doing when it’s not in a game or enjoyable form. This situation is plain horrible and my opinion is NEVER MAKE US DO IT!!!

Evante also wrote how deplorable this is, “Everything about this is bad. You have to read ... you have to answer questions.” Jesus similarly responded negatively that you “have” to read something. Amy supported the notion of enjoying what you’re doing noting, “the bad thing is

you may not like reading.” Aliyah suggested a similar conception regarding the importance of authentic activities with, “the teacher didn’t say the point in doing so.” Erik also wrote about interest and purpose, “it might be just a waste of time ... it might be really boring ... we could do something more educational than reading from a book.” Erik ended his response with, “I don’t like book work; to me, it just doesn’t make any sense.” Victoria’s response implied a lack of relationships constructed in this classroom, “The bad is the teachers aren’t interacting with the kids,” and, “kids learn best when they are active in conversations and involved.” Victoria finished with, “I don’t like reading and then answering questions because I don’t feel like I’m learning as much, and the information can be outdated.”

This prompt, especially the reflection upon the “bad” of the situation seemed the most emotional for the students. There were more “caps locks”, exclamation points, and bolded words than the previous responses; additionally student voice seems to resonate in this writing. Student responses highlight notions of frustration over being told what to do, and how many traditional educational tasks are disconnected and impersonal. In distinction to the directed prompt above, inquiry pedagogy presents a different scenario. Students were asked to reflect upon the values of an inquiry classroom as well.

### **Inquiry Pedagogy as Desirable Learning Situations**

The final statement on the questionnaire for the students tried to portray the opposite of question 6. It asked students to reflect on and respond to what is good and bad about students picking a topic to learn and with a little guidance from the teacher learns on his/her own. Aliyah stated the positive things are that, “the student learns more” and will “interact” with the teacher. This is supported with Erik’s reply, “the student will learn something that he would want to learn” and Evante’s, “this will make you strong in the subject.” Amy suggested that choice and

freedom helps the student “completes his/her task” as it is what is intriguing to her. Choice is also what Demi, Jesus, and Victoria wrote as positive. Zack touched on the value of autonomy, “the kid gets to find out on his own about his topic.” Zack, further wrote, “what is good is the teacher helps find what the kid needed,” which hints at the significance of relationships and supports Aliyah’s previous comment about interaction. Victoria commented on the importance of teacher guidance as well and how important it is to help students avoid getting “lost.” Students are very familiar with making choices and also know that there are two sides to most situations.

Many of the students wrote something similar to, “there is nothing bad about this” (Zack, Jasmine, Amy, and Erik). Aliyah’s “bad” suggested that managing “multiple things” might be difficult, which is somewhat related to Demi’s concern about the size/quantity of the project. Evante expressed concern about overall perseverance and how some students are just “lazy” while Victoria’s answer included fear of not picking an “important topic.”

Clearly students have different sources of motivation, which affect how invested they become in the classroom and assignment. Although at first some students struggled with their new-found freedom, this was overshadowed by the amount of excitement and joy witnessed in the classroom when students were introduced to the inquiry project and as this initial fear waned.

When students were first told we were taking a break from the traditional instruction and beginning a new investigation based upon their own interests, they were extremely excited. Immediately when I explained they were going to pick something they wanted to learn about and research it there were numerous fist pumps, “Yesses”, and wide smiles as recorded in my journal. Students highly rated the inquiry method on the survey; 47/63 (75%) students rated learning about their own interests is fun a 4 or higher and 46/60 (77%) rated learning about their

own interests will help them learn better a 4 or higher (another 11 were “indifferent” – rated the statement a 3). Erik, a 13 year old male with an ELL background, after rating whether “Learning about my own interests is fun” a “5” explained,

Being able to investigate my own interests is very much fun, because you learn something that you would enjoy! You want to learn something of your own interest!

Sometimes teachers teach you some very boring stuff and you really don’t learn, but if you get to pick your own topic of choice, you get to understand stuff you want to know, not something boring a teacher teaches.

Zack, another 13 year old male with an ELL background supported his “3” rating with, “kind of because I have the power to learn what I want to learn.” Aliyah, a 13 year old female with an ELL background followed her “5” rating with, “it can be more interesting when we do things that we want and not the things that teachers or the school board want us to do.” Demi, a 13 year old female from a historically marginalized group who rated this question as a “4” clearly liked choosing, but also astutely recognized that students are not always completely ethical in picking topics. She explained her rating with, “Sometimes it gives us freedom, but then it’s hard to pick a topic. We might pick a topic we already know about, so we wouldn’t be learning anything new. I say just give us choice once in a while.” Undoubtedly, Demi recognized some students picked topics dealing with The Holocaust, which was also a topic supporting their Language Arts studies. Her statement clearly suggests she does not think this type of integration between classes is appropriate, even though teachers specifically seek and organize such events. Besides this comment, which still suggests inquiry/choice is fun, only one person rated this question below a 3 and disagreed with the statement. Miguel, a 13 year old male with an ELL background supported his “2” with, “Not really, because it’s hard to find out about it.” Miguel,

consistently, throughout the project expressed these feelings of difficulty, even though he is a very successful student (repeatedly earned “A’s” all year in all classes).

The following survey statement to this one stated “Investigating my own interests helps me learn better”, which Miguel rated a “3” with “I don’t know” as his support. This further suggests Miguel is struggling with what he perceives as “learning” and his ability to do so independently. Similar to Miguel, Amy a 13 year old Caucasian female rated this statement a “1” supported with, “None of my interests will help me be a better student.” Amy’s response is extremely disheartening. She believes that her interests are not important, that her knowledge is worthless. In fact, Amy’s interests could have very easily been investigated. Throughout the year she was notably distracted by horses (drew them, wrote about them, read about them, etc. - often during inappropriate times). Had she written down her interests in horses as a topic, she could have investigated how the horse did, in fact extremely, influence America. However, because she felt this interest was not important, it was not even on her list of topics and she did not research it. She did pick an excellent topic though (Rosa Parks) and remained focused, engaged, and excited throughout the project. Although the rest of the student survey data analyzed for this statement was rated 3 or higher, and all with positive intonations, these two statements depict a disconcerting sentiment about student perceived formal learning environments that may be more widespread.

Other students strongly felt learning about their own interests would be beneficial. Victoria, a 13 year old female with ELL background rated this statement a “4” followed with, “I think learning about my own interest will help me learn because when we are able to pick our own topics on projects, we get to learn about what is important to us and what we like.” Her explanation reinforces the significance authentic learning must maintain and that it is individual.

If a student does not think it is important, he/she will not value it and/or therefore retain it.

