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DISSERTATION

THE STUDENT'S EXPERIENCE IN A CONSTRUCTIVIST CLASSROOM

Submitted by

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School of Education

In partial fulfillment of the requirements

for the Degree of Doctor of Philosophy

Colorado State University

Ft. Collins, Colorado

Spring 2001

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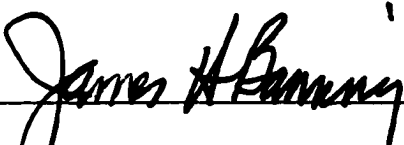
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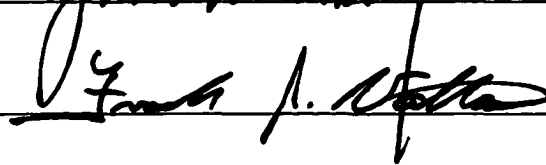
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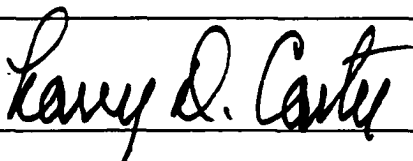
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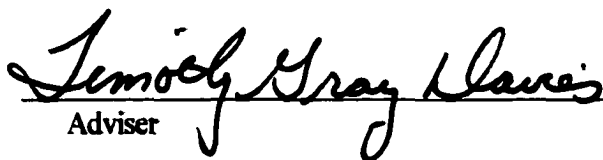
WE HEREBY RECOMMEND THAT THE DISSERTATION PREPARED UNDER OUR SUPERVISION BY JOANNE MAYPOLE ENTITLED "THE STUDENT'S EXPERIENCE IN A CONSTRUCTIVIST CLASSROOM" BE ACCEPTED AS FULFILLING IN PART REQUIREMENTS FOR THE DEGREE OF DOCTOR OF PHILOSOPHY.

Committee on Graduate Work










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ABSTRACT OF DISSERTATION

THE STUDENTS' EXPERIENCE IN A CONSTRUCTIVIST CLASSROOM

Constructivism is a psychological theory of learning popularized approximately sixty years ago by Jean Piaget. Constructivists postulate that all learners construct knowledge based upon background knowledge and multiple resources. Constructivists do not believe that there is a body of knowledge independent from the learner. All learning is filtered through the learner's lens of reality. The purpose of this qualitative study was to explore the students' perceptions of constructivism as applied in an American History II survey course.

In the review of literature I found that many educators have adapted constructivist theories to classroom teaching. I formulated a list of ten elements of constructivism most frequently applied in the classroom. The class activities and methods of teaching I utilized were consistent with constructivism. Students were encouraged to construct their own knowledge based upon past experience, primary resources, collaboration, secondary resources, and independent research. Students were encouraged to think critically and independently. Cognitive growth was anticipated and occurred, but students reported other areas of development also. Students learned to value multiple perspectives, validate their own ideas, and to be respectful of others and their ideas. They learned to appreciate the complexities of our history and understand that the fabric of life incorporates multiple realities.

Participants in this study were students enrolled in an American History II survey course at a Colorado community college. The data for analysis came from student voices, via written essays and interviews.

Students described experiences one might expect in a constructivist classroom, such as learning more and increased enjoyment of the process. Although students did not use the term affective development, the learning they described included cognitive and affective growth. Presumably this growth occurred as a result of participating in a constructivist classroom.

One implication of this study was that applied constructivism may result in a more holistic approach to teaching and learning. From students' comments I extrapolated that participating in a constructivist classroom promoted affective development in areas that included improved tolerance, civility, and understanding.

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Spring 2001**

DEDICATED TO:

My son, Matthew James Maypole

**Born healthy and beautiful August 4, 1977
Lived with much love, kindness, and good humor
Died tragically January 30, 2000**

**Words cannot express the depth of my sorrow in losing you. You were the light of my life
and I miss you more than I can say.**

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My advisor, committee chair, and friend, Dr. Timothy Davies, provided me with many opportunities to learn and develop professionally over the past several years. I heartily thank him for all of his efforts on my behalf. He seemed to know when to encourage me and when it was best to allow me gather my own resources. When I did not want to go on, he urged me forward. I am grateful for his gentle persuasion in encouraging me to persist in finishing this dissertation. I have been fortunate in meeting some very special people in my lifetime; I count Dr. Davies among them.

My committee members also contributed much to this study. Dr. James Banning was invaluable with his insights and his knowledge of qualitative methodology. Dr. Banning provided me with ideas for organizing and structuring the presentation of the information in the study. He was very supportive and took extra time to review my work and make suggestions. I enjoyed working with him and appreciated his help in producing this qualitative study.

Dr. Larry Carter, past president of the Community College of Aurora, provided ideas and support from an administrative perspective within the Colorado Community College system. At each meeting he had constructive comments and ideas to share with me. He was especially knowledgeable about teaching and learning styles from a college president's perspective. He offered good questions that helped me produce a better study. I thank him for his time and assistance.

Dr. Frank Vatanno offered suggestions to improve my writing style and to clarify my statements. He asked questions that helped me examine the data from many different perspectives, both qualitative and quantitative. His insights and questions helped me improve my study because I critically thought about and addressed his concerns. I thank him for his time and thoughtful questions.

To my family and my friends I owe a great deal of thanks. The love and support I feel from them has helped to make this journey successful. My husband and best friend Bill, with his ever-present dry wit and concern, has always supported me regardless of what new mountain I had in my sights. I was blessed with three wonderful children. My daughter Julia and my oldest son Erik, give me their love, good conversation, and support on a daily basis for which I thank the Lord. My youngest son, Matthew, from whom kindness, support, and love flowed like a mighty river, surely knows this is completed. My mother Grace, my dad Colin, and my sister Roxanne have given me boundless unconditional love and devotion for all of the years of my life. My good friends Jo Ann and Brenda are always close at hand for good conversation and encouragement.

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CHAPTER ONE

Introduction

This phenomenological study describes the experiences of undergraduate students enrolled in an American History II survey course in which constructivist learning theories guide the teaching methodology. The focus of this study is the students' perceptions of that learning environment. Constructivist theories were adapted for classroom application, and I am interested in discovering how students perceive this learning experience.

Constructivist theorists believe students improve their critical thinking and problem solving skills when they construct new knowledge based upon background experiences and multiple resources. Students construct knowledge as individuals or as part of a social unit, but knowledge is not a separate entity onto itself and knowledge cannot be independent of the knower. The philosophical, psychological, and epistemological underpinnings of constructivist learning theories are disparate, but the common thread throughout constructivism is learner centered teaching. Bloom's (1956) taxonomy of cognitive learning suggested that higher order thinking skills are developed when students analyze, synthesize and evaluate ideas. The higher order reasoning skills Bloom (1956) described are the pedagogical foci of constructivism. Students think critically when they combine background knowledge, independent research, and classroom presentations to build on their existing schemata, thus expanding their foundations of knowledge. Constructivist theory lends itself well to classroom application; however, there are questions about transforming learning theory into practice.

Constructivist Learning Theories Defined

There is abundant literature on constructivist learning theories, but according to Richardson (1997) it is contradictory and not prescriptive. The literature suggests that the process of transforming constructivist theories into practical classroom application is tenuous at best.

There are two main theories in the application of constructivism to classroom teaching. The theories differ in focus of attention and in the role of formal academic knowledge in learning (Richardson, 1997). Regarding focus of attention there are two models most commonly associated with psychologists Jean Piaget and Lev Vygotsky. The Piagetian model focuses on the individual and his or her construction of meaning, which is called cognitive constructivism. Vygotsky's model focuses on language and social interactions and is called situated social constructivism. Constructivists do not agree on whether individuals construct ideas independently (Piaget) or if social interaction (Vygotsky) is needed to facilitate that process (Fosnot, 1996; Steffe & Gale, 1995). It may be a moot point. "We cannot understand an individual's cognitive structure without observing it interacting in a context, within a culture. But neither can we understand a culture as an isolated entity affecting the structure since all knowledge within the culture is only, to use Cobb's (1992) terminology taken as shared." Fosnot, 1996, p. 24) Although Piaget is known for his emphasis on individual cognitive development, he also believed language and social interactions were important to intellectual development. He wrote, "There is no longer any need to choose between the primacy of the social or that of the intellect; the collective intellect is the social equilibrium resulting from the interplay of the

operation that enter into all cooperation.” (Piaget, 1970, p. 114) Both social interaction and individual construction of knowledge are important aspects of cognitive development.

Society doesn't think; only individuals think. Thus the relation between individual and society, like the relation between organism and environment, is a dialectical one. It is not only that society is the environment of the individuals and therefore perturbs and is perturbed by the individual...only an individual can think, but only a society can have class structure. At the same time what makes the relation between society and the individual dialectical is that individuals acquire from the society produced by them individual properties that they did not possess in isolation. It is not just that wholes are more than the sum of their parts; it is that parts become qualitatively new by being part of the whole. (Lewontin, Rose, & Kamin, 1984, p. 287)

John Dewey (1916) believed constructivism was better accomplished through social interactions. He said, "when words do not enter as factors into a shared situation, whether overtly or imaginatively, they operate as pure physical stimuli, not as having meaning or intellectual value." (p. 16) Vygotsky (1978) stated that within social interactions, cultural meanings are shared and internalized. "Increased learning will occur if the specialist uses a learner-centered approach, where facilitators utilize the learner's experiences and knowledge in the learning process where they develop methods in which students interact with and reflect on the subject matter." (Beaudin, 1995, p. 3) A comparison between Piaget and Vygotsky reveals that there were differences, but also similarities in their beliefs. "Both are clearly constructivists: They both see knowledge as self-regulated construction. Both see social interactions as having an important role, if for different reasons. In many ways their work converges." (Wadsworth, 1996, p. 12)

The second theoretical difference among constructivists relates to formal or academic knowledge. Constructivists do not disregard the need for formal knowledge (Von Glasersfeld, 1995). Mastery of content is the goal of learning and within each

discipline the rote memorization of discrete facts is necessary; however, the conceptual foundation upon which the facts rest can be built using constructivism. Teachers establish a rapport with students that facilitates both learning processes. Constructivists suggest that teachers change their own perceptions of knowledge and how people learn.

“Knowledge, then, could be treated not as a more or less accurate representation of external things, situations and events, but rather as a mapping of actions and conceptual operations that had proven viable in the knowing subject’s experience.” (Von Glasersfeld, 1995, p. 4) The interpretations people make about the world around them, along with past experiences build their foundations of knowledge. By combining formal knowledge with real world experience and new ideas or perspectives, the construction of new knowledge occurs.

Problem Statement

The purpose of this research is to explore the students’ perceptions of the learning experience in an American History II survey course using constructivist theories to guide the teaching. A case study by Cross and Steadman (1996) asked an important question: is it working? Frequently educators postulate on teaching and learning theories but fail to ask students if classroom practices help or hinder their learning. Are students gaining an understanding of the learning process in which the interpretation of historical fact is as important as the facts themselves? Can students construct the big picture by examining the small pieces of the puzzle through inductive reasoning and their own lens of reality? Can they learn to critically evaluate primary resources to improve their understanding of history thus building the larger story from discrete facts? As an educator, I am interested in the students’ perceptions and the meanings they assign to this learning environment.

Significance of Study

This study is significant in understanding the students' perceptions of a constructivist classroom. Much of the existing research regarding applied constructivism relates to methodology or assessments. A review of the current literature reveals that a study of the students' perception of an American History II survey course that utilized constructivist learning theories to guide the teaching methodology has not been completed. This study should help people "understand better what it is like for someone to experience that." (Polkinghorne, 1989 as quoted by Creswell, 1998, p. 55) The literature suggests more research is needed, and teachers as practitioners are the ideal researchers. "The place to develop constructivist praxis is in the classrooms with teachers and teacher educators who are interested in pushing theory and practice ahead." (Richardson, 1997, p. 12) Many educators believe that applied constructivism gives students the opportunity to think critically and construct their own knowledge. This study will help determine if student participants agree.

Constructivism construes learning as an interpretive, recursive, building process by active learners interacting with the physical and social worlds. It is a psychological theory of learning that describes how structure and deeper conceptual understanding came about, rather than one that simply characterizes the structure and stages of thought or one that isolates behavior learned through reinforcement. The challenge for educators is to determine what this new paradigm brings to the practice of teaching. (Fosnot, 1996, p. 30)

Constructivist learning theories are appropriate for teaching the diverse community college student body. Constructivists encourage students to build their own meaning from cultural experiences by placing value on border knowledge, the cultural knowledge that exists outside of the canon (Rhoads & Valadez, 1996). "Current demographic reports reflect the urgency of developing pedagogical practices which are culturally relevant.

Somehow constructivists must work to ensure that the epistemology upon which their pedagogical approaches are based interrupts and challenges the status quo and facilitates a critical analysis of inequality." (Vadeboncoeur, 1997, p. 35) As a teacher in a community college I am accustomed to working with diverse populations. Diversity among students within the classroom encourages acceptance, understanding, tolerance, and an appreciation for the differences. "Classroom settings with students from different cultures, abilities, needs, and interests provide rich learning opportunities, in part because they so clearly reflect one of the central tenets of constructivism: There is virtually an infinite variety of ways to know the world. The magnitude for student diversity underscore this point in ways impossible to ignore by even the most traditional of teachers." (Marlowe & Page, 1998, p. 137)

Research Questions

The central research question is how do college level history students experience a course in which constructivist learning theories guide the teaching methodology? The sub-questions are driven by the elements of constructivism as applied in the classroom.

1. How did you "construct" knowledge based upon background information, primary sources, guest speakers, secondary sources, discussions, and/or reflection papers?