Aliyah explains this as well,

Investigating things that I want to learn about will help me learn better. Once I learn about the topic I want I will go on and on and on until I have learned almost everything I wanted. Also on the way of me learning what I want I might learn things that could help me in my studies for school while having fun at learning.

Aliyah's statement highlights the cyclical nature of inquiry and hints at transfer. As she progresses through learning what she values, this fosters further learning which she feels may be transferable to other studies while maintaining "fun". Zack also supports the cyclical nature of inquiry learning, "Yes, because I could learn what interests me so that makes me learn more and do more of it." Jesus, a 13 year old male with an ELL background reported that, "It is more interesting for the one that is investigating." This indicates that individually chosen topics, not broad, overarching topics that will reach many, but not all students, will maintain his interest and help him learn better. Additionally, Evante, a 13 year old male from a historically marginalized demographic, wrote he is "more open to learning when I choose the topic," which further supports that students are more receptive to learning about something that is of their own choosing instead of someone or something else's. If choice plays an important role in student learning, there might be other aspects of classroom dynamics which foster good experiences.

The second question of the questionnaire asked students to reflect upon a "good experience" in school and explain what made it such. From a few responses, the notion of autonomy surfaced. Aliyah described a project that she had to "make it herself". This was followed with recognition, "the teachers told me that I did a good job and it was even better than the 6<sup>th</sup> graders." Erik's answer further highlighted success, but it was a personal

accomplishment, “when I finally get knowledge around (overcome) my problem.” These answers suggest task orientation (accomplishment of a goal) is a motivating factor for these students. Evante mentioned success, coupled with recognition, “I was congratulated by a lot of people” which suggests Evante might be more ego oriented (being the best, rewards). Other students also mentioned rewards. Victoria explained how they would “get candy” when they got a problem right. Jesus mentioned feeling happy after eating, and Jasmine described getting gum for hard tasks as her good experience. Two of the students suggested relationships were key factors in good experiences. Demi commented on how teachers need to be jovial, and imperfect. Zack said, “A good experience at school for me is meeting cool teachers.”

The above responses from these students suggest a classroom environment that nourishes autonomy, success (recognition) and relationships is desirable. Therefore, designing pedagogy around such systems should improve educational experiences, both academically and socially.

Question three was similar to question two; it asked the students to reflect upon a good experience in Social Studies and explain what made it good. Similar to the second question, students suggested relationships helped make it a good experience. Aliyah wrote about laughter and creating a jovial environment. Erik described working on a project and “comfortable being a part of it (the classroom).” Jesus’ response included components of relationships, but focused on cooperative learning. He wrote, “A good experience in Social Studies is when my team was working together and helping each other.” This supports other students’ responses about learning through projects. Demi suggest small projects are best, otherwise she gets “confused” and then “bored” when lost amongst a large project. Victoria described a project involving King George and taxes they did in 5<sup>th</sup> grade and said, “We can make Social Studies better by doing more projects.” Jasmine included choice in her description, “I think it is a good project (what

they just worked on) because we got to learn the history of something we want to know about.” Amy also included choice in her response describing how she got to pick Rosa Parks and do a project on her. Evante returned to rewards as what made his experience good, further highlighting the need for recognition in the classroom.

### **What Students Think Motivates Them**

Motivation is a central concern of any educator, especially during the tumultuous teenage phase. Question 4 of the questionnaire, thus, inquired about what motivates the students. Most of the responses described some type of future success is what motivates them now, which at first seems contradictory to their previous statements about liking school and the goal of school. If the goal of school is supposed to help them be successful in their future, then planning for a successful future should be motivating. This information is perplexing, because it seems very simple, very linear. Looking back at the beginning of this chapter, though, reminds us that 5% of participants did not like being in school, even though they realized school is important. Investigating methods which foster enjoyment in school, then, might help address this anomaly.

Success as motivation appeared in a number of different manners. Earning good grades surfaced a few times as defining success and motivating. Amy wrote, “The fact that I can get better grades,” and included the reasons, “to go to high school and study a lot,” so she can get into college and learn about “bio-technology.” Jesus explained something that motivates him to work hard is when he gets an “A” or when someone tells him “good job.” Victoria’s response was very detailed and included grades as a motivator to maintain her student-athlete qualifications. Her response also maintained an eye towards her future, “do something with my life,” “experience college,” and “make good money.” Jasmine also mentioned going to college, but included how her parents are important motivating factors. Zack, Victoria, and Aliyah

further mentioned parental influence. Aliyah wrote, “My family motivates me to work in school,” and Zack’s included his performance in school is a reflection upon his parents. Both Demi and Evante noted the challenge of schools keeps them motivated. Without challenging tasks, boredom precipitates. Demi’s is wrapped around choice and wrote, “If I really like the subject it will also motivate me to do my best.”

Student responses to motivation were diffuse, but almost all of them contained some type of future benefit gained from hard work and success now. This highlights the importance of authentic learning and critical thinking skills which are transferable as situations dictate. Transfer is a highly advantageous aspect of learning, and if inquiry pedagogy advances this then further investigation and support for its development seems worthwhile.

Data collected and analyzed suggest these students positively associated inquiry pedagogy with heightened states of motivation and learning. Choice, and what it provides students, cannot be overlooked as a motivating factor. Developing inquiry pedagogy, then, which supports notions of competency, autonomy, and relatedness, can positively influence student achievement.

### **Summary of Research Questions and Supporting Evidence**

The first group of research questions (see Table 4) addressed student understanding of teaching, learning, and motivation. The connection between the three different ideas was brought to the forefront via all four student data sources. Inquiry pedagogy was positively accepted as a more preferable method for many students. Various reasons were provided, but freedom and choice were predominant.

The second set of research questions focused on features of inquiry pedagogy. A thorough understanding of the inquiry cycle and various strategies implemented helped prepare students for the upcoming pedagogical shift. Apprehension to inquiry pedagogy, specifically freedom and choice, by students was also present in a minority of student responses. This suggests student have not experienced this very frequently in the past and were hesitant to embrace it now. Teacher resources (templates) and gentle guidance helped pacify their concerns, as well as constant reflection and encouragement that what they were doing was important and significant.

The final research question attended to student learning. Inquiry pedagogy necessitates research and helps promote critical thinking skills. The level of depth and knowledge students presented was far more significant than what is typically developed during a textbook exercise. This was evident in student self-assessments and teacher assessments.

Inquiry pedagogy thus initiates high levels of student motivation, promotes critical thinking skills, and develops complex consequential tasks. This is accomplished alongside meeting numerous state and national standards in social studies instruction while further promoting high levels of student self-worth and independence.