How important was your own background knowledge (personal experiences) in constructing new ideas (learning more about history and historical methods)?

2. Describe the autonomy you experienced in choosing multiple research topics and setting your own pace (within the limitations of the semester) to produce the work.

How did you experience the freedom to choose the direction of your research and when you would complete it? How did this independence or autonomy affect you?

3. How did the use of primary source documents help you to understand multiple perspectives through the words of the people who were there? Did the events or people seem more real? How did the use of multiple resources affect your experience?

4. In the reflective journal assignments you were asked to classify, analyze, evaluate, predict, and/or synthesize many events and/or people into larger frameworks. How did writing reflective papers help you learn to analyze, synthesize, and/or evaluate historical facts? How did it change your understanding of historical methods?

5. Describe the benefits or detriments of participating in collaborative learning. (Was group learning good or bad? How did it affect your experience? Why?)

6. How did you experience intellectual growth based upon the conflict between your old ideas (ideas you had before) and the new ones (ideas that surfaced after considering other perspectives or events)?

7. In what ways were multiple perspectives shared? How did you experience looking at the world through multiple perspectives?

8. How did the pace of the learning, opportunity for discussion, and a demonstrated interest in you and your ideas affect your learning experience?

9. What was your experience with the types of assessment used in this class (reflective journals, portfolio, research projects, oral history, and essay exams)?

Limitations and Delimitations

A delimitation of this study is that it concerns only one community college American History II survey course.

The limitations of this study include researcher's biases, since I am the teacher and researcher in this study. My interpretations could be interpreted differently by other people teaching at their community colleges.

CHAPTER TWO

Literature Review

Constructivism is a psychological theory of learning. Constructivist theorists believe that learners build new knowledge and that knowledge does not exist independently from the learner. Therefore, constructivists do not accept epistemologies that state there is a real world of necessary knowledge. In other words, all learning is at the discretion of the learner and everything that is learned is filtered through the mind and experiences of the learner. Construction of new knowledge is accomplished by utilizing background knowledge, primary sources, discussions, real world experiences, experiential learning, and collaboration. As translated by Smith (1993), Piaget said, "Platonic, rationalist or apriorists epistemologies suppose themselves to have found some fundamental instruments of knowledge that is extraneous, superior to or prior to experience...such doctrines, though careful to characterize the properties which they attribute to this instrument...have omitted to verify that it was actually at the subject's disposal. Here, whether we like it or not, is a question of fact." (Piaget, 1970, p. 12)

Virginia Richardson (1997) defines constructivism as "a learning or meaning-making theory. It suggests that individuals create their own new understanding, based upon the interaction of what they already know and believe, and the phenomena or ideas with which they come into contact." (p. 3) Constructivists believe that there are multiple realities and all learning is through the lens of the learner. Meaningful learning only occurs when a student frames new ideas within his or her own larger schema. Piaget (1976), as quoted

by Wadsworth (1996), said, “A student who achieves a certain knowledge through free investigation and spontaneous effort will later be able to retain it; he will have acquired a methodology that can serve him for the rest of his life.” (p.147) Educators believe constructivist classrooms foster the acquisition of critical thinking and problem-solving skills. Piaget and Vygotsky differed in their theories on the process of constructing knowledge; however, they both recognized the necessity of active learning. They agreed that through construction, cognitive growth and intellectual change occur in the developmental process (Wadsworth, 1996).

Constructivist theories do not prescribe teaching methods; however, the literature suggests general principles or elements of constructivism that may be useful when applying the theories to classroom practice. I have listed ten elements of constructivist theories most frequently cited by educators who apply constructivism in the classroom. I chose these elements based on the literature regarding constructivist classroom applications and have credited the authors appropriately. I also used the available literature to define the elements of constructivism and how they will be used in this study. I have included a glossary in the appendix to define terms related to applied constructivism.

Elements of Applied Constructivism

One: Knowledge is Constructed

(Brooks & Brooks, 1993; Dewey, 1916; Dewey, 1938; Fosnot, 1996; Marlowe & Page, 1998; Noddings, 1990; Piaget, 1970; Richardson, 1997; Steffe & Gale, 1995; Von Glasersfeld, 1996; Vygotsky, 1978). Constructivist learning theory dates back to Plato; however, the modern learning theory of constructivism was reintroduced by Jean Piaget approximately sixty years ago (Von Glasersfeld, 1996). “The subject exists because, to put

it very briefly, the being of structures consists in their coming to be, that is, their being 'under construction' ... There is no structure apart from construction." (Piaget, 1970, p. 140) Knowledge cannot have the purpose of independent reality and each individual constructs her or his own way of knowing. It is different from the epistemological theory that people learn about the real world independent from them as Cartesian philosophers suggest. Von Glasersfeld (1996) wants to "dismantle the still widespread notion that conceptual knowledge can be transferred from teacher to student by the means of words. That is not to say that language is not important...but it does not transport meanings or concepts." (p. 7)

Noddings (1990) wrote, "Having accepted the basic constructivist premise, there is no point in looking for foundations or using the language of absolute truth. The constructivist position is really post-epistemological, and that is why it can be so powerful in inducing new methods of research and teaching." (p. 12) Constructivist theorists believe that teachers do not dispense knowledge, but provide opportunities for students to construct their own. The opportunities afforded to students in this study include learning discrete historical facts and weaving them into the montage of multiple realities that gives form to our history.

Fosnot (1989) defined applied constructivism in these terms, "constructivist teaching is a model that emphasizes that learners need to be actively involved, to reflect on their learning and make inferences, and to experience cognitive conflict." (p. 3) A constructivist classroom is not about telling students about historical events, people, or eras but in engaging them in intellectual activities that will help them construct their own knowledge. Deep understanding and concept development, or ownership of knowledge

should be the products of constructivist classrooms. Honebein (1996) said, “Self-directed learning is at the heart of the knowledge construction process.” (p. 18)

Von Glasersfeld (1995) explained that many teachers use the theories underlying constructivism unknowingly. “The best teachers have always known and used all of this information, but they have known and used it more or less intuitively and often against the official theory of instruction. Constructivism does not claim to have made earth shaking inventions in the area of education; it merely claims to provide a solid conceptual basis for some of the things that, until now, inspired teachers had to do without theoretical foundation.” (p. 15)

Two: Autonomy is Encouraged

(Brooks & Brooks, 1993; Dewey, 1916; Dewey, 1938; Fosnot, 1996; Gaff, 1997; Honebein, 1996; Knuth & Cunningham, 1993; Marlowe & Page, 1998; Vygotsky, 1976; Windschitl, 1999). Students are given control over what they study and how they will learn while teachers facilitate the process. John Dewey (1916) was critical of traditional methods of teaching. He said the curriculum “is taught as a finished product with little regard either to the ways in which it was originally built up or to changes that will surely occur in the future. It is to a large extent the cultural product of societies that assumed the future would be much like the past.” (Dewey, 1916, p.20) Our society is changing ever so quickly and students need to learn to work independently and to think critically about events. By encouraging students to get involved in their learning processes and to provide autonomy for choosing much of what and how they will learn helps students to develop these skills. “How many students were rendered callous to ideas, and how many lost the impetus to learn because of the way in which learning was experienced by them? How many acquired

special skills by means of automatic drill so that their power of judgement and capacity to act intelligently in new situations was limited? How many came to associate the learning process with ennui and boredom?" (Dewey, 1938, p 27) Learning can and should be enjoyable and stimulating. Ideally, teachers provide students with opportunities to learn. Teachers can "survey the capacities and needs of the particular set of individuals with whom he is dealing and must at the same time arrange the conditions which provide the subject matter or content for experiences that satisfy these needs and develop these capacities." (Dewey, 1938, p.58) Dewey (1916) perceived a progressive education to be more democratic in nature than a traditional education, which he perceived as autocratic. "His response to the rapid industrialization of his day was to propose a theory of education that emphasized the ability of people to interact with an experience to make sense of." (Gaff, 1997, p. 90) He believed that the purpose of education was to create in students the ability to think critically and solve problems. Dewey made these comments decades ago, but his words are still relevant today.

In schools, those under instruction are too customarily looked upon as acquiring knowledge as theoretical spectators, minds which appropriate knowledge by direct energy of intellect. The very word pupil has almost come to mean one who is engaged in not in having fruitful experiences, but in absorbing knowledge directly. Something which is called the mind is severed from the physical organs of activity." (Dewey, 1916, p.140)

J. Brooks and M. Brooks (1993) suggest that when students analyze topics independently, critical thinking and problem solving skills will improve. Students get involved in their own learning through active analysis. Passive reception of information, in which little original thought is required, is less desirable according to constructivists. Autonomy and self-motivation are necessary for learning. Students need to be

independent, raise questions, formulate answers, and check those answers for validity to foster critical thinking.

Moral development is fostered when students make decisions autonomously and learn to accept the consequences of their actions. Piaget (1932/1965) as quoted by DeVries and Zan (1996) said, "It is only by refraining from exercising unnecessary authority that the adult opens the way for children to develop minds capable of thinking independently and creatively and to develop moral feelings and convictions that take into account the best interest of all parties." (p. 108) Although Piaget was discussing children, autonomy in learning is important for adult learners also. Coercion should be kept to a minimum to encourage student autonomy and to aid in the development of intrinsic motivation (DeVries & Zan, 1996). "The constructivist belief that learners are capable of intellectual autonomy must coincide with the belief that students possess a large knowledge base of life experience and have made sense out of much of that they have experienced." (Windschitl, 1999, p. 752) Regard for students' knowledge and abilities encourage respect for people and ideas in the classroom.

Three: Primary Sources Ensure Authenticity

(Ankeney, Danzer & Newman, 1994; Brooks & Brooks, 1993; Del Rio, Nash & Vigilante, 1996; Marlowe & Page 1998; National Center for History in the Schools, 1996; Windschitl, 1999). Students use multiple sources to construct interpretations. Various primary resources, the core of any historical study, are used in the classroom. Guest speakers, panels, or field experiences provide students with quality primary source material. Census records, court records, demographic information, letters, diaries, journals, documents, and newspapers all give students a window into the past to aid them

in understanding events and eras. “Primary sources concretely present the uniqueness of each situation. An appreciation of this singularity, an awareness that each circumstance has special aspects, is one of the major contributions that the historical approach makes to human understanding.” (Danzer & Newman, 1994, p. 21) When students interpret primary source documents, they put the documents into the larger context. The pedagogical function of multiple primary sources is to teach students to analyze the content, assess the writer’s motivation, synthesize a variety of perspectives, and evaluate meanings. Constructivists use authentic means to foster learning; the use of primary sources encourages students to learn historical methods. As quoted by Danzer and Newman (1994), Thomas Jefferson said, “History, by apprising them of the past, will enable them to judge the future, it will avail them of the experience of other times and other nations; it will qualify them as judges of the actions and designs of men; it will enable them to know ambition under every disguise it may assume; and knowing it, it defeats its view.” (p. 23) Students gain deeper understanding through the use of primary source material; the goal is not to imitate but to create knowledge. Connections between ideas go beyond the initial experience to open new perspectives on familiar topics (Merleau-Ponty, 1962). The National Standards for History provided this insight:

True historical understanding required students to engage in historical thinking: to raise questions and to marshal solid evidence in support of their answers; to go beyond the facts presented in their textbooks and examine the historical record for themselves; to consult documents, journals, diaries, artifacts, historic sites, works of art, quantitative data, and other evidence from the past, and to do so imaginatively—taking into account the historical context in which these records were created and comparing the multiple points of view of those on the scene at the time. (The National Center for History in the Schools, 1996, p. 59)

Four: Cognitive Language is Used

(Bloom, 1956; Brooks & Brooks, 1993; Fosnot, 1989; Marlowe & Page, 1998; Windschitl, 1999). The use of language used in the classroom sets the tone for the class. The use of cognitive terminology like analyze or evaluate when giving assignments encourages students to use higher order thinking skills. Students learn at higher levels because they are actively involved in the process. Dewey (1933) described the mind as a verb, being active, rather than a noun like a sponge to be filled. Marlowe and Page (1998) described Dewey's (1938) ideas about learning, "for projects to be educative, they need to fit the student's interest, involve the student actively, have intrinsic worth, present problems that lead to new questions and inquiry, and involve a considerable time span." (p. 17) Active learning promotes higher order reasoning. "Constructivist framework challenge teachers to create environments in which they and their students are encouraged to think and explore. This is a formidable challenge." (Brooks & Brooks, 1993, p. 30)

Five: Learning is Student Driven

(Brooks & Brooks, 1993; Beaudin, 1995; Dewey, 1938; Honebein, 1996; Knuth & Cunningham, 1993; Lee & Caffarella, 1994; Vygotsky, 1978; Windschitl, 1999). Constructivist classrooms center on learners. Ideally, the classroom is an inviting place in which intellectual exchange takes place. Talking and listening are equally important in a constructivist classroom. Teachers have a high regard for student knowledge and experience. Student interest is stimulated as Brooks and Brooks (1993) said, "for students, schooling must be a time of curiosity, exploration, and inquiry, and memorizing information must be subordinated to learning how to find information to solve real problems." (p. 9) Constructivists provide students with opportunities to build their own knowledge. Windschitl (1999) said, "Students should experience the ideas, phenomena,

and artifacts of a discipline before being exposed to the formal explanations of them.” (p. 753) Students talk to one another to share ideas and solve problems. Vygotsky (1976) said social interactions are imperative for cognitive development so collaborative or cooperative learning is practiced. Vygotsky (1976) and Dewey (1938) believed social interactions stimulated the intellect. Constructivist classrooms encourage dialogue among students and with the teacher (Brooks & Brooks, 1993). Fosnot (1996) said discussions within the classroom encourage critical thinking. Students should be actively engaged in conversation and reflection (Fosnot, 1989).