Table 4 – Summary of Research Questions and Supporting Evidence

<u>Question</u>	<u>Answer</u>	<u>Evidence</u>
1. How do middle school students perceive learning and their own motivation to learn in social studies taught through inquiry pedagogy, as compared to more traditional pedagogy?	Most students prefer inquiry pedagogy and feel it keeps them motivated. A few do not prefer it due to the difficulty of it versus being told what to do.	This is present in questionnaire, survey, exit slips, and teacher data.

a. How do these students compare the learning environments they experience in inquiry pedagogy with other environments they have experienced in the past?	Past learning environment were suggestive of "sage on the stage" teaching.	This is present in the questionnaire data.
b. In what situations have students enjoyed learning most? What made it enjoyable?	Student enjoy autonomous project work most.	This is present in questionnaire, survey, exit slips, and teacher data.
c. In what ways does student enjoyment of learning affect their demonstration and mastery of the topic investigated?	The projects were very successful and demonstrated concerted and consistent effort.	This is present in teacher data.
d. What motivates students to initiate investigation and further compels them to seek resolution, completion, and satisfaction?	Students suggested choice and inquiry addressed this best.	This is present in questionnaire, survey, exit slips, and teacher data.
2. What features of inquiry pedagogy in social studies classrooms make students and teachers most and least comfortable? Under what conditions in the classroom and school is inquiry pedagogy most likely to flourish?	Things that students said and felt they needed consist of 1-1 dialogue structured around reciprocal relationships. Least comfortable situations consisted of fear of independence/inertness.	
a. What structures or devices do students and teachers feel are helpful in creating an inquiry classroom?	An understanding of the inquiry process, support structures (templates), frequent opportunities for dialogue.	This is present in exit slips and teacher data.
b. What aspects of inquiry pedagogy present obstacles or struggles, and how do students and teachers address them?	Independence and inability were concerns from students. Implementing support structures and frequent dialogue structured around reciprocal relationships helped address this.	This is present in questionnaire, survey, exit slips, and teacher data.

<p>3. How does participation in a social studies classroom taught through inquiry pedagogy influence students' grasp of content knowledge, motivation to engage with school learning, and development of critical thinking skills?</p>	<p>Content knowledge was very deep. Students went far beyond literal sources of expression. Students were consistently engaged throughout the duration of the project. Students developed high-level analysis and synthesis of information.</p>	<p>This is present in questionnaire, survey, exit slips, self-assessments, and teacher data.</p>

## **Chapter 5**

### **Conclusions and Implications**

Stepping back from the detailed presentation of findings in the preceding chapter, some larger meanings and conclusions emerge from the investigation. In this chapter I discuss what the study means and what it contributes to several of the informing literatures, first by reviewing the main findings, and then identifying broad conclusions that these findings suggest in relation to several matters identified in the literature. Following that, I discuss possible alternative interpretations of the findings, as well as identifying limitations of this kind of study. Finally, I offer some practical implications for those who engaging social studies education, as well as in other content areas.

### **What the Study Found**

The mixed methods study's findings can be summarized in two parts. First, drawing largely on participant observations and documentary data sources, this investigation documented the implementation of a social studies unit in four middle school classrooms, based on inquiry pedagogy principles and maximizing student choice of topic and focus for their learning, within broad parameters defined by the teacher. Second, drawing on several forms of surveying, supplemented by a student questionnaire and the teacher's observations, the investigation identified themes in the students' responses to and interpretations of their learning experience that point towards larger insights into the nature of their motivation for learning, and their views of their schooling experience.

Regarding the design and implementation of the inquiry pedagogy unit, the curriculum asked them to create and design a research project stemming from their own inquiry. The implementation of this unit proceeded through several stages, but was initiated by the students

themselves. This immediately switched the typical classroom design wherein the teacher makes the choices and controls the process to where the students' choices were welcomed and paramount. Students proceeded through a prearranged inquiry cycle which required metacognitive development towards ultimately becoming the experts on their subjects and then teaching the class about the topic. The students engaged with various primary and secondary sources while addressing numerous state standards in social studies education. Their choices enmeshed them in content covering a range of topics from the Revolutionary War, to Hitler, to Computers. Student levels of engagement were noticeably high throughout the project, and they created remarkable products which they presented to class, all the while managing their individual progress towards satisfaction of their personal interests. Many students created Power Point presentations, some created Moviemaker movies, and one performed a skit about the Boston Massacre.

The teacher's role evolved over the inquiry project from a "sage on the stage" to a "guide on the side." This required a delicately guided prod instead of a controlled direction. If students appeared to miss a key concept, or connection, the teacher proceeded to question this, instead of immediately repair it.

Regarding the students' experiences and interpretations of this kind of learning environment, several patterns emerged. From the evidence gathered and analyzed here, students clearly valued the inquiry model. Learning on their own, on projects that stemmed from their own interests, was more enjoyable than other pedagogical methods they had previously experienced (including their experience with the teacher involved in this study). Students reported that inquiry pedagogy is more desirable than what they considered as "traditional" pedagogy. As recorded by the teacher and noted by the students, students developed higher

levels of self-worth and critical thinking skills. There were some initial trepidations, both for the teacher and for the students, but as they both adapted to the new demands and possibilities in the inquiry learning environment, the teacher observed higher levels of enthusiasm, engagement, and quality of work than had been typical in this group of students at other times in the year.

Students suggested the goal of school is to help them be successful. Success is highly ambiguous, however, and varied from preparing students for their future to the immediacy of grades on an assignment. Additionally, as students answered the questionnaire and completed the survey, students felt most of their educational careers were directed and controlled by someone else. Consequently, this often engendered discordance amongst them as they wrestled between being told what to do versus being supported or recognized as valuable intelligent persons. Students also suggested that inquiry pedagogy combined with choice offered a welcome reprieve from such feelings and further enhanced their academic enthusiasm and positive self-image. This belief was also supported by the teacher witnessing the transition amongst the two pedagogical methods. Students reported being motivated in many ways, but most influential in this field was a strong sense of relationships built upon supportive autonomy.

### **Learning Dynamics at Work in this Case of**

#### **Inquiry Pedagogy**

What the students did in response to this social studies unit, and how they experienced and interpreted it, suggests some larger meanings that connect to literatures on (1) motivation and what it means to build intrinsic motivation; (2) the effects on students of fostering competency, autonomy, and relatedness; and (3) students' encounter with a kind of "fear of freedom" in such learning environments. Together, as illustrated by these students' engagement

in this social studies unit, these dynamics point to the possibility that inquiry pedagogy can offer learning opportunities that are simultaneously fun and powerful, and their power may derive in part from the fact that they are fun. While these insights are not definitive, nor can they be claimed to apply in all instances of inquiry pedagogy, their manifestation here suggests some provocative possibilities and wider applications, which deserve to be further explored.