Experiential learning is a component of constructivism. Lee and Caffarella (1994) suggested three guideposts for using experiential learning for adult learners. The first is to help the student to connect past knowledge with a new set of skills and ideas known as knowledge synthesis. The second is to shift the power base from the faculty to the student so the learner assumes more responsibility for what is learned and how learning occurs. The third guidepost is the transfer of learning from a theoretical to an application context. Dewey (1938) supported the concept of experiential learning because experiential learning is learning by doing and its core is action. When given the opportunity “students can think of themselves as creators of knowledge and move to becoming independent thinkers.”

(Beaudin, 1995, p. 3)

Six: Discussion and Reflection Aids Learning

(Boud, 1993; Brooks & Brooks, 1993; Fosnot, 1996; Honebein, 1996; Von Glasersfeld, 1995). Learners need adequate time to consider a question before answering, so students are encouraged to take time to formulate answers. Outside of the classroom there is more than one solution to any problem. There are multiple ways to look at life and

it is good intellectual exercise to try to see more than one correct answer when solving problems. Thus, students elaborate on their initial response to any question to refine or broaden their answers. “It is important to consider that whatever a student does or says in the context of solving a problem is what, at this moment, makes sense to the student. It may seem to make no sense to the teacher, but unless the teacher can elicit an explanation or generate a hypothesis as to how the student has arrived at the answer, the chances of modifying the student’s conceptual structures are minimal.” (Von Glasersfeld, 1995, p. 15)

Student inquiry should be encouraged. Brooks and Brooks (1993) quoted Bruner (1971) as stating "only through the exercise of problem solving and the effort of discovery that one learns the working heuristics of discovery; the more one has practice, the more likely one is to generalize what has been learned into a style of problem solving or inquiry that serves for any kind of task encountered—or almost any kind of task. Of only one thing am I convinced; I have never seen anybody improve in the art and technique of inquiry by any means other than engaging in inquiry." (p. 86)

A component of the constructivist learning theory is reflective thought. Boud, as quoted by Beaudin (1995) stated, “Reflection consists of those processes in which learners engage to recapture, notice and reevaluate their experience, to work with their experience, to turn it into learning.” (Boud et al., 1993, p. 9) Students are encouraged to take the time to stop and think about class discussions and try to make sense of multiple perspectives. “Reflection on learning is crucial for a deep approach. Methods which encourage reflection include the use of learning diaries, reflective journals...video and observers when learning skills.” (Deep Learning, Surface Learning, 1993, p. 10) Students

gain a deeper understanding when they reflect on what they have experienced or thought about. Fosnot (1996) said, "Reflective abstraction is the driving force of learning." (p. 29)

The autonomy students receive in a constructivist classroom promotes self-discipline. Clift, Houston, & Pugash, (1990) as quoted by Wilson (1996) said, "An important goal of instruction is to develop skills of self regulation – to become independent. Teachers should model reflective thinking throughout the learning process and support the learners in reflecting on the strategies for learning as well as what was learned." (p. 140) Metacognition as defined by Cross (1996) consists of two parts; an awareness of one's thinking and reflection on that process as well as learning methods to control the thinking process. Students think about how they think and learn how to use the process to their best advantage. Independent learning and reflective thinking are enhanced as a result of greater autonomy in learning.

Seven: Disequilibrium Provides Opportunities For Learning

(Brooks & Brooks, 1993; Fosnot, 1996; Hogan & Presley, 1997; Honebein, 1996; Piaget, 1970; Richardson, 1997; Vodeboncoeur, 1997; Von Glasersfeld, 1996; Vygotsky, 1978; Wadsworth, 1996). When one's schema is challenged cognitive growth occurs. All people have perceptions of the world and its realities. Piaget called viewing the world through one's own constructs, assimilation (see glossary). Piaget called events or ideas cause an individual to question his or her own worldview equilibration. The result is accommodation or change in worldview to adjust to new ideas. Piaget said the process of assimilation, equilibration, and accommodation does not necessarily occur in that order because the process of constructing knowledge is fluid and changing. Piaget said knowledge arises from actions and the agent's reflection on them (Von Glaserfeld, 1996).

Fosnot (1996) said, "Accommodation is comprised of reflective, integrative behavior that serves to change one's own self and explicate the object in order for us to function with cognitive equilibrium in relation to it." (p. 13) The process of accommodation, assimilation, and equilibration is in flux until equilibrium is established. Fosnot (1996) explained equilibration, "Assimilation as an active process of making meaning out of experience and accommodation as the changing of one's own thinking in order to strive toward equilibrium." (p.3)

Eight: Scaffolding Aids Learning

(Hogan & Pressley, 1997; Fosnot, 1996; Gould, 1996; Vygotsky, 1978).

Scaffolding helps students build their base of knowledge. Students work with peers or their teacher to generate questions and answers. but as their knowledge and experience increases, students begin to guide their own learning (Hogan & Presssley, 1997).

Vygotsky believed that learners developed higher psychological processes with some support and guidance. He talked about two zones, the zone of actual development (ZAD), what a learner could accomplish independently, and the zone of proximal development (ZPD), what a learner could accomplish with help. "ZPD is the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers." (Vygotsky, 1978, p. 86) Vygotsky (1978) said utilizing the zone of proximal development stimulated intellectual growth by giving learners difficult tasks they could not complete independently. Students needed help or guidance from a teacher or peer to move from one level to the next. Support for students, while in the zone of proximal development, is similar in concept to scaffolding.

Scaffolding helps students in "making connections, building mental schemata, and developing new concepts from previous understanding." (Hogan & Pressley, 1997, p. 8)

Scaffolding is intended to reduce students' frustration when they experience cognitive dissonance and to support them through the learning process. Bruner (1986) as quoted by Fosnot (1996) said scaffolding provides a student with "hints and props that allow him to begin a new climb, guiding the learner in the next steps before the learner is capable of appreciating their significance on his or her own. It is the loan of the teacher's consciousness that gets the learner through the zone of proximal development." (p. 132)

Cambourne (1988), as paraphrased by Fosnot (1996), described scaffolding as "raising the ante." (p. 21) Cambourne (1988) said teachers provide scaffolding by helping students focus ideas, challenging their ideas, encouraging clarification of ideas, and by directing students to new ideas for their consideration.

To meet these objectives teachers need to be willing to listen to students' questions and conundrums. "By focusing on puzzlements and contradictions, the teacher establishes the notion that ideas are complicated and worth of time and consideration and that each student is capable of formulating interesting ideas. Further, the teacher acknowledge that "not "knowing is a state that is important to live with—the state that most of us are in most of the time. (Julyan & Duckworth, p. 71, 1996)

Nine: Assessment

(Brooks & Brooks, 1993; Brandt, 1995; Dick, 1992; Kugelman, 1995; Marlowe & Page, 1998; Reeves & Okey, 1996). Assessment should be real and related to the daily assignments. Reeves and Okey (1996) quoted Perkins (1991) who said the three goals of education are to foster "retention, deep understanding, and active use of knowledge." (p.

191) Assessments frequently address narrow contexts of knowledge as measured by standardized tests (Reeves and Okey, 1996). Real assessment should be an ongoing process that connects directly with the material, is driven by students, and requires more of students than remembering what their teacher told them (Marlowe and Page, 1998). It is recommended that teachers ask students what form of assessment will best demonstrate their knowledge. "Ask students how they can best show you...what they've understood, what they need help with, what questions they have answered, and what new questions they have...make as little deal of it as possible. Otherwise the grade or the grade substitute becomes the point." (Kohn, 1993, p.5) Kugelmass (1995) said assessment should not be separate from instruction but woven into it. According to Oxford University's study entitled Deep Learning, Surface Learning (1993) assessments that award reproduction of knowledge encourage students to take a surface approach to learning. Assessment drives learning and surface learning is more likely to occur with objective tests. If students are allowed to choose the project or topic that will be assessed, the assessment is more relevant and authentic. Lin, Baker, and Dunbar (1991) described five elements of performance assessment: (1) focus on complex tasks, (2) practice critical thinking and problem solving skills, (3) require active student involvement, (4) explore multiple processes, and (5) encourage students to expend considerable time and energy. Reflective journals, essay writing, portfolios, and cooperative efforts on critical thinking questions are authentic methods of assessment. Multiple forms of assessment allows students to select the methods that best demonstrate their learning. "For the constructivist, the focus of the assessment should be on what has been constructed by the

student as a result of the learning situation. What has been constructed will likely be different from student to student.” (Dick, 1992, p. 93)

Ten: Multiple Perspectives

(Brooks & Brooks, 1993; Dewey, 1938; Greene, 1993; Honebein, 1996; Marlowe & Page, 1998; Rhodes and Valadez, 1996; Vadeboncoeur, 1997). Constructivists say learners construct reality based upon their own experiences. Vadeboncoeur (1997) stated, “Now more than ever we need to examine constructivist epistemologies with a lens sensitive to social inequalities and forms of oppression.” (p. 16) The changing demographics in this country encourage teachers to be more sensitive to issues of diversity. John Dewey (1938) said, “it is not necessary to say that experience does not occur in a vacuum. There are sources outside an individual that give rise to experience. It is constantly fed from these streams.” (p.40) It is appropriate for learners to base their knowledge on personal experiences. To ensure equal opportunity for all, Dewey (1938) believed access to education and institutional flexibility were necessary. Dewey proposed a holistic approach to education. He did not believe in standardized education for all, but that everyone should have the opportunity to develop to his or her full potential. The historic marginalization because of class, race, gender, or ethnic origin precluded many individuals from realizing his or full potential. Greene (1993) said, “If one human being is demeaned, if her or his family is delegitimized, crucial rights are being trampled on. This is partly because persons marked as unworthy are unlikely to feel good enough to pose the questions in which learning begins, unlikely to experience whatever curriculum is presented as relevant to their being in the world.” (p. 211)

Constructivist classrooms value every experience because it is from the learner's background that knowledge is constructed. Greene (1993) pointed out "there cannot be a standard of humanness or propriety when it comes to taking a perspective in this world. There can only be an ongoing, collaborative decoding of many texts." (p. 212) The growing diversity among community college students provides many opportunities for learning. "When we know that over half the students who attend community colleges are non-white, our view of community college pedagogy should change." (Rhoads & Valadez, 1996, p. xi) In a history classroom the construction of family stories expand cultural horizons. Vadeboncoeur (1997) stated, "When subjectivity is situated – recognizing alternative experience due to class, race, gender, sexual orientation, linguistic diversity, and other differences – the everyday lived experiences of students and teachers may be used as a base upon which to develop academic knowledge rather than to be replaced by academic knowledge. Finding a way to recognize and value the everyday lived experiences of students dramatically alters the options for pedagogical approaches." (p. 31-32)

Summary of Review of Literature

In this chapter I reviewed the various theories underlying constructivism and the methods in which it has been applied. While theorists differ in their opinions regarding constructivism, they agree that active student involvement strategies foster greater learning. Educators have considered the theories of constructivism and believe implementation of these strategies result in improved cognitive development for students.

CHAPTER THREE

Methods

Purpose Statement

The purpose of this phenomenological study is to describe the experiences of undergraduate college students enrolled in an American History II survey course using constructivist learning theories to guide the teaching methodology. The focus of this study is the students' perceptions of this learning environment.

Rationale and Research Approach

The rationale for this study is to understand the students' experiences in a classroom in which the teaching methods are guided by constructivist learning theories. According to Perkins (1992), "The larger lesson is that any pedagogy but especially constructivism, given its commitments, does well to include a vision of how students experience it. They are the ones who have to walk in the shoes we theorists, teachers and designers cobble together for them." (p. 164) Teacher practitioners might be interested in this study to help them decide whether similar methods would be beneficial in teaching their own disciplines.

This is a phenomenological qualitative study. Phenomenology, as defined by Deutsch (1997), is "a descriptive method that seeks to grasp the essential character of the objects experience; theory of consciousness that holds that all consciousness is of

something or other.” (p. 502) A phenomenological study captures what Edmund Husserl (1931) called the “essential character” of the experience through the eyes of the students.

Edmund Husserl created phenomenology as a branch of philosophy. He believed he had discovered the “indubitable foundation of understanding.” (Magee, 1987, p. 257) Husserl said, “for each one of us there is one thing that is undeniably certain and that is our own conscious awareness. Therefore, if we want to build our knowledge of reality on rock solid foundations that is the place to start.” (Magee, 1987, p. 254) Husserl’s thoughts on conscious awareness fit with the theories of constructivism. Phenomenology is an appropriate research method to discover what Husserl would call the students’ lived experiences. “Whatever was actually lived out—perceived, thought, imagined, remembered—is, in so far as it is a lived experience, free from doubt.” (Macann, 1993, p. 17)

Participants

The participants in this study were students enrolled in an American History II survey course at a Colorado community college. There were twenty-four students registered in this sophomore level course. American History II survey is not required to complete a degree at this college. Students were free to enroll in alternate sections of the course if they preferred a traditional delivery method. Students were a self-selected sample as it was their option to choose whether to take the constructivist course, another course, or enroll in another section. At the first class meeting of the semester, I told the students about my study on constructivism. I explained the teaching methods, both in the syllabus and in my discussion with them. Students were invited to participate in the research study. The students who chose to participate in the study would earn twenty-five

points extra credit for completing the research questionnaire. Students who did not want to participate in the study could receive an equal number of extra credit points if they chose a content related assignment instead. Students also had the option of remaining in the class but not providing data for the study. The mean age of community college students at this institution was twenty-eight years old. Methods consistent with constructivism were used for this class.