### **Building Intrinsic Motivation**

Research on motivation, especially intrinsic motivation, offers a useful way to understand what was taking place in this social studies classroom and the students' response to it. Ryan & Deci (2000) suggest that the social conditions in which people operate either support or hinder engagement. Human behavior is naturally inquisitive at birth, so engaged activity is not dependent upon "mere dispositional differences" or "biological endowments" (p. 69). If behavior is not dependent upon a person's innate characteristics, then certain conditions must exist which function to ignite or snuff action. Concurrent with the acknowledgment of humans' natural inquisitiveness by developmentalists, an investigation relevant to its absence or sporadic manifestation in later years is apropos.

People are motivated in many ways; sometimes this is a strong internal desire or sometimes people act because of a strong external pressure. As Ryan & Deci (2000) put it:

Comparisons between people whose motivation is authentic (literally, self-authored or endorsed) and those who are merely externally controlled for an action typically reveal that the former, relative to the latter, have more interest, excitement, and confidence, which in turn is manifest both as enhanced performance, persistence, and creativity (Deci & Ryan, 1991; Sheldon, Ryan, Rawsthorne, & Ilardi, 1997) and as heightened vitality

(Nix, Ryan, Manly, & Deci, 1999), self-esteem (Deci & Ryan, 1995), and general well-being (Ryan, Deci, & Grolnick, 1995). (p. 70)

This suggests conditions must be promoted which foster strong internal motivation and minimize external coercion.

Ryan & Deci identify three needs which form the basis for self-motivation and, “optimal functioning of the natural propensities for growth and integration, as well as for constructive social development and personal well-being,” (p. 69). These needs are simply the needs for competency, relatedness, and autonomy. To fully grasp the significance of these basic needs, analysis of varying types of motivation, such as internal and external motivation, will be helpful.

Intrinsic motivation is simply defined as an inherent desire to address curiosity, novelty, and challenges. Conversely, external motivation is often depicted as external “coercion,” which, to some people, suggests a highly negative and almost physically domineering system, “*extrinsic motivation* refers to the performance of an activity in order to attain some separable outcome and, thus, contrasts with *intrinsic motivation*, which refers to doing an activity for the inherent satisfaction of the activity itself,” (p. 71). Contrary to what many people might believe, by the time people reach middle school age there is little motivation remaining that is as intrinsically pure as that in early childhood. At this stage, strong socializing forces have thus shaped so many extrinsic sources that young people internalize them as if they had them inherently:

Much of what people do is not, strictly speaking, intrinsically motivated, especially after early childhood when the freedom to be intrinsically motivated is increasingly curtailed by social pressures to do activities that are not interesting and to assume a variety of new responsibilities. (p. 71)

Several studies demonstrate the many ramifications of highly extrinsic environments, (Vansteenkiste, Simons, Lens, Sheldon, & Deci; 2004) including poor mental health, unstable self-esteem, increased likelihood of high-risk behaviors, and reduced performance. As these extrinsic goals become more common and desirable, they begin to crowd out “need-satisfying behaviors, such as affiliation and prosocial engagement (Ryan, Sheldon, Kasser, & Deci, 1996),” (p. 246). Clearly careful monitoring, if not complete withdrawal, of externally motivating factors is needed.

The response of the students sampled in this study to the question about what motivates them supports this view of intrinsic motivation and its potential benefits. Many students (48/60 – 80%) rated their responses 4 or 5 (strongly agree/high) when they replied to being able to motivate themselves when they want to. This suggests these students feel they have knowledge of and control over what is personally motivating to them, which further suggests they will pick and choose where to put forth their highest or strongest effort. This could tremendously affect their learning and performance then. If students do not value or believe in what they are doing enough to give it their full attention, then there is little a teacher can do to encourage it besides pushing externally motivating factors. Furthermore, if students react poorly to extrinsic coercion, then the teacher may inadvertently push them farther away from the task and learning which it is meant to achieve. The negative consequences of extrinsic coercion in full strength, relevant to high-stakes, standardized testing, especially as these measures are used to determine financial and economic support for teachers and districts, produce comprehensive predicaments. Educators need not give up trying to engender a quest for

knowledge, but taxing amounts of pressure for knowledge acquisition present an interesting dilemma when considering motivation and what it means for learning.

Designing situations which are motivating is not a simple matter, and will not automatically beget competence, autonomy, and relatedness, as a person's individually unique culture and experiences further challenge defining conditions which promote these needs.

Need satisfaction is facilitated by the internalization and integration of culturally endorsed values and behaviors suggests that individuals are likely to express their competence, autonomy, and relatedness differently within cultures that hold different values. (Ryan & Deci, 2000, p. 75)

As indicated by the responses to student questionnaires, each student listed unique reasons as motivating to them. Woefully, only one of the students' answers to the question "What motivates you to work harder/do better in school?", supported notions of intrinsic motivation. Demi wrote, "If I really like the subject, it will motivate me to do my best." Ultimately, why Demi likes the subject might even lie in an extrinsic reward conception (for example, if she "likes" science because she wants to become a M.D. to make money). A follow-up interview or further investigation might have produced more robust data from Demi, but due to design limitations this was not possible at the time. Every other response to that question suggested an outside influence (grades, money, "make my parents proud", prizes). Previous to writing about liking the subject, however, Demi also said prizes motivate her. This additionally complicates motivation because other research suggests that extrinsic rewards are usually ephemeral. Furthermore, extrinsic coercion also is problematic when considering ethical notions of natural human tendencies.

If educators constantly offer extrinsic rewards anyways (disregarding the data) to satisfy what they want someone to do, or to encourage them to do something they think is important, they inherently suggest, then, they as the educators know more and have more value than the non-educator. At the same time as they try to get this person to buy into what they are proclaiming they devalue and belittle him or her as they surreptitiously suggest what they know is important but what he or she knows is not. To fully support competence, autonomy, and relatedness, teachers must know their students well and embrace them as the unique individuals they are to effectively nurture motivating environments.

### **Fostering Competency, Autonomy, and Relatedness**

Inquiry pedagogy fosters competency, autonomy, and relatedness through supporting unique individual characteristics and inquisitiveness in a concordant environment. Fundamentally, it cannot be authentically practiced as a hierarchical, and thus authoritarian, because a substantial part of this pedagogy is, in effect, “self-teaching”, that originates within the student. Immediately this shifts the environment from inhospitable to complementary. This environment is how students described “good school experiences” in their questionnaires and survey data.