Researcher's Point of View

I presumed students would respond favorably to the constructivist methods used in this class. I am an experienced history teacher who has taught at the college level for more than ten years. The majority of students with whom I have worked enjoy active class participation. However, education is not a one-size fits all proposition and passive learners may prefer lectures. The literature suggests that a constructivist classroom may feel overwhelming to students because the responsibility for learning is theirs. All students are not accustomed to playing such active roles in the classroom. Some students are uncomfortable with constructivist methods and are critical of the experience and other students question why they should formulate answers for themselves when teachers could give them the "right" answers and save them time and energy. Perkins (1992) said of Piaget's model, which is anomaly driven (cognitive dissonance), or conflict deferred in which students bracket their previous ideas to explore new ones, that students may "have a hard time with this path." (p. 162)

Piaget, Vygotsky, Dewey, Von Glasersfeld, Fosnot, Brooks and Brooks, Steffe and Gale, and others suggest that the application of constructivist theory produce increased learning and independent thought. When teachers transmit correct answers to

students, critical thinking and problem solving skills are not fully developed in students. Dewey (1938) said, “there is no defect in traditional education greater than its failure to secure the active cooperation of the pupil in construction of the purposes involved in their studying.” (p. 67) Students should practice critical thinking and the application of knowledge or else the educational process has failed (Dewey, 1916). Critical thinking skills can be applied in all aspects of life. Moustakas (1994) said of a college promoting critical thinking, that “throughout the educational program the emphasis and focus is on individual knowledge, freedom to explore and make choices, and the validity of personal vision, discovery and self assessment.” (p. 62) John Stuart Mills’ (1956) On Liberty, elaborated the point

Nobody denies that people should be so taught and trained to know and benefit by the ascertained results of human experience. But it is a privilege and proper condition of a human being to use and interpret experience in his own way. It is for him to find out what part of recorded experience is properly applicable to his own circumstance and character...The human faculties of perception, judgement, discriminate feeling, mental activity, and even moral preference are exercised only by being used. (p. 70-71)

Independent thought is crucial in student and individual development. Students should "enter into a process of authentic self-presence, thinking and choosing as a way of discovering and knowing the nature and meaning of significant experiences in identity formation and selfhood." (Moustakas, 1994, p. 63)

Procedures and Methodology

The pedagogical methods of constructivism centered on the student. Students constructed knowledge based upon life experiences, textbook readings, independent research, primary sources, and information received in class. An American History II survey course lends itself well to this type of learning because of the contemporary

primary sources and guest speakers willing to share their experiences with students. I facilitated the process as students constructed interpretations of history based upon multiple resources. We used a primary source book entitled Enduring Voices by Lorence and a secondary source book entitled The American Promise Volume II by Rourk, Johnson, Cohen, Stage, Lawson, and Hartmann. Both textbooks are arranged chronologically, so the course material was presented in a structured, organized, and familiar pattern. Students were required to read and discuss assignments from both books. Historic facts were not open to interpretation, but the cause and effect of people, actions and events were subject to interpretation. Students read primary sources from divergent perspectives and constructed meaning based upon readings, class discussions, and their own background knowledge. In addition to the written word, we had one guest panel, one individual speaker, and each student interviewed one person about his or her life as an oral history resource. Students listened to the speakers (primary sources) and synthesized what they heard with what they knew and read.

Students constructed “big ideas” (Fosnot and Schifter, 1993) which were “learner constructed central organizing principles that can be generalized across experiences and that often required the undoing or reorganizing of earlier conceptions.” (Fosnot, 1996, p. 30) Perhaps an analogy may be helpful in understanding what is meant by building big ideas or the big picture. Think of building a three-dimensional jigsaw puzzle without the box top to use as your model. You have many small pieces that do not have much significance by themselves, but as you combine them you see small pictures take shape. Sometimes what you think will develop as the bigger picture forms occurs, and sometimes it does not, but eventually as the smaller pieces fit together the big picture emerges. The

same idea applies in constructing knowledge. In other words, students constructed big ideas or the big picture from smaller pieces of information. As more information or perspectives were added, the bigger picture took on greater dimension and breadth; thus leading to a more complex and global interpretation of history based upon multiple resources and perspectives. Students were encouraged to reconsider old ideas and reorder their previous thinking. An example of this was when students viewed the 1960s. I asked students to brainstorm about what they knew about the 1960s. At the outset we hear many different perspectives on the topic. Students in my class mentioned peace and love; hippies; Students for a Democratic Society; the war in Vietnam; ROTC; Woodstock; Kent State University; Richard Nixon; Democratic convention of 1968; assassinations of John Kennedy, Robert Kennedy, and Martin Luther King, Jr.; Peace with Honor; the Silent Majority; and a widespread use of illegal drugs. The ideas and people represented in this list were important in a historic study of the era, but were they alike? Would we hear the same story from all of these voices? Did the students think that was likely? We read primary resource documents presenting the viewpoints of many of the people or groups involved. Each story was unique, each story was relevant, and each story presented a microcosm of what occurred in the 1960s. However, when learning history, a microcosm is inadequate. Students need to learn to construct the bigger picture by taking the smaller pieces of information and making the whole qualitatively larger than the sum of its parts.

When students needed help to synthesize and evaluate the information into the bigger picture, I provided support with scaffolding or a similar process Vygotsky (1978) called the Zone of Proximal Development (ZPD). I facilitated when students needed guidance to comprehend new information or to present additional perspectives. Smith

(1993) quotes Piaget regarding the intellectual progression that occurred through scaffolding. Students followed a structural model “construction is normative, construction occurs through action, action has the priority over consciousness, construction is a search for coherence, and construction occurs in the epistemic subject.” (p. 39)

Elements of Constructivism As Implemented In This History Class

One: Constructing Knowledge

I introduced students to the theories underlying the methods used in this class. Students received a working definition of constructivism as well as the course syllabus and requirements at the first class meeting. The elements of constructivism are closely related, so there was some overlap in implementation.

Most classes began with exercises to activate pre-existing background knowledge, often brainstorming with the entire class about an event or era. I asked open-ended questions for class discussions, or provided critical thinking questions for small groups, which were effective starters. The plan was to briefly review the ideas discussed in the previous class and transition into new materials for the current class. At the end of each class, the topic for the day was briefly recapped and preview of the next class presented.

Two: Student Autonomy

Constructivists believe students are more engaged with the material if they have some control. This transitioning of power from the teacher to the student was gradual. Students seemed surprised at the autonomy they had during this course. Based upon my observations students took advantage of the freedom to choose topics of interest to research.

Students were required to choose four research projects and present the information to the class during the semester. The selection of research topics was at the student's discretion. Time frame for each presentation was to fit within the general chronology of the class, but the specific dates for their presentations were at the students' discretion. At least two of the research assignments had to be oral presentations; the other two could be either oral or written assignments. Discussion and questions from other students and from me followed each presentation. To help students select topics they were asked: What are you interested in? What do you want to know about? What knowledge do you want to share with your peers? If the students did not know what they wanted to research, I provided them with ideas and resources.

Each student kept a reflective journal as an ongoing writing assignment. Students wrote ten short reflective entries on the topics of their choice as critical thinking exercises. Students also completed an oral history assignment. Students could choose the topic, the interviewee, and approximate due date.

Three: Primary Sources

Primary sources are the core of historical study. Historical facts were important, but also important was the process of critically evaluating documents to broaden the appreciation for multiple perspectives in any given situation. For example, students read secondary source materials (textbook) about the social implications of the Great Depression. This provided them with general background knowledge of the era and a class discussion followed. Then they read primary source documents that represented multiple perspectives or interviewed people who lived through the Great Depression to make the experiences seem more real. They found resources from people who lived on farms, in the

cities, were wealthy, or homeless. Each interviewee or author had a valid and true representation of the experience as it impacted them; thus, each view was unique to that individual and each experience fit into the larger story. The use of primary resources helped students appreciate multiple perspectives and breathed life into the past.

Examples of the primary source material used, in addition to human resources for contemporary accounts, included census information, advertisements, letters, journals, diaries, newspaper accounts, government documents, song lyrics, wills, photographs, and court records. Documentary footage was presented via videos for visual interpretations of events or eras. Students brought in historical artifacts to share with the class when they reported on their research projects, thus providing their peers with another look at historical methods and resources.

As part of the oral history assignment, students located an individual who was alive during World War II to learn about his or her experience during the war. Students were instructed to request an interview with the person and complete some background research prior to the interview. The object of the assignment was to make history come to life by talking with someone who experienced what was being studied in class. Students shared their research with the class when it fit into the course chronology. This assignment helped students learn through practical application how history is written. There was flexibility in the oral history assignments for students who did not find anyone to interview from the World War II era.

Four: Cognitive Language

Constructivists believe that use of cognitive language in the classroom shifts the focus from the teacher to a student driven learning environment. Marlowe and Page

(1998) said a change in language in which students are asked to evaluate, analyze, or synthesize encourages students to become more actively involved in the learning process.

Reflective journal assignments were to include a recitation of facts plus the students' interpretation of the events. Students wrote about what occurred, but also what they thought about the event or era. They had to process the information well enough to write a narrative that stated the facts, what the facts meant, and why it mattered. To complete these journal entries, students reflected on what they learned. They evaluated, synthesized, and analyzed information from the text, lecture or discussion, primary resources, and student presentations to produce a one to two page paper. Student evaluation and analysis of the information was important, as primary resources seldom agree.

Methods for this element of constructivism are reflective journal writing, research assignments, and classroom discussion. Active reflection improves learning. "As meaning makers humans seek to organize and generalize across experiences in a representational form. Allowing reflection time through journal writing, representation in multi-symbolic form, and/or discussion of connections across experience or strategies may facilitate reflective abstraction." (Fosnot, 1996, p. 29)

Five: Collaborative Learning

Critical thinking questions required collaboration among students. The difference between cooperative and collaborative learning is the amount of teacher control (Cross and Steadman, 1996). Cooperative learning is most commonly associated with K-12. The teacher organizes the groups, gives each individual a responsibility within the group, monitors the group, and grades the group as well as individuals. Collaborative learning is

commonly used in higher education. The students are more autonomous within the group. They share ideas and answer questions, but the division of the work and individual accountability is left to the group to control. Collaborative learning is more difficult to implement because it assumes responsibility within the group. All students were expected to share the work equally when answering questions collaboratively, whether or not they spoke for the group. Collaborative learning assignments “more prevalent in higher education settings, emphasize a shift in authority from teacher to students. In collaborative learning groups student roles and tasks are less structured by the teacher. Collaborative learning promotes peer-governed relations at the expense of accountability.” (Cross & Steadman, 1996, p. 174)

The following questions are examples of critical thinking questions that were assigned to collaborative groups. What were the causes of the Cold War? What were the effects? How did it impact average American citizens? Student responses should have incorporated fact with interpretation. These questions address historical facts (causes of the Cold War) but also encourage students to interpret the effects or impact on the citizens. Some responses might have been an arms race, massive foreign aid to Western Europe, the Red Scare, Korean police action, McCarthyism, fear of communism, Berlin Blockade, Vietnam, Cuban Missile Crisis, or any number of other direct effects of the Cold War. Students decided for themselves the important effects of the Cold War by examining primary resources that represented multiple perspectives.

Another form of collaborative learning in this class was research shared by peers. Students shared information with classmates and answered any questions that followed the

presentations. All students were actively involved in research, so when peers raised questions, other students could answer their questions based upon their own research.

Six: Discussion and Reflection

I observed that most of the students were very willing to share their research, their ideas, and to contribute to class discussions. It appeared that students were quite comfortable asking questions and making comments throughout the class. They were allowed adequate time to think before answering a question. Students often responded with brief answers during class discussions because developing ideas takes time. I asked students to elaborate on their thoughts and gave them time to formulate answers. Students reported on their research almost every class meeting. Peers asked questions and student driven discussions ensued. Students reflected on discussions, presentations, and readings to write short journal entries.

Seven and Eight: Disequilibrium and Scaffolding

Piaget's assimilation, equilibration, and accommodation are important aspects of this element. It was expected that students would bring some erroneous information to the classroom with them. Dispelling those notions was not always easy. Students appeared to feel a sense of discomfort when they examined multiple perspectives that made them question ideas and opinions they had previously held. An example of multiple perspectives is how any story changes because of the perspective of the storyteller. Laborers, factory owners, federal courts, and the government officials would tell different versions of labor relations during the late 19th century in the United States, even though each group would be telling about the same event or era. The laborer would tell the story of living in company towns, receiving little compensation paid in company script, being

exposed to environmental hazards, working under dangerous conditions, working twelve to fourteen hours per day, six or seven days a week, and the like. Factory owners like Rockefeller and Carnegie would describe their business practices as good business because they accrued huge fortunes. The workers were considered cogs in a machine to be used and discarded when broken. The court system used injunctions to force laborers back to work or to break strikes that impeded the factory owners' right to make money, because they believed they were justified in doing so. The state and federal government officials believed unrestrained big business was synonymous with a strong economy and therefore a strong country. When workers tried to organize to protect their interests, business with the full support of the government and the court system denied them opportunities through the use of strike breakers, militia, and court injunctions. Who was right? Who was wrong? It depended upon one's perspective. Students practiced critical thinking skills when they viewed these multiple perspectives. The study and discussion of documentary evidence surrounding labor relations encouraged students to explore the multiple realities and the complexities of history in the formation of new constructs. Students reconsidered their old ideas (America was the land of opportunity) when new perspectives were introduced (although most immigrants fared better in the United States than in their native countries, big business supported by the government, took a much larger share of the wealth that was produced). This transition from one schema to the next is an example of the construction of knowledge.