Most data collected in this study suggests students value notions of competency, autonomy, and relatedness. Students reported good experiences when teachers provided choice and autonomy, but they also realized that unabated autonomy was not necessarily a good experience. This suggests they recognized the need for guidance, which requires a positive relationship built upon respect and support, not dictatorship. Victoria wrote how doing more projects of her own volition is what would make Social Studies/School better. Erik wrote about

learning more when he picks what to learn about. These descriptions of good learning experiences suggest that choice helps create powerful learning environments.

Student choice can be present in the classroom in many different situations. For example, “Love and Logic” suggests giving students choices that we want them to pick from, such as choosing between reading We the People or Call to Freedom to learn about the American Revolution. Either way, students have two reputable sources (pre-selected by the teacher) to learn about the American Revolution (also pre-selected by the teacher). Middle school students may see this as a veiled attempt at structuring autonomy, and as such not offering them much choice, especially authentic choice. By contrast, the design of inquiry pedagogy studied here offers a wide range of choices, originating within the students. While the choice provided my students did have parameters, they were very broad. Choosing a topic that involved/s US Social Studies (i.e., some connection to a significant influential social situation in the US) provided students enough freedom to recognize they were experiencing initial stages of autonomy.

Autonomy supportive environments (those that minimize external incentives, avoid controlling language, and acknowledge the learners’ frame of reference) “have been found to enhance autonomous motivation and facilitate learning, test performance, and adjustment (Black & Deci, 2000; Ryan & Connell, 1989),” (Vansteenkiste et. al., 2004, p. 247). Taking simple steps towards students feeling more autonomous helps supports competence and relatedness, which will help propel the inquiry classroom and lead to powerful learning situations.

Students may be more likely to take good advantage of autonomy if they recognize their individual self-worth and that they are competent and capable learners. Although this may seem easy to develop, they have spent the bulk of their previous years in education being told what they know is inadequate and it must be supplanted with what the teacher/adult and book know.

This pattern of prior experience was evident in the students' comments about how they think school is organized/operated and when they answered what the goal of school should be. Furthermore, comments by many students suggest they were fearful of independence, which implies they did not feel competent to proceed alone. Developing feelings of competency is a vital component of inquiry pedagogy. Students must realize they have what it takes to work independently. At this level, the bulk of students (perhaps omitting some recent immigrants to the US) are knowledgeable of many of the necessary foundational structures for learning on their own; they know how to use a library, they are more than capable internet searchers, and this is unlikely their first essay or presentation. Most of them have taken notes and prepared written reports before, so inquiry pedagogy is just another evolution of that process for them. But they have not yet recognized that they also have the capability to choose an important topic, structure their own project, and proceed forward independently. For many students in my classes, it must have felt like the moment when someone took the training wheels off when learning to ride a bike as a youngster. It's not as if the mom/dad (teacher) holding (or in this case letting go) of the seat is going to leave them lying there if they stumble. The teacher provides a ready hand (cautious not to be too ready) to support the student when the student stumbles (stressed, incomplete, agitated, etc.), props them back up on the bike, gets them ready to go, and sends them on their way again. If students are unfamiliar with this situation, which many of them are due to the traditional nature of school, then this is cause for trepidation which can be initially crippling to the inquiry process as students are too hesitant to proceed. But teachers can help students overcome this initial trepidation. In the classes studied here, I had support structures (note-taking templates, essay-writing templates, rubrics, etc.) readily available and took the time to work through them with students who were "stuck" in this phase. Preparing materials in

advance is a necessary step in building relationships with students; it demonstrates the teacher cares enough about his/her success to try and proactively address potential roadblocks.

When I introduced the project to the students, I also gave them a simple template to help them organize their questions/topics. This first step demonstrated to students that I had prepared tools in advance to help them transition and proceed through the inquiry process. Many students were relieved that these tools were offered (some just wanted to start researching the first day since they had a topic immediately). This forethought demonstrated to my students that I cared enough about their success to develop resources to guide them along their journey. Although small, it is important to “start out on the right foot”, and this was just one simple way to do so. If I had quickly just thrown this introduction and template at them, with no guidance or support along the way, I would not have demonstrated the caring and supportive relationship so crucial to inquiry pedagogy. Developing supportive relationships is perhaps paramount for inquiry pedagogy. It seems difficult to help students feel competent and release them to be autonomous without first establishing an honest and trustworthy relationship. Students need to know they are valued. They need to feel that they have important skills and knowledge that will improve the class as a whole. In other words, they need to feel that a key piece of the classroom puzzle will be missing, and thus incomplete, if they are not present. This takes time to develop. Students will not immediately feel a relationship is built after the first day of school. From the beginning of the school year, I tried to make sure I presented myself as a co-learner in the classroom and that I was going to learn as much from them as they were from me

The process at work in these and other inquiry pedagogy classes suggest that teacher and students built a relationship together, and that particular moves by the teacher facilitated this process. These moves, along with the real invitation to students to be central players in defining

their own learning, fostered the “relatedness” that Ryan and Deci discuss. For example, by not appearing too readily as the expert when students asked questions (rather instead responding with questions back to the student), the teacher was able to enhance the students’ role in the relationship building process. It is in most people’s nature, especially teachers, to quickly run to the aid of someone in distress, which asking a question implies. By not quickly answering a question, and returning the question to the class, the teacher invited students to share what they know, or what they think about, the topic and provide some information to the class. This begins the notion that students have important knowledge and are welcome to share it in the classroom while distancing the teacher from the perennial “sage on the stage”. Similarly, by admitting they don’t know the answer and would need to do some research to find out, the teacher supports exactly what inquiry pedagogy is about – asking questions that you want to know the answer to and seeking the answers to them. Additionally, it reinforces the notion that teachers do not know everything, and that questions are commonly difficult to answer succinctly. There might be different interpretations of the same event, especially in history, so what the teacher thinks/knows might be different than another “expert” and this requires investigation.

Building relationships often advances through changing how the teacher approaches class. In other words, when talking about what the class is going to do, changing from singular possessive to plural (“I” becomes “We” and “My” becomes “Our”, etc.) suggests a communal environment. This relationship can be easily fostered when reciprocal in nature. My students, as evidenced in the comments expressed throughout the project, embraced and promoted each other. One group of boys were individually working on Pearl Harbor, World War II, and Hitler, but together they were constantly jabbering back and forth about who did what, when, why, and furthermore sharing resources relevant to each other’s investigation. Together, the class learned

from each other, and the class as a cohesive group learned more from each other than if it was only myself presenting information.