Vygotsky (1976) said students learn best when they are assisted by teachers or more accomplished peers to complete tasks they cannot complete independently. He called this the zone of proximal development (ZPD). Working in peer groups, reviewing

primary sources from disparate perspectives and answering related questions are a good example of applying his theory. Students helped each other along by lending their individual insights to the discussion at hand.

Scaffolding assisted students to transition from an area of incompetence to one of competence. The idea was to create a challenging and supportive atmosphere. The assignments were challenging enough to stretch the students' abilities, but support was provided so students could successfully attain their goals. An example of this was the oral history assignment. The task was sufficiently challenging that students needed guidance, but questions were answered, suggestions were made, and students completed the task at hand.

I talked to the students for a portion of each class and led them in discussions about the most important historical facts in a specific era. I distributed outlines or chronologies that included all of the important events that occurred in a given era so when students added their research reports on specifics, the students would not get lost in the details and lose sight of the bigger story.

Nine: Authentic or Real Assessment

Students were assessed by authentic methods. The assignments were embedded into the course; they were not artificial or arbitrary. The course assessments consisted of the day to day work of the class and two essay examinations. The essay examinations were multifaceted and asked students to blend facts and interpretations into cogent narratives. Each student was responsible for sharing several research assignments and one oral history assignment with the class. A reflective journal with a minimum of ten entries was used to keep students thinking and recording their thoughts. A portfolio was required

on the last day of class that included a table of contents, an introduction, a conclusion, and all of the work that was completed for the class.

Ten: Multiple Perspectives

Students used different types of resources for coursework. Examples of resources included primary sources (documents), secondary sources (textbook), guest speakers (verbal resources), independent research (research topics), lecture (passive learning), collaboration (group work), and class discussions.

The value of multiple perspectives was aptly demonstrated by the diversity of the students enrolled in the class (study participants). The cultural, ethnic, and racial composition of the class was diverse. Students from Europe, America, Indonesia, and Asia were enrolled in the course and shared their perspectives during classroom discussions and presentation of individual research assignments. Hearing the life stories, through oral histories, gave each student a fine opportunity to learn that each individual from differing backgrounds has wonderful first hand stories to tell. Each of these stories lends new perspectives to the study of history.

Trustworthiness

Glesne (1999) used the term validity to describe the verification process used in qualitative research. It is not validity in a numerical sense, as is used in quantitative research, but a method of establishing trustworthiness in a qualitative study. She used guidelines suggested by Lincoln and Guba (1985) and Creswell (1998) to address the issues of validity and trustworthiness. The first recommendation was prolonged engagement and persistent observation. I spent 15 weeks with the participants during scheduled class times and office hours. I also met with several students at the end of the

semester for focus group discussions or individual interviews. Triangulation by using different sources of data collection and multiple methods is the second recommendation. Student essays, student interviews, my observations, and class documents provided data for the study. Glesne also recommended clarification of any research bias. I stated my biases and thoughts about the study at the time of this proposal. I also shared interviews and drafts of results with participants to see if my construction was representative of their experience.

Essay and Interview Questions

Patton (1990) suggested the use of open-ended questions that described the experiences, feelings, behaviors, opinions, and senses of the participants. “The way the question is worded is one of the most important elements determining how the interviewee will respond.” (p. 295) Patton (1990) suggested the use of detail oriented “probes” (p.325), which were implemented during the interviews to provide depth and detail to the descriptions. As a phenomenological study, the design was emergent so the questions and answers flowed during the interviews. In addition to interviews to gather data, all of the students in the class were invited to participate in the study by answering the following questions in an essay format. The central research question was: What was the essence of a student’s experience in a college level history course taught using constructivist methods?

1. How did you “construct” knowledge based upon background knowledge, primary sources, guest speakers, secondary sources, discussions, and reflection papers? How important was your own background knowledge (personal experiences) in constructing these big ideas (broader more global points of view)?

2. Describe the autonomy you experienced in choosing multiple research topics and setting your own pace (within the limitations of the semester) to produce the work? How did you experience the freedom to choose the direction of your research and when you would complete it? How did this independence or autonomy affect you?

3. How did the use of primary sources help you to understand multiple perspectives through the words of the people who were there? Did the events or people seem more real? How did the use of multiple resources affect your experience?

4. In the reflective journals you were asked to classify, analyze, evaluate, predict, or synthesize information. How did writing reflective papers help you learn to analyze, synthesize, and/or evaluate historical facts?

5. Describe the benefits or detriments of participating in cooperative learning. (Was group learning good or bad? How did it affect your experience? Why?)

6. How did you experience intellectual growth based upon the conflict between your old ideas (ideas you had before) and the new ones (ideas that surfaced after considering other perspectives or events)?

7. Explain in what ways multiple perspectives were shared. How did you experience looking at the world through multiple perspectives?

8. How did this slower paced opportunity for discussion and interest in student ideas affect your learning experience?

9. What was your experience with the types of assessment used in this class (reflective journals, portfolio, research projects, oral history, and essay exams)?

Data Gathering

I gathered data through student participant essays and student interviews at the end of the semester. The final week of the semester in which the study occurred, I gave each student a series of open-ended essay questions they could opt to answer to receive extra credit. Each student received two pages of questions: one page consisted of open-ended questions related to my study and one page was discipline specific essay questions. Students had the option of completing either set of questions the study questions to earn twenty-five points extra credit. A colleague collected the essays, briefly reviewed them, and asked the students who completed the extra credit questionnaires to sign their names on a sheet of paper. I awarded the extra credit on the basis of the sign up sheet. After grades were posted, I interviewed five volunteers and then I reviewed the essays.

I followed Husserl's (1931) directive to "get back to the things themselves" to begin the analysis. I began the analysis by interviewing volunteers and then reading the essays. Husserl (1931) emphasizes how important deep, rich description is. "The decisive factor lies before all in the absolutely faithful description of that which lies before one in phenomenological purity, and in keeping at a distance all interpretations that transcend the given." (p. 262) I read the essays and listened to the taped interviews to hear the students' voices. Moustakas (1994) said, "Husserl was concerned with the discovery of meaning and essences in knowledge. He believed that a sharp contrast exists between facts and essences, between the real and the non-real." (p. 27) Husserl (1931) introduced the notions of noesis and noema in his book, Ideas. He said, "the noesis constitutes the mind and the spirit, and awakens us to the meaning or sense of whatever is in perception, memory, judgement, thinking and feeling." (p. 249) The noema refers to the physical.

Ihde (1977) elaborated to distinguish between the two. "Noema is that which is experienced, the what of experience, the object-correlate. Noesis is the way in which the what is experienced, the experiencing or act of experiencing the subject-correlate." (p. 43)

The importance of understanding noesis and noema is stressed by Moustakas (1994) who said, "Ultimately, to arrive at the essence of a phenomenon, I must unify the noema and the noesis, even when my focus is basically external or basically internal. The interweaving, the rhythms of noema-noesis creates a harmony and an integral understanding of an experience." (p. 74)

I organized the data from multiple sources to construct the learning experience. I gathered data, read and re-read data, reflected and inductively answered the research questions. After completing the analysis of the data, I asked several participants to review the results to insure the essence of their experience was captured (Moustakas, 1994).

CHAPTER FOUR

Analysis

Introduction

I began this section on analysis by reiterating the characteristics that define a qualitative study (Creswell, 1994). This qualitative study occurred in a natural classroom setting. I did not have a pre-established hypothesis and although I presumed they would enjoy the methods used in the classroom that were consistent with constructivism, I was not sure how students would perceive their experiences. I collected and analyzed the data to create a narrative that described the phenomenon. I used language rather than numbers in telling the story. The students' perceptions of a constructivist classroom experience were the focus of this study. In this qualitative design, data were studied and inductive reason built the narrative. The data consisted of student voices telling their stories. Since this was a qualitative study the data could not be quantified in the conventional way (Creswell, 1994). Validity and reliability in a quantitative sense were not appropriate to this research. The verification process suggested by Creswell (1998), Lincoln and Guba (1985), and Glesne (1999) was used to increase trustworthiness as was described in chapter three. I also use Miles and Huberman (1994) suggestions for confirming findings to test my conclusions later in chapter four.

I used the phenomenological analysis model presented by Patton (1990), which was based on the work of Douglass and Moustakas (1984), as a guide. The process used in the analysis included Epoche, phenomenological reduction, imaginative variations, and structural synthesis (Patton, 1990; Douglass and Moustakas, 1984; Moustakas, 1990).

This phenomenological analysis began with Epoche or a setting aside of any prejudgments (Husserl, 1931). Ihde (1977) as quoted by Patton (1990) said, "Epoche requires that looking precede(s) judgment and that judgment of what is 'real' or 'most real' be suspended until all of the evidence (or at least sufficient evidence) is in." (p. 407) The Epoche process eliminated pre-judgement of the data before it was all read. Patton (1990) explained, "The process of Epoche epitomizes the databased evidential and empirical (versus empiricist) research orientation of phenomenology." (p. 408)

Phenomenological reduction, the second step in analysis, is the description of what was seen in the Epoche process. Patton (1990) said, "In this analytical process, the researcher brackets out the world and presuppositions to identify the data in pure form, uncontaminated by extraneous intrusions." (p. 408) Bracketing was Husserl's (1931) term. To paraphrase Denzin (1989) as quoted by Patton (1990), bracketing involves taking the data apart and examining each element to find the story, interpreting a meaning, reviewing the meaning, and proposing a definition. Moustakas (1994) quoted Husserl (1931), "Let us reduce till we reach the stream of pure consciousness." (p. 93) Also part of the phenomenological reduction step is horizontalization. Moustakas (1994) defined it like this: "When we horizontalize, each phenomenon has equal value as we seek to disclose its nature and essence." (p. 95) Moustakas (1994) explained that horizons are ever changing and our perceptions of them change so during horizontalization the data are examined

giving equal weight to all perceptions. Redundant or superfluous data were removed later so only relevant themes remained and were clustered. The final step in phenomenological reduction was to produce “a textural description of the experience.” (Moustakas, 1994, p. 96) A textural description retells the story without revealing the essence of the phenomenon.

The next step in Moustakas’ (1994) research process is called “imaginative variation.” During this step researchers examine the data in a number of ways and directions to find other possible interpretations. This step involved exploring multiple realities as they related to the phenomenon.

The development of a “structural synthesis” was the final step in the research process. It was here that the essence of the experience was disclosed. The common truths were synthesized from the interviews, focus group, and student essays to tell the story through student voices. I also attributed other possible meanings to the experience based upon the data. The detailed process I used when implementing this model of phenomenological analysis is included in the following sections: establishing Epoche, phenomenological reduction, imaginative variation, and structural synthesis.

Since I was the teacher and the researcher in this course I was concerned that the data might be compromised. To mitigate that possibility, students were assured that their participation in the study would not have an adverse affect on them or their grade for the course. To ensure the integrity of the study, student essays were collected by one of my colleagues on the last day of class. She asked students to sign in when they turned in their essays so I could award extra credit. I did not see the essays or interview student

volunteers until after grades were posted, so students could complete the essays honestly and without fear of reprisal.

Twenty of the twenty-four enrolled students answered essay questions to provide data for this study. One student opted to complete the content related questions rather than the study questions. All participating students were awarded extra credit points. Five students volunteered to be interviewed to share their perceptions of a constructivist classroom, which added more dimension and depth to the data. At the end of each quote is a parenthetical number (essay responses) or parenthetical initials (student interviewees) that relate back to the individual student. Student quotes are the raw data from which the story emerges to “get back to the things themselves” as Husserl (1931) directs.

Some observations about the participants in the study may be helpful in interpreting their comments. Students #8, #9 and #16 said in their essays that they liked certain aspects of the class, but that constructivism was too much work. They liked traditional methods of teaching and learning because it was easier or they were more accustomed to it. Students #1, #2, #3, #4, #5, #6, #7, #10, #11, #12, #13, #14, #15, #17, #18, #19, and #20 said they learned more, enjoyed the class, and were successful in completing assignments at the appropriate times. The five student interviewees also liked most aspects of constructivism.

It is uncommon to use so many voices in a phenomenological study; however, I was not convinced that the exclusive use of student interviews would give me all of the information I wanted. It seemed to me that the students who would volunteer to be interviewed were the students who were most successful with this teaching methodology. I wanted the perceptions of as many students as possible so I could construct the story

based upon a broader representation of student voices. It occurred to me that students who had anonymity through essay writing would be more honest in their appraisal, even if that meant being very critical of the learning experience. Using both sets of voices I had depth from the interviews and breadth from the essays, thus answering my research question more thoroughly.

Brief Review of the Elements of Constructivism as Implemented in This Classroom

The learner constructs all knowledge. Students were introduced to constructivism as a theory of learning. I explained the importance of background knowledge in constructivism and activated pre-existing background knowledge at the beginning of each class. The methods employed included brainstorming, short reading assignments, critical thinking questions, and group discussions.

Student autonomy was encouraged. Students were required to complete assignments throughout the semester. However, students could choose research topics and approximate due dates. Ten entries in a reflective journal were required. Again, students had autonomy to choose any topic to write about and control over the due dates based upon the topics that were chosen. Students were free to choose an interviewee and specific topic for the oral history assignment.

The use of primary resources ensured authenticity. The primary source book included documents like letters, newspaper clippings, Congressional reports, wills, court records, census information, photographs, and advertisements. In addition to written primary source documents, each student interviewed an elder as an oral history source. Guest speakers were also considered primary resources. Students brought historical

artifacts to class that were used as additional resources. Primary resources provided students an active approach to learning the discipline.

Bloom's (1956) language of higher order thinking regarding the cognitive domain was considered when making assignments. Students evaluated, synthesized and analyzed what they learned in class and in their readings by writing in reflective journals.

Evaluating primary resources was an exercise in critical thinking because primary sources seldom agree. Writing was an integral part of the course. Students were not passive receptors of information. The assignments were primarily active and the classroom work revolved around students, forcing them to take a more active role in their own learning. Active inquiry was expected and supported. Students completed research assignments on an ongoing basis and presented their research to the class. Other students asked questions which generated student driven discussions.

I encouraged students to share ideas. Collaborative learning helped shift focus and authority from the teacher to the students. Students received critical thinking questions to answer collaboratively in formal groups. Students produced research on an ongoing basis. The sharing of ideas, artifacts, and stories were ways in which collaborative learning occurred.

Knowledge was constructed with adequate time for discussions and reflection. During each class period I led students in discussions about key events and people. I embedded critical thinking questions into the text of my topical overviews to encourage interaction. When students were asked specific questions, they were given adequate time to formulate answers. Disequilibration and scaffolding aided students in making connections and learning. Primary resources representing multiple perspectives were used

throughout the semester. The use of multiple perspectives encouraged students to question their schemata. Reading or talking with a peer regarding different perspectives might have caused disequilibrium. Disequilibrium helped students construct new knowledge and challenged them to refine their thinking. To provide scaffolding or intellectual support as students considered new ideas I talked to them about different perspectives. I provided outlines or chronologies of the most important historical events for the eras we discussed. Concrete linear information was helpful when many previously held ideas were being reconsidered.

Assessment was authentic. The assessments were embedded into the course and consisted of the day to day assignments students received. This included research assignments, reflective journal entries, and oral histories. In addition to these requirements, students were required to take two essay exams. The essay tests held students accountable for the information discussed in class and in their reading assignments. On each exam students were given a number of essay questions from which they could choose several to answer. A portfolio showcasing all of their work for the semester was required at the end of the semester.

I encouraged sharing of multiple perspectives. There was diversity of age, race, nationality, and interests among the students enrolled in the course. Throughout the course individual students represented different perspectives during class discussions. World War II, an international conflict, was a way of further emphasizing the differences in perspectives. Primary resources were used to illustrate multiple realities also.

Establishing Epoche

I began this phenomenological analysis by establishing Epoche. Although I presumed students would enjoy learning in a constructivist classroom, I did not have an a priori hypothesis. I divorced myself from any pre-existing notions I had about the students and the classroom experience to hear what they said about it after the fact. It was my intent to accept the students' perception of their experiences at face value without adding meanings of my own. Moustakas (1994) said, "In the Epoche, no position whatsoever is taken; every quality has equal value. Only what enters freshly into consciousness, only what appears as appearance, has any validity at all in contacting truth and reality." (p. 87)

Epoche encourages looking at things in a new way. "In the Epoche, we set aside our prejudgments, biases, and preconceived ideas about things." (Moustakas, 1994, p. 84) I observed the class throughout the semester and had ideas about how the students perceived the experience, but I left those thoughts behind me as I entered into the process of Epoche. I did not begin to analyze or judge the participants' experiences until they told me what they thought. I did not formulate my opinions until after reading all of the essays and completing the interviews with the student volunteers. Each student voice was given equal value as I reviewed the data. Moustakas (1994) says Epoche is a difficult process. "The challenge is to silence the directing voices and sounds, internally and externally, to remove from myself manipulating or predisposing influences and become completely and solely attuned to just what appears, to encounter the phenomenon, as such, with a pure state of mind." (Moustakas, 1994, p. 88) I interpreted meaning from the data. I reviewed the data by spending time with it, giving it my full attention, and reflecting on my conclusions. Schmitt (1968) as quoted by Moustakas (1994) said, "It is I who must decide whether the claims to reality of the objects of experience in particular, and of the

world in general, are valid claims. I discover that whatever has sense and validity, has sense and validity for me." (p. 60) I entered into the process of Epoche with Moustakas' (1994) words in my mind. "Although the Epoche is rarely perfectly achieved, the energy, attention and work involved in reflection and self dialogue, the intention that underlies the process, and the attitude and frame of reference significantly reduce the influence of preconceived thoughts, judgements and biases."

(p. 90)

Phenomenological Reduction

Phenomenological reduction began with bracketing. I examined all of the data on their own merit to find meaning. At the same time, I viewed all of the data equally weighting the perceptions to include the process of horizontalization in seeking meaning. As I read and re-read the responses from each person, I began to understand each individual's perceived experience as a student in a constructivist classroom. Although ideas emerged with each person, it appeared that students liked certain elements of applied constructivism and disliked other elements. Student comments are included in the discussion that follows. I coded the data within the specific cases or elements, looking for emerging themes and then completed a cross case analysis using the software HyperRESEARCH™ as a tool. Upon completion of the coding I began to cluster themes together, removing repetitious data.

The following themes, many of them consistent with the elements of constructivist theory, emerged while reviewing the data. The introductions include my comments and analysis. The process I used in this analysis was inductive, but the presentation of the

information seemed clearer if I introduced the themes and then supported them with student voices.

Constructing Knowledge

Some students were confident in their background knowledge and their ability to construct historical interpretations based upon their background and new information. Constructing knowledge is much like constructing anything else; it is a building process. The processes used by students depended upon the individuals. Most of them list the common ingredients (primary resources, independent research, discussion, sharing knowledge, and reflection) in constructing history, but each had his or her interpretation of the process.

I think it is the same as when you are obtaining any new knowledge, the more facts you already know the easier it is to simply add on. (#18)

Since I was already interested in history, it was easy to assemble my own background knowledge. I already had a great understanding of U.S. history due to watching documentaries, reading several books, and having the knowledge to know where to look for primary resources in order to write reflection papers and being able to answer test questions. (#7)

Oh, I think it was really important to have some beginner's level background knowledge of the events we studied in class because it gave me a starting point and it also gave me a point to jump off and ask questions. The questions about specific parts of an event that I might be more interested in. Yeah, I think you need at least a basis to go forward. (Interview K.R.)

Big Picture

Students were encouraged to build the big picture or global viewpoint from background knowledge, primary sources, student presentations, class discussions and readings. Students had the opportunity to examine the evidence representing multiple

perspectives to see how details support the larger picture. Building the big picture from multiple resources fits well with constructivist learning theories and fits well with understanding the complexities of history.

In many topics this semester in this course I have been trying to visualize what we talk about to see the big picture of what we are discussing or learning. It was very important to put together all details of historical facts. (# 2)

During this class I constructed much of my knowledge from the primary source book, much from the individual oral reports given and class discussion. From the textbook I took dates and facts mainly for the tests. I learned 'constructed' my knowledge mainly from class: my own history. (#20)

I believe that to gather all of the knowledge from the various guest speakers, presentations, discussions, and my own past experiences allowed me to see the whole picture from many different viewpoints. I feel that as a student, learning from one resource is not efficient enough to keep a student interested and to actually learn efficiently about the topic. Learning from different outlets definitely enabled me to learn much more about history. (#15)

Putting all the information together in a report made me see how the parts formed the whole. I enjoyed the type of work expected from us in this class. It was good to construct my knowledge from something other than just one book. You have to work to dig out the best work you can do. I based most of my learning from this class on digging out the necessary information from the reading and lectures and putting it together in my own head to make sense of some very complicated events. (#1)

I constructed knowledge based on notes I had taken in class, primary sources and outside sources. I used all of the sources available to me for my homework. My background knowledge in history was so limited that I don't believe it played a part except for my desire to learn history. I loved learning about history in this class. (#19)

Autonomy

A component of the course was completing research and sharing information with peers. Students were instructed to choose four topics of interest to research, spanning the decades under study. Constructivists believe that students are more engaged in the learning process if they have some control over what they learn. They also suggest that

allowing students the freedom to choose topics and flexibility in due dates fosters intrinsic motivation and increases the depth and breadth of learning. Students said learning autonomously was fun. The following comments are consistent with constructivism.

I thought this part was great in the course. It is easy to learn about things that I'm interested in. To do my own research about topics has helped me to understand and learn better. I really liked the freedom that we had. I like working on my own because then I can shape my own thoughts and research more about what I am interested in. (#2)

Here is what I expected of you. Memorize it. The test is on Tuesday. I haven't had anybody in any class say how do you feel about this, what are the important points? Your style, at the beginning it took me a little by surprise because I wasn't used to it, but boy I jumped all over it because it let me do what I wanted to more and I liked the freedom. I think I learned more because I was more engaged. (Interview K. R.)

I liked being able to pick my own topics and deliver them when I wanted to. It allows a freedom rarely seen in the classroom and I welcome it like a breath of fresh air. I worked on my topics more since I was personally interested in them. (#1)

Having the freedom to pick my topics usually meant that I chose subjects that interested me, so getting them completed by the deadline was not a problem. It also allowed me to research the pieces of history that intrigue me, family life in Europe in WWII rather than military strategies. The military strategies were filled in by other students who found that part of the war the most interesting. (#20)

How many years did we cover? More than one hundred years, and we could choose anything we wanted. You didn't give us a list. You said what would you like to learn about? What would you like to talk about? It was great. (Interview M. N.)

Since I got to choose any topic I wanted, it made it more interesting because I could share information that someone else might not know. It also gave us the chance to show different perspectives on different situations. I also liked having the assignment fall into the section we were working on at that time. (#7)

I loved being able to choose the topics I was interested in to research and share with the class. Being able to look at a particular part of history to talk about made it more fun to learn. Being able to pick a time frame to research helped me with the load of homework in other classes. Having more time to do the research on my own and in balance with other classes made the reports more in-depth. I was more

inclined to do a better job on the reports because I picked them and because I would work on them at my own pace. I was not just trying to do the minimal to get by. (#10)

Being able to make many of our reports oral helped a lot. When I knew that I would be presenting my information to the class it gave me incentive to find interesting material. (# 9)

Being able to choose the assignments that I researched was very good. It enabled me to learn about different things that I believed were more interesting. My learning experience was affected because it opened up my mind to new things and ideas, instead of believing things from one perspective. (# 14)

Primary Resources Stimulate Interest

When learning history, the raw data are the basis from which all conclusions are drawn. Primary resources, guest speakers, oral history assignments, and field experiences provided students with additional data to construct their own interpretations of history. The use of primary resources encourages students to think critically, analyze, synthesize, and evaluate ideas. Primary sources, documents written by individuals who were observers or participants in events, give history real life meaning. The primary accounts represented many points of view. When examining the world through the lens of multiple perspectives, students learned to think critically and to carefully evaluate sources to construct theories of their own. Students learned to think about the author's motivation in writing the document, who the audience was, and what the author hoped to accomplish by writing it. Reality and validity increased using primary sources in constructing history. Students said they learned more as a result of using primary resources, which is consistent with constructivist theories.

Personal accounts make history come alive. (# 1)

It was refreshing to get a realistic view on history through interviews and articles written during these time periods (# 4).

It is amazing how much more I learned from real experience rather than to read it out of a textbook. I became more interested in stories told through people's encounters of history rather than to read about events that occurred. I felt more interested in the events that occurred because of the real life experience that were told or read. (# 5)

Multiple sources led to multiple points of view. Events were more real. Events were not just stories read in a book, but real people experiencing history. I became more interested in stories told through people's encounters of history rather than to read about events that occurred. (# 12)

It seemed real to me hearing from someone who actually has been there. I enjoyed learning from others who knew people who had lived through it. I only knew the stories from books and movies. I learn much more by hearing personal stories. (Interview S. B.)

It was nice to have people come in and talk about their experiences instead of reading it or watching a movie. I got more feel of the experience. (#11)

Primary sources are fun to read and help fill in the gaps between the facts. History books are dry. I noticed that some sources may portray one picture while another source might portray the picture differently. On almost all of my work this semester I have used more than one source. (#1)

Primary sources are much more helpful because they are an individual experience. You have to learn to look at the source and think about why they wrote and what they did. They teach you that no one person's experience is the same. A text gives you a sum up of the majority's conclusion of an event. It is nice to see other's perspectives. (#10)

The primary sourcebook did what it was designed to do. It made me look at the issue or event from different angles, you know the Civil War from the white perspective, the black's angle, the rich, the poor, the north and south. I think it broadened my perspective to look at it from angles that would not have occurred to me with my own personal biases and background. And I like that book because it was individuals talking about their experiences and how it hit them in the gut opposed to just the broad brush of history. (Interview K.R.)

The use of primary sources was very helpful to the learning experience. I have problems reading a textbook. I have found many textbooks to be very boring. Most history is taught from a rich, white, male point of view. It is nice to see how the oppressed see history. Their experience is so different from what we are taught in school. (Interview K. H.)

I think this is a biggie! If I can say that! I think the way this class was conducted was wonderful! I learned so much from so many different perspectives. I think this also encouraged more class discussions and it really did help me kind of put myself in someone else's shoes to see the event in a different way. (#15)

Critical Thinking

The core of this theme was higher order thinking skills. I assigned ten reflection papers to be completed throughout the semester. Reflection papers afforded students the opportunity to synthesize, analyze, and evaluate information to make sense of multiple resources. Students gathered information from peer presentations, class discussions, the instructor, the text, primary sources, and other sources. They reflected upon all of the sources to synthesize the information into a concise and cogent narrative. This was not an easy task because of the amount of information. The student reflections went beyond a recitation of facts because students were expected to tell what they thought of the event and why. Ideas that emerged were consistent with constructivist theory.

Writing reflective papers helped to condense the quantity of information we received through lecture, primary resources, and the text. I think it was helpful to evaluate the times and think about why our leaders and others in history made decisions and actions. (#4)

Wow! I sure wrote a lot for this class but it really did help me think about the series of events that were studied and tried to somehow put them all together into some sort of a story or equation that makes sense. The reflective journals were good because it was different from any history I have had in the past. In the past my experience has been okay what year was Abraham Lincoln assassinated? My point is nobody ever said, "How do you feel about that?" That is the difference to me. Everyone lays out the dates and chronology. But what separated you from the rest is that you asked us how it affected us as an American or a male or whatever. So I liked that. I think that is where you dig deeper instead of just pulling dates out of people. How do you feel? That is a great question. (Interview K. R.)