Inquiry pedagogy supports this notion of student empowerment and shared learning. Many students, at this level, have very different and unique experiences to share; these are not insignificant and can tremendously benefit the class. Shutting them down effectively tells the student that what he/she knows is not important. Shutting them down, followed with something like opening a book and lecturing to them, further tells the student that the teacher is the source of knowledge and power. It seems naïve and pejorative for any person to think they know *everything* about a topic, especially history. What we think we know about history has changed considerably over time, so a teacher situating him/herself as a guide to help students navigate history is more suitable than one stating the “facts” of history *to* students.

Building this kind of teacher-learner relationship is not easily accomplished, but when combined with autonomy and competence as delineated in Ryan and Deci, students feel empowered and develop strong feelings of self-worth, while demonstrating application and synthesis of content knowledge. Developing this process requires diligence and understanding of inquiry pedagogy, by both students and teachers. Students’ complete conception of school may be ruffled enough to cause initial mystification, but in the appropriate environment as described above this can effectively be mollified.

### **Fear of Freedom**

As they experience autonomy, struggle to see themselves as competent, and develop a new kind of relationship with their teacher and each other, students seemed fearful of complete freedom, almost scared of being left alone. This was powerful enough that some students struggled to begin the most simple and initial task of listing topics of their own interest. There

are two plausible reasons for this. The first explanation might be that they are not, in fact, adequately prepared—that is, do not have the necessary skills, tools, or resources—to complete the task. The second might be that even though they have the skills, tools, and resources, they don't *feel* they do. In this situation, they are so comfortable with, and reliant upon, traditional pedagogical methods, that this new freedom creates a pronounced fear, or even phobia, of independence, regardless of ability. This could be so profound, that the thought of working independently produces heightened but completely undeserved self-doubt. This was evident when Vanessa, a very capable and highly intelligent student, expressed apprehension frequently throughout the project. Amy went so far to think that none of her interests “will help her learn better”, as if what she knows and values is not important and is irrelevant. Manuel and Nicolas were worried about not picking or learning things that were “important”. These students and others are so dependent upon the traditional structure of school that when removed from them they become inconsolable.

Bill, Manuel, Amy, and Vanessa were traditionally A+ students; they were very successful at navigating school. They developed expectations of what school was like and learned to successfully interact in this system. When throwing something new and different at them, in some respects freeing them from traditional constraints, they were very concerned about negotiating this new environment. It appeared that they were bewildered by what I was asking them to do – simply write down topics and questions of their own interests.

These statements corroborate Freire's and Moll's work on pedagogy, learning, and student validation. Freire suggests education, as typically characterized (and as conducted in the schools within which these students have spent their educational careers), perpetuates a cycle of oppression because it positions students as empty vaults to be filled with information from

teachers (Freire, 1970). This implies students are lacking something important, that they are in a deficit situation, the solution of which is through formal education by a formally educated teacher. It is oppressive because someone or something has the power to resolve the situation and “divvies” it out as he/she/they see fit, and because of the nature of this power (knowledge) it is self-perpetuating because only those who have received it can then continue to pass it on and are encouraged to do so in a veil of “false generosity” to help (fix) those people lacking it. Moll’s work, which followed Freire’s several decades later, parallels this notion and posits that traditional education fails to realize the vast “funds of knowledge” students enter school with (Moll, 1992). For many reasons, schools suggest the knowledge and information they maintain is what is valuable and needs to be shared. By implication, the knowledge students have that is not part of an academic environment is insignificant. Clearly these students, and many more throughout my research as evidenced in comments, surveys, and questionnaire data, embody these conceptions.

Negotiating this particular problem took time, but it was essential for the students to truly ignite their abilities and begin feeling more competent. Once this occurred, students visibly relaxed and started to “have fun.” This is where inquiry pedagogy combined with choice distinguishes itself from more traditional styles of teaching.

### **Learning that is Simultaneously Powerful and Fun**

Inquiry pedagogy and choice produce many powerful learning moments. For students, they start to feel like they are truly important components of the learning environment, far more than the traditional “all about me” poster might produce. Students begin realizing their knowledge is important and that it can be helpful in creating a positive classroom where all people are invited to share and learn together. Simultaneously as this develops, notions of self-

worth begin advancing, which further spiral into excitement. This perpetuates learning. Various indicators in my study underscore the point. The level of enthusiasm was high throughout the inquiry project. Student comments, particularly after some of the initial distress wore off, were very positive and succinctly expressed elation towards, and focus upon, their work.

Vansteenkiste et. al wrote that pursuing intrinsic goals, which is fundamental to inquiry pedagogy, have positive effects on well-being because they promote satisfaction of basic psychological needs (p. 246). Furthermore, after completing three separate but concurrent studies regarding autonomous motivation, they discovered, “people are more able to fully attend to and grasp the importance of an intrinsic goal for their learning when they feel free to decide for themselves to learn rather than feeling forced to do so,” (p. 258). They continue and note that the combination of intrinsically conceived goals combined with an autonomously supportive environment produce more free-choice persistence. Although varied in their results, persistence appears to relate to intrinsic goals and choice, both of which are key elements of inquiry pedagogy.

Student engagement never seemed to wane during the project. Once begun, enjoyment from learning on their own and about a topic of their choosing persisted even past their presentation to the class. Many students wanted to continue choosing topics and learning on their own, unfortunately we were unable to repeat this project due to curriculum constraints. This highlights the significance of structuring an environment supportive of competency, autonomy, and relatedness, which inquiry pedagogy inherently does.

## **Alternative Interpretations and Limitations of Study Findings**

It is possible that the patterns and interpretations offered above do not exhaust the meanings in this situation under study. There might exist other ways to understand the students' comments and behavior. First of all, my students and I had strong, positive, and "good" relationships before the inquiry project. It is possible, then, they might have inferred some tone or inclination in my presentation about the two learning environments. Even though I earnestly attempted to present the project as simply different (nothing special), perhaps they picked up on some subtle innuendo that might have suggested I felt one way or the other. Additionally, these are my students and if I did a good job of developing a positive environment, they would naturally want to please me (whether or not this is something I sought or they thought I sought). This may have led them to attempt to "feed" me the answers they thought I was looking for. Investigating multiple types of data, from multiple sources, helped reduce this possibility. For example, the survey asked them if investigating their own interests was fun, and will help them learn better. A similar question on the questionnaire asked students to explain a good learning experience. Although the statement and questions were worded differently, they both attempt to reveal how this student learns best and why.