Writing reflective papers helped me learn to analyze, synthesize, and evaluate historical facts by teaching me to take what I know and think about the way it happened. Most classes you just have to memorize facts and restate them on tests.

With the reflective papers I thought about what stuck out in my mind about an era. I also had to learn to pick out the key factors that led up to an event. I took a question about a time and analyzed it by looking at all of the sources I had about it and coming to my own conclusions. I tried not to use the book very much on them. I looked at my notes to see what we talked about in class. I used my notes as the outline and my own personal thought to fill in the outline. If I was not sure about something I used the book. I used the primary sources in the reflective papers to talk about how people reacted to living a time period. (#10)

I also think that the oral histories and the reflection papers gave me a good basis on seeing how well I really understood the topic. It was sort of a way for me to express what I had learned and recount back to myself the whole picture. I think too often we rush through a topic and never really recite back to ourselves exactly what we had learned. This gave us all a way to do that! (#15)

Oral Histories

The oral history was a variation on the primary source theme. The assignment was a practical application of learning to do history. Students located someone who experienced World War II, asked what he or she did during the war, and requested an interview. Students prepared for the interviews by completing general background research. Students were to be respectful, listen carefully, record the interview, evaluate the information, see how it fit into the larger picture of World War II, turn in an outline to me, and report to the class. Student voices were consistent with constructivism because they enjoyed active learning.

The WWII oral history was awesome. It encouraged me to take the knowledge that is quickly passing and really learn about the circumstances. (#9)

I really enjoyed it just for the fact that my family is always sitting around talking about stuff. And then to go back to talk to them about an era where they might have forgotten. They would laugh and say, 'Oh, that's right!' and start talking. I thought that was fun. I could do that for a living talking to people about that kind of stuff. It was great. (Interview M. N.)

It was neat for me to sit there and talk to him about him listening to the radio and hearing that Pearl Harbor had been bombed. It really brought it alive and that is

probably what you were trying to do with that. Bring some history alive. That was certainly good for me. (Interview K. R.)

I enjoyed doing the WWII project of speaking to an elder person. I spoke with my great aunt. It was fun speaking to her and taking the time to do it. I liked that. (#11)

I personally liked giving the oral histories so that I could share the knowledge that has accumulated. (# 7)

It helped me to analyze and I learned a lot about my family. I had a lot of fun with it even though I had to talk to my grandma to get the information (laughs). She actually flew down and like brought all of the journals down with her. My grandma had pictures of everything in there. Really detailed very good drawings of the POW camp and some of the SS men and he had all of these SS badges like in the journal, stuck places. (Interview K. H.)

Collaboration

Students were responsible for producing research and expected to share knowledge with their peers. Much of the course work was student driven rather than teacher driven. Constructivists believe cooperative or collaborative learning are necessary components to teaching and learning. Sharing research and oral histories throughout the semester was a type of collaborative learning students said they enjoyed. However, when students worked in formally assigned groups with specific tasks to complete within those groups, the perceived enjoyment decreased. Consistent with constructivism is generation of curiosity and enhanced learning through collaboration.

I just enjoyed the opportunity to share my thoughts and to hear others react. Very rarely students are so enthusiastic. (#12)

I loved it. I could have sat and talked about what we were discussing for hours. I was really scared at first even taking a history class because I wasn't sure I could get it. (Interview G. C.)

I enjoyed being able to find topics which I desired to know more about and present them in a way to educate others from the information that I had gathered. Also being able to present them at my discretion took the stress from knowing the exact

time and date I would have to speak in front of the class. I learned a lot this way and the experience was fun. (#19)

If you can convey information to another person, either orally or in written form, then you truly understand the information. Putting all the information together in a report made me see how the parts formed the whole. (#1)

I think when a person is put into a group situation they try harder to analyze the information and understand the topic better. I know that there were a few topics that perhaps I might not have spent enough time learning about and because I was put in a group situation and that my group members expected me to know the material I put in a little extra effort. Now, I can look back at those discussions and know that I learned something because of them. (#15)

Group learning is definitely a good thing because it makes people see things in different perspectives. I tend to base my information in extremely right or wrong. Hearing the opinions of other people made me open up and decide whether certain issues were actually good or bad. It affected my experience because it made me learn interesting information that may or not be in the text. (#14)

Relaxed Pace

A component of constructivism is honoring students and their contributions to the discussion. Although the pace within the class was more relaxed, the pace of the written assignments and the requirements for research were continuous throughout the course.

Consistent with constructivism is a more relaxed pace for discussion which respects people and their ideas.

It made me feel that my thoughts and thinking were important, that motivated me more to find out more about topics I didn't know about before. I also got a little feedback if my thought were right or wrong by listening to how other students see things. This way I could tell if I was way off target or if I had understood the topic. (#2)

I liked having a lot of time to think about, answer, and discuss a question. It gave me a much greater understanding of history. I had to analyze an event and got the opinion of others in the class. They helped give an option as to why something happened that I might not have thought of. I like knowing that I understood a subject completely before we moved on. (#10)

The slower pace for discussion brought a better understanding of the issues throughout history. It made me think more about my ideas of things that I have learned from previous history classes. Whether or not my ideas were actually valid and consistent. (#14)

The slower pace and opportunity for discussion let us cover a subject more deeply. The fact that we were not rushed through our discussion and oral reports made it feel like we had a stake in the class, like our views were accepted and worthwhile. I learned more from this class because I will be able to relate to the discussion and reports forever. It seemed like a more personal experience than memorizing and moving at a faster pace. (#20)

I believe it allowed for a more thorough discussion and a better understanding of history. By slowing it allowed us plenty of time to formulate opinions and answers we were also more interested in history. (#17)

I like it. For me, this really respects people's ideas. Students who actually have different opinions, they would love to share it. It gave more students the chance to offer an opinion or comment. The slower pace made the class feel more relaxed and willing to learn. (#8)

My opinion is knowledge should flow as it does. If no questions are coming from the class then keep charging on, but when something grabs somebody that is when if I was the teacher I would stop and really dig deep. Because you have hit a nerve, something people are interested in. When I am interested in something I learn it better. So when those moments arise it would be nice if there was a slack in the schedule to probe a little deeper when you find you have hit a nerve and somebody is interested. I believe in quality not quantity. I would go with that. (Interview K. R.)

Changing Perceptions

Most students have preconceived notions about history. Constructivist teachers encourage students to question pre-existing thoughts and to examine other perspectives. When new ideas were introduced, especially via primary resources, students reconsidered their ideas. There was a period of discomfort before students accommodated the change to their schemata. The change they experienced was new knowledge because of a broader range of understanding and learning to see the world through multiple perspectives.

Knowledge is constructed when minds are opened to evidence that supports different conclusions.

I definitely think the primary resources changed my views on a lot of things. That is what I enjoyed the most was the primary resources. I would love to take courses that only use primary sources. Whether it be negative or positive about the experience. That is what I liked about the (primary source) book. Some of the resources were very positive and some were very negative. So you could see a wider range of emotions and you could see how they possibly reacted in the ways they did and how it set up future things to come. (Interview M. N.)

I had a different view of the 1960s-1970s, it was actually not full of peace and love, but a turbulent confusing time when everyone was angry and no one trusted the government. (Interview S. B.)

The Vietnam War was another. Who did you feel sorry for the soldiers or the students—after seeing the fear that motivated the students and the fear of the soldiers? It became a very personal war, one that we may never figure out. (#20)

One of the best examples of something changing my original ideas was the day we went to see the Russian journalists. Their personal experiences and the discussion that ensued helped me develop a different idea of Russia and its people. Other situations occurred mainly early in the semester with the study of expansion in the west. These contradictions helped me to better understand the time era and gave me a very different view of what I had before. (#17)

If I was not sure about my old ideas, I would more likely believe the new ideas that I received. If I was sure about my old ideas, I would more likely not believe the new ideas at all. Hearing or knowing a different perspective from different resource might confuse me to get to the conclusion. However, it gets me confused when it is different from what is in the textbook. (#8)

I came into this class thinking America was the greatest country and the struggles through history was because other countries were not as strong as we were. My thinking has changed. I still think we have a great country, but the motives and the decisions of our leaders are questionable. (#4)

As I came into this class I had pre-conclusions about events and people. Some things that were taught agreed with my conclusions, but other things changed my mind because of the many primary sources. (#5)

It made me look at different ways of thinking to gain a better knowledge of my old ideas and to form new ideas based upon other people's perspectives. I can try to see things in different shades of gray instead of black or white. (#14)

Support for Learning

Students had pre-existing knowledge from school, reading, life, or their parents. Frequently the knowledge was one-dimensional. As students began to understand the historical process and utilize it, I could see a question in their eyes or discomfort in their body language and then, eureka! Different perspectives gave them new insights. They trusted themselves to modify their old ideas or build new knowledge independently based upon multiple resources.

I provided scaffolding to help students along in a number of ways. Narratives tied the presentations together or filled in facts that had been omitted. Written outlines or chronologies presented information in concrete and linear ways, to help students construct the bigger pictures. I provided students with study guides to help them prepare for their essay exams as well as support and direction to complete the oral history assignment. Scaffolding is about building a new schema, which is consistent with constructivism. Also consistent with constructivism is tying information together. With many reports on disparate topics, it was easy for students to lose sight of the forest for the trees. Details are good, but are better after the global picture has been established. I talked and listened to the students. I provided structure or scaffolding to help students construct the story.

If you (teacher) began to feel like it wasn't clicking and you would add information if you didn't feel like it had come together. If there was a part missing or you felt like we hadn't put enough time into a certain portion you would give us an outline or you would add information which really helped to tie it together as well. It was presented in a way it would be hard not to get. You would lecture on things and we would take it from there. It was easy to learn in this format. I retained a lot of information. (Interview G. B.)

You laid out the events and tied them together, but it was up to me to digest them and make sense of them on my own. In your class, although I don't think you ever

used the term **critical thinking**, that is exactly what you were demanding of us. (Interview K. R.)

The outlines and the timelines really helped. The outline was good with the facts. I wanted to make sure I have in my mind the right sequence. The facts that we really should know about. That is what I like, keeping it in order. (Interview M. N.)

Evaluation

Real assessment was the underlying factor in selecting assignments. Assessments were chosen not only to formulate a grade, but also to help students learn and develop their minds. Requirements for the course included two essay exams, ten reflective journal entries, one oral history and report, four research projects with reports to the class, and a portfolio showcasing their work for the semester. Although the students were aware of the course requirements, they had autonomy in choosing topics and due dates for all of the work with the exception of the exams and the portfolio. Students said the assessments aided in developing critical thinking skills, improved retention of knowledge, and increased interest in the discipline, all of which are consistent with constructivism.

The reflective journals and research papers helped in the success of this class. It helped with many more primary sources and helped with assessing what we had learned. I felt more comfortable at the beginning of class knowing what I had to do to pass the class, but as I look at what was accomplished, I felt that it was not only for assessing but to learn and grow. (#5)

I personally liked the way the class was orchestrated because I think it allowed people to see that history is not so boring. The journals, projects, oral histories and essay exams helped us demonstrate the knowledge we had truly gained from this class. Again, it allowed me to open and share my thoughts, which is how this learning experience changed me. (#7)

I think the different types of assessment really gave me a better understanding of what I had learned in the class. Having a more relaxed learning environment made history a more enjoyable subject and I was very pleased overall with taking this class! (#15)

I liked all the forms of assessment we used in class because they were all essay related. I prefer essays over any form of assessment because you have to know more about a subject to write about it. I do very poorly on multiple choice tests because they are so specific. I like having room to give my opinion. I believe that you have to know more about a subject to argue something about it. I had to think much more about my answers to be able to answer them in this class. I found that I kept more of the material because of it. (#10)

I enjoyed the reflective journals, the oral reports, and essay exams, well, as much as you can enjoy an exam (laughs). The reflective journal was what I felt about the certain time frame, my opinion, and your opinion can't be wrong, so it gave you a sense of honesty to fill in the journal, not just saying what you think the professor wants. The oral reports were fun because you were able to spend time researching something that you really had an interest in. The essay tests are better test of what we learned and how we processed all of the information. It allows you to tell not only what happened but how you viewed the happenings. This type of assessment allowed me to relax and absorb what was going on, it didn't stress me at exam time, or report time because of the way the class reacted to the whole constructivist way of learning. (Interview M. N.)

I believe the journals, the papers, the projects, the oral history, and exams helped me to better understand history and remember it better and longer. (#17)

Multiple Realities

A tenet of constructivism is leveling the playing field by including many perspectives. Different social and economic classes, the powerful and weak, government voices, minorities, and women were included. Multiple resources gave students the opportunity to see multiple realities and vicariously walk in someone else's shoes. Students said their minds were opened to other perspectives, which is also consistent with constructivist theory.

In this class I got into the habit of looking at minorities view of history. Most teachers mention that minorities were mad that the white man kicked them off their land but that was it. Just because we are taught from birth that the Pilgrims had Thanksgiving with the American Indians does not mean that it is the only point of view. This class did a very good job of showing the underdog's situation throughout history. To understand history you have to look at multiple perspectives, this class taught me to do that on a more regular basis. (#10)

My learning experience was affected because it opened up my mind to new things and ideas, instead of believing things from one perspective. (#14)

Looking at multiple perspectives helped a lot. The primary sources helped me to be put back in the time period and think deeper about the events being able to research facts on our own helped me a lot by forming my own thoughts. It gave a lot more opportunities to learn, not just memorize facts. (#9)

By having everyone choose their own topics for the oral histories or discussions that came up in class, it allowed us to see the many perspectives we have about a situation. By experience it in this manner, I think it allowed us to see that the United States is not always the good guy or the bad guy when it comes to events in history. (#7)

We had different students share information they had gathered giving multiple perspectives especially with the oral reports on WWII. These multiple perspective did help me to see how other people had experienced WWII that it wasn't just the military. It teaches that multiple perspectives gave me a better and broader understanding of our history. (#17)

Uniqueness

Students report that part of the reason they enjoyed the class was because the experience was unique as compared with other classes. Students describe a feeling of ownership and enjoyment in learning because constructivist methods provide that opportunity.

I must say that I truly enjoyed the experience of this class. I know it was very experimental and deviated from the norm, and I found it a welcome improvement of the stressful tactics of memorization and regurgitation. I felt much more involved in the learning process and as a result I think I got a lot more out of it. It allowed us more freedom to delve deeper into the topics we found most interesting. I hope that this is beginning of a trend and that more instructors will begin using similar methods. (# 7)

I liked it because it was new and different. Instead of saying here we are going from A to Z here. You gave us a lot of freedom and I liked it personally. It forced me to teach myself in a way, if you will. You laid out the events and tied them together but it was up to me to digest them and make sense of them on my own. I think the world needs a lot more critical thinking. We are just spoon fed so much information. How do you form an opinion if you don't have one? (Interview K. R.)

Cognitive Growth Occurred

As is consistent with constructivist theories, cognitive growth occurred. According to the student voices, constructivist methods were effective. Students report greater interest in the subject as a result of this type of learning experience.

This was probably the best learning experience that I had this year. To be able to gain information based upon my own experience has made me want to know more about history. (#14)

The learning experience was great. I thoroughly enjoyed learning in such an environment. At the beginning I had no idea what you meant by constructive learning, but I think I do now! This class was different from others. I think you pulled more out of me with all that darned writing, but it was great. I enjoyed this class very much. (#15)

I basically learned a lot from this experience. It helps me to build up my own thoughts and makes me want to learn more on a particular issue. I personally think that history sometimes is a boring class. This learning experience was very helpful to learn history. The students are expected to get information by himself instead of being assisted by the teacher all of the time. The students get to learn more because they want to know more. (# 12)

I found it much more beneficial to learn history in this manner. I like this type of class because it teaches you to think and you get a better education. You also have to be able to apply what you have learned, you are forced to think. Any time an instructor goes out of their way to try to find a better way to teach I am very impressed. (#10)

I would have to say that this class was a lot different than my other classes because it encouraged me to get more involved. I was able to, so to speak, "get my hands dirty" in the various topics that we had learned. In my other classes, the teachers mainly gave lecture that had little enthusiasm and never really encouraged too much class participation. I think that's why many students would get entrapped in a daydream and end up missing valuable information. This class definitely added more excitement and I really feel that everyone in the class got a lot out of the learning experience. (# 1)

It made my learning experience so much more fun. I have really enjoyed this class. Earlier I did not have the same interest in history as I have now. That is because this course has opened up some of my views on topics. (#2)

I loved it. I just really loved it. And I feel like I learned a lot. I feel like I am more knowledgeable. I really enjoyed it. I just feel like I started out at a negative thirty and I am up to eighty and I have a lot of knowledge I didn't have. (Interview G. C.)

The primary sources helped me to be put back in the time period and think deeper about the events being able to research facts on our own helped me a lot by forming my own thoughts. It gave a lot more opportunities to learn, not just memorize facts. (#10)

I personally liked the way the course was orchestrated because I think it allowed people to see that history is not so boring. (#7)

Confidence

Although students wanted to share their ideas with peers for validation, they began to trust themselves to construct new knowledge. Students developed greater self-discipline and self-confidence when they were required to articulate their ideas. There was a budding sense of trust among students in that it was acceptable to venture forth ideas that were controversial or mistaken assumptions without fear of ridicule. In addition to the trust of others, students began to trust themselves to use critical thinking skills to construct their own knowledge.

I like researching my own topics, but also really enjoyed what others had learned in class. It helped me to talk in a group comfortably. (#19)

I was more willing to open up and share how I felt or things I knew in order to have class discussions develop. It allowed me not to be so afraid of other students in the class. (#7)

It adds confidence to you as a student because you do retain it and it ties into so many others. Art, humanities, literature and it carries over into the other subjects too. (Interview M. N.)

It made me feel that my thoughts and thinking were important, that motivated me more to find out more about topics I didn't know about before. I also got a little feedback if my thought were right or wrong by listened to how other students see things. This way I could tell if I was way off target or if I had understood the topic. (#2)

I put more of myself into it and took a lot more out of it. (Interview S. B.)

Broader Worldviews

Students said multiple perspectives helped them broaden their worldviews.

Students who grasped the concept of multiple realities gained an appreciation for walking in someone else's shoes, therefore promoting toleration and a greater acceptance of others. Students describe the eye-opening experience of seeing and discussing the multiple perspectives of life through the use of primary resources.

Clearly, I would reflect and even try to put myself into their stories and the time in which they lived. It helped me to view past actions in different ways or angles. (#3)

I think this also encouraged more class discussions and it really did help me kind of put myself into someone else's shoes. (#15)

There were times in class I would think, hmmm, I never thought of it quite from that angle. I think it colored my whole perspective of that particular event because I didn't have all of the facts or I had the facts incorrect. There was a piece missing somewhere and somebody, you or one of the other students provided it and it allowed me a new way to frame the idea. (Interview K. R.)

It is always good to hear others views on topics, you don't always have to agree or be persuaded by them by they are good to hear. (#18)

I think you have to have an open mind too. You have to be open to listen. You have to be mature enough to listen to the other people's opinions and, you know, listen to the way they are coming at it. (Interview M. N.)

We explored multiple perspectives from the views of different generations, sexes, nationalities, and political viewpoints. It is good to see and hear how the other half lives. (#1)

The role of primary sources is critical to either understand the background and details or context in which the story of the people is given. Clearly, I would reflect and even try to put myself in their stories and the times in which they lived. I understood that some of the people's experiences affect the person and the way they view people and life in general. (# 3)

Independent Thinking

Students were encouraged to think and work independently at times and cooperatively at other times. Independent thinking is a necessary component of critical analysis. Many students commented on this aspect of the experience.

I really liked the freedom we had. I like working on my own because then I can shape my own thoughts and research more about what I'm interested in. (#2)

I think it helped a lot to take the general idea and then to focus. When we researched anything for a report or a reflection I would end up with a couple of different interpretations. Because of this I could get a generally non-biased opinion. Normally I have had to only hear one point of view and accept that as truth. (#4)

I loved it. I think it is fun to work with topics and come up with my own thoughts about the material. (#1)

Primary sources helped me because I had to remember to look at who the person was and why they were writing this particular paper. I had to think it through. I don't learn when people just tell me something. My brain refuses to absorb it. It is like I don't understand and you can tell me fifty times, but until I think about it and analyze it on my own time and relate it to myself, I probably won't remember it. (Interview K. H.)

The fundamental thing you are doing here is letting us construct our own knowledge. That is not occurring in any other class I have had at this college, and I graduate this semester. To tie all of the parts together and make sense of it. I liked it because it pushes me, but I'm the kind of student who likes to be pushed a little bit. I'm here to learn something. (Interview K. R.)

The reflection papers helped me to incorporate my own ideas and feelings on the subjects. (#15)

Intergenerational Respect

Oral histories promoted intergenerational respect and communication. Students said they enjoyed interviewing a grandparent or an older family friend to learn what life was like when their interviewee was young. Students gained first hand knowledge from people who lived the history of bygone eras. Students became aware of their elders as people who had had interesting lives. Perhaps students realized that some day they too

would be old and have a world of knowledge and experience to share. Learning to listen, sharing ideas with their elders, and finding value in the experience taught students more about life than reading from a textbook.

The World War II oral history was awesome. It encouraged me to take the knowledge that is quickly passing and really learn about the circumstances. (#9)

I thought the oral histories were great too. I got to talk to our family friend about the Bay of Pigs and Cuba and the country being communist. He knew all the presidents who were around at the time. I thought—oh my goodness! (Interview S. B.)

When we talked to "grams" it seemed to bother her a little bit to talk about her past, but it was interesting for us to hear about her life during WWII. (Interview G. C.)

When I was doing the oral history and talking to my mom about it and reading my grandpa's journals, I thought that's a lot different than just sitting and reading a book. There were a lot of POWs and my grandpa was one of them. This is exactly what happened and I have a written account of it. It was a lot more real and I could relate more to it. I actually have an interview I did with him (grandfather) before he died. It is like five tapes long, but there was a lot of stuff he wouldn't talk about. (Interview K.H.)

This is so true many ideas I had about different eras were changed, or if not changed enriched and reformed into a deeper knowledge. The Depression, WWI and WWII—taking the time to seek out people who had first hand knowledge showed that even though it was a hard time, people still had great happy stories to share. Tom and Bill's mom grew up in Detroit, my family having a country point of view, and my dad having a small-town point of view. The four of them together helped me put together my oral history. It was four very different outlooks on the same time of life, which I thought was very helpful. I thought that was fun. (Interview M. N.)

I liked the oral histories the best. (#7)

I loved it. I interviewed a dear friend of mine and it added just another perspective. It was back to the primary source history. He was there. (Interview K. R.)

Complexities

The students report a greater appreciation for the complexities of life, and therefore history. If we learn anything of value from history, it is that life is indeed complex and that multiple realities exist. The diversity in the class made multiple perspectives real as the students knew and could discuss events with peers from different cultures, ethnic groups, backgrounds, or nationalities, which aided in the understanding of the complexities of history.

What did I learn? I learned that world history makes no sense at all. Millions of people have died around the world in so many senseless wars. Humankind does not seem to learn from the past and commits the same mistakes every couple of generations, once recent memories have had the time to fade. I learned the experiment that is America comes at a very high price. (#15)

I learned that the world is a far more complicated place than I had ever thought. The people of the world need to study history more so some of the terrible things that have happened will never happen again. (#1)

This was enlightening. Some world events, I never quite understood all the complexities and actions. Other individual perspectives supported and produced the necessary elements or facts that a book alone cannot provide. (#3)

The different nationalities in the class were good. It was different. America paints history one way, and the rest of the world apparently paints it another way. The war hero here, might be their villain. That came out a lot more than it would have in a straight party line textbook. (Interview K. R.)

The stuff you read in textbooks is not always true. You have different textbooks that write different things. Different people talk about themselves so everything is not black and white. I never used to see things in gray until I took this class. It is like when I hear the different interpretations and it is like maybe that isn't it. Now I see things in shades of gray instead of black or white. (Interview S. B.)

Sharing Ideas

Students mention expending extra effort because they were to share information with their peers. They also talk about how the topics their peers presented to other

students stimulated interest. Students liked this aspect of learning in a constructivist classroom.

Having other students talk about their topics makes the course more interesting. Everyone is interested in different things. Some topics I probably not have read about. Now I learned about them because students that were interested in these topics told me about them. (#2)

When people were speaking the other students were paying attention to you, except the guy who was sleeping (laughs). The fact that they would ask you questions and you could expand on things that you might not have looked at as interesting and you just kind of touched on in your oral report. Or if they had a question and you didn't know the answer, there was someone else in the class who would say, oh this. I think the class honored you and gave you enough time. (Interview M. N.)

I prefer doing essay and research anyway. And I like to talk to people about it. To make sure they understand it the same way I do. If I can relay the information that I learned to other people effectively that means I understand it. (Interview K. H.)

I felt that rather than just learning from a teacher, each student can learn from each other. This is not to say that teachers could be obsolete, but it is good to hear from other students whether it be something they research or from personal experience. It helped me to reflect on events and make my own conclusions on historical events. (#5)

Discussions in class with my classmates helped to open up new views on various topics. (#4)

I remember a student did quite a good report on Douglas MacArthur and rounded out that historical figure for me much better. MacArthur wasn't anyone I was particularly interested in, but I became more interested in him because my peer kind of sucked me in if you will. There were students in the class who generated more interest from me than I would have brought to the table myself. (Interview K. R.)

When I knew I would be presenting my information to the class it gave me more incentive to find interesting material. (#9)

I did extra research topics to share with the class about things I felt that history does not cover enough information on. One of my topics I never learned anything about in any history class. (#10)

I think when a person is put into a group situation they try harder to analyze the information and understand the topic better. I know that there were a few topics that perhaps I might not have spent enough time learning about and because I was put into a group situation and that my group members expected me to know the material I put in a little extra effort. Now, I can look back and those discussions and know that I learned something because of them. (#15)

Variables

For the majority of the students, the experience was consistent with constructivist theory. There were some exceptions or variables within the experience. The following comments fall under the exceptions to the rule category. Difficulties for some students stemmed from need for more structure, ambiguity of due dates, the quantity and quality of the work expected, inadequate time, and dislike of group learning. One or two students found multiple resources more confusing than enlightening. Some students were concerned with covering all of the material rather than uncovering material which takes more time but leads to deeper learning and is consistent with constructivism (Marlowe and Page, 1998). Mature learners were disappointed and sometimes annoyed at the lack of effort expended by less mature learners regarding collaborative work and class participation.

More structure.

I did have a little trouble with the flexibility of the times papers were due. Because of my work schedule, and the lack of time I have, it was difficult not to procrastinate because I did not have a concrete deadline to schedule myself around. (# 4)

It was good to be able to research something you actually cared about. By having the freedom to choose our topics