Although students were given space to explain their responses on the survey and questionnaire, follow-up interviews would have been beneficial and could have further developed knowledge of inquiry pedagogy. For example, when Amy rated the statement "Being able to investigate my own interests helps me learn better" a "1" (strongly disagree/low) wrote, "None of my interests will help me be a better student." That's all she wrote. This could mean many things, potentially differently how I interpreted it, so following up with Amy would help

clarify this statement. As I saw it, this statement indicated that she has developed a strong sense that what she likes or is interested in is not important in life—i.e. they are not going to make her a better, stronger, smarter person—and therefore what she likes and knows is insignificant. Alternatively, though, she could be saying her interests are simply not motivating to her, or that her interests are not relevant to academics or the school environment, but they're fine to pursue when more important things (school) are complete, or she could have meant something else. Her interpretation or understanding of the question, since students were not allowed to ask for help or clarification, could also be part of the problem. Because I know Amy as a person, and was able in hindsight once the project was done to coordinate student data, and based on her other statements written and heard, I feel I am able to infer correctly what she was suggesting. If I did not have these options, it would be much more difficult to assemble the true meaning of her statement. Follow-up interviews, therefore, might have helped further illuminate student answers. Unfortunately, this was not possible, but it would be an important consideration for future work on inquiry pedagogy and student beliefs about it.

Considering implications similar to the Hawthorne Effect where students might react to a change occurring, not the pedagogy itself, are entirely possible. Due to classroom structures and support systems in place previous to the inquiry pedagogy project though, this is unlikely. My class was already designed around an inclusive environment. Students were constantly encouraged to share their experiences, ask questions, and pursue answers. Additionally, students were familiar with working independently on mini-projects, as well as working cooperatively in small groups. In other words, they had experienced different activities and learning environments throughout the year that were included in the textbook parameters. The main

difference that students hopefully responded to should have been the change in pedagogy and choice; nothing else in the classroom environment changed.

In my previous teaching years, I implemented various “motivating” scenarios, mini projects, independent and cooperative work, integrated science/math lessons, moviemaking, skits, etc., and NONE of these situations produced as highly elevated levels of enthusiasm and response by students as inquiry pedagogy and choice. At all points of previous years instruction, when introducing the next task and clearly thinking to myself that this was exciting, how cool it would be for them to work on, how motivating they would be, etc., there were always a solid 30% of students who resisted this, who responded negatively. When students reacted to inquiry pedagogy and choice, the negative reactions were not about the new pedagogy, but they were solely concerned with freedom and ability to navigate a different way of doing school (and this was about 5% of students), not upset that they now got to choose their learning.

Further studies involving inquiry pedagogy might expand explanations of its absence, including teachers whom have little understanding of it and should extend to administrators as they are primarily responsible for curriculum considerations. Additionally, a longitudinal study comparing traditional pedagogy with inquiry pedagogy and the long-term knowledge-retention capabilities of both will help determine its academic prowess. Finally, further investigation into the intricacies of how inquiry pedagogy helps create a more or less motivating classroom for students, what are the key characteristics of it that influence student engagement, will be helpful when promoting such pedagogy on a larger scale. For example, how might the students have responded if I was not as helpful of a guide as I was? What might happen after repeated, say 6 or 7 back-back inquiry projects, would student interest wane?

## **Implications for Practice**

I interpret inquiry pedagogy as teaching critical thinking skills covering content knowledge in an ethical and human-first manner. Critical thinking skills are important parts of all academic standards, and a human-first approach should be self-evident, but if a student does not choose all content/topics per his/her grade-level standards then problems (i.e. roadblocks) to inquiry pedagogy are presented. If this is a problem at certain points in the school year, presenting the student with content options not yet covered might resolve the issue without inharmoniously jeopardizing the inquiry process. This could be a consideration in future studies but may not be something that could be adequately prepared for as it is impossible to predict what each individual will choose to research.

Really defining what inquiry pedagogy is and why it is important has tremendous implications for what we value as learning and education in our society. For example, if a teacher needs to cover the American Revolution (a large and full topic) there are numerous pedagogical options available. One would be to stand in front of a class of 30 students and read/lecture from the text, with intermittent dialogue, and complete some type of summative assessment upon completion of the chapter/unit. This is a fairly common textbook/classroom design. This pedagogical option is less common in contemporary education as we know that it is perhaps one of the least motivating and successful. Current teacher education programs suggest classes and teachers implement various pedagogical methods and multiple types of assignments to keep interest and success vibrant, this is congruent what Massialas et. al. suggest as the “opining method” previously mentioned. As creative and motivating as some projects are, a large gap exists between students reacting to these contemporary suggestions and students reacting to inquiry pedagogy. In all my years of teaching, incorporating various pedagogical

strategies, assignments, projects, etc., nothing produced as dramatic and long-standing enthusiasm as inquiry pedagogy did. When inquiry is allowed to flourish and students allowed to investigate topics of their choosing, engagement was consistent and higher than in previous situations. When outcomes are higher, or even the same, in contrast to other pedagogical options educators must ask themselves which option is better? For student learning? For the teacher? If both accomplish the same goal (learning about the American Revolution) and one can be done with a more student-centered and human-first philosophy than another, the human-first option must be the chosen one. To not do so will perpetuate a cycle of incomplete thinkers and increased levels of negative self-image as a result of growing up in an environment suggesting the student is constantly lacking the skills and knowledge capable of metacognition and critical thinking. In this situation, education is thus in danger of producing people incapable of original thought. The remedy of this suggests a strong shift in the conception of “knowledge,” and demonstration of it, in America is needed. Inquiry pedagogy positions itself as a viable and strong recourse to this situation. There may be others equally suited to the task, but inquiry pedagogy from the very beginning inherently posits critical thinking skills at its core and is readily available with little financial cost (especially compared to new textbooks and curriculum) required.

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## Appendices

## APPENDIX A

### **Questionnaire**

1. Can you describe you think school is operated? How instruction is delivered?
2. Can you describe a good experience in school and tell me what made it good?
3. Can you tell me about your social studies/history experiences? What made it good or bad? Can you think of a way to make it better?
4. What motivates you to do better/work harder in school?
5. What should the goal of school be?
6. What is good/bad about this situation: The teacher tells you to read a chapter in a book and answer the questions at the end?
7. What is good/bad about this situation: The student picks topics to learn about and with the teachers help learns about those topics on his/her own?

APPENDIX B

Observation Guide

I will be observing students. Things I will look for/listen for are comments/conversations suggesting happiness, fun, energy, enthusiasm as well as comments that might be more negative. Whenever possible, I will try to follow up with this student as soon as possible to elucidate exactly what was exciting or what was boring – what lead to the comment? Per period (3 total), I will only be observing two students, so I think a fairly steady stream of observations will be feasible. As the nature of inquiry pedagogy provides more teacher “freedom”, I will be able to observe students often. I will try to note the frequency of comments as well as the nature of the comment (as close to exact phrasing as possible). This form can easily be used to track a conversation and create a transcript as well as note a specific comment, behavior, observation.

DATE	TIME	COMMENT/OBSERVATION/SPEAKER	FOLLOW UP

APPENDIX C  
Student Survey

DIRECTIONS: On a scale of 1-5 (1 = low/disagree, 3 = somewhat, 5 = high/agree), please rate the following statements by circling one number. Additionally, if you can provide a 1-2 sentence explanation, that will help clarify your thinking.

**I like being in school**

1                      2                      3                      4                      5

Explain: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**I think learning is important**

1                      2                      3                      4                      5

Explain: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**School is fun**

1                      2                      3                      4                      5

Explain: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Social Studies is fun**

1                      2                      3                      4                      5

Explain: \_\_\_\_\_  
\_\_\_\_\_

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**Being able to investigate my own interests is fun**

1                      2                      3                      4                      5

Explain: \_\_\_\_\_

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**Being able to investigate my own interests will help me learn better**

1                      2                      3                      4                      5

Explain: \_\_\_\_\_

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**I can push myself to learn when I want**

1                      2                      3                      4                      5

Explain: \_\_\_\_\_

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## APPENDIX D

### Student Self-Assessment

The following standards are what students are supposed to learn in 7<sup>th</sup> grade Social Studies. We are going to use these to help complete your project. The research projects will naturally meet most of these standards. However, we might decide to specifically target some of them as well. As you progress through your project, you need to start keeping track of where/when/how you meet these standards. **You need to: 1) judge for yourself if you met them; 2) explain, in more than two sentences how you did meet them or how/why you did not and; 3) reference where in your project you did.** You and I will also review this together to make sure we are meeting standard. Make sure you ask questions about the standards as they come up.

1.1 Understands key ideals and principles of the United States, including those in the Declaration of Independence, the Constitution, and other fundamental documents.

Met? Yes \_\_\_ No \_\_\_

How/Why?

Where?

1.2 Understands the purposes, organization, and function of governments, laws, and political systems.

Met? Yes \_\_\_ No \_\_\_

How/Why?

Where?

1.3 Understands the purposes and organization of international relationships and U.S. foreign policy.

Met? Yes \_\_\_ No \_\_\_

How/Why?

Where?

1.4 Understands civic involvement.

Met? Yes \_\_\_ No \_\_\_  
How/Why?

Where?

2.1 Understands that people have to make choices between wants and needs and evaluate the outcomes of those choices.

Met? Yes \_\_\_ No \_\_\_  
How/Why?

Where?

2.2 Understands how economic systems function.

Met? Yes \_\_\_ No \_\_\_  
How/Why?

Where?

2.3 Understands the government's role in the economy.

Met? Yes \_\_\_ No \_\_\_  
How/Why?

Where?

2.4 Understands the economic issues and problems that all societies face.

Met? Yes \_\_\_ No \_\_\_  
How/Why?

Where?

3.1 Understands the physical characteristics, cultural characteristics, and location of places, regions, and spatial patterns on the Earth's surface.

Met? Yes \_\_\_ No \_\_\_

How/Why?

Where?

3.2 Understands human interaction with the environment.

Met? Yes \_\_\_ No \_\_\_

How/Why?

Where?

3.3 Understands the geographic context of global issues.

Met? Yes \_\_\_ No \_\_\_

How/Why?

Where?

4.1 Understands historical chronology.

Met? Yes \_\_\_ No \_\_\_

How/Why?

Where?

4.2 Understands and analyzes causal factors that have shaped major events in history.

Met? Yes \_\_\_ No \_\_\_

How/Why?

Where?

4.3 Understands that there are multiple perspectives and interpretations of historical events.

Met? Yes \_\_\_ No \_\_\_

How/Why?

Where?

4.4 Uses history to understand the present and plan for the future.

Met? Yes \_\_\_ No \_\_\_

How/Why?

Where?

5.1 Uses critical reasoning skills to analyze and evaluate positions.

Met? Yes \_\_\_ No \_\_\_

How/Why?

Where?

5.2 Uses inquiry-based research.

Met? Yes \_\_\_ No \_\_\_

How/Why?

Where?

5.3 Deliberates public issues.

Met? Yes \_\_\_ No \_\_\_

How/Why?

Where?

5.4 Creates a product that uses social studies content to support a thesis and presents the product in an appropriate manner to a meaningful audience.

Met? Yes \_\_\_ No \_\_\_

How/Why?

Where?

APPENDIX E

Student Self-Reflection (Exit Slips)

**Name**  
**Class**  
**Period**  
**Date**

**DIRECTIONS:** Every day that we have class, with 4 minutes left before class is out (see schedule on board if you don't know), you need to fill this out. You need to write **at least three sentences** telling me what you did each day, or how you think your research project is progressing. This needs to involve content. For example: "Today I researched more about Benjamin Franklin. I learned that he invented electricity. I also learned that he started the first library. I took detailed notes on it that will help me in my project." **Save** it to your H drive every day as: last name-first initial-Monday's date-exit slip. For example: "bartle-c-2-8-exit slip.doc". On **Fridays** you need to email this to me. The purpose of this is to make sure you and I know what you are doing, and that you are making progress on your project. If you are absent one day simply write "absent" in the space. If you don't have your computer, you need to fill out a paper one and turn it in on Friday.

Monday:

Tuesday:

Wednesday:

Thursday:

Friday:

APPENDIX F:

List of Student Topics

Boston Massacre  
Battles of Lexington and Concord  
American Revolution\*  
Civil War\*  
Slavery\*  
Frederick Douglass  
Harriet Tubman  
Civil War Technology  
Electricity  
Benjamin Franklin  
Hydro-Electric Power  
History of Automobiles\*  
Mexican-American War  
Yukon Gold Rush  
World War I  
Prohibition-Dance/Music-Speakeasies\*  
Women's Suffrage  
World War II\*  
Hitler\*  
Bombing of Pearl Harbor\*  
Atomic Bomb  
History of Flight\*  
Vietnam War  
History of Computers  
Microsoft\*  
Starbucks  
Apple\*  
Nike\*  
NFL\*  
Soccer\*  
Olympics  
Skateboarding\*  
History of TV and Radio\*  
Hershey's Chocolates  
Nordstrom  
(\*indicates multiple students selected this topic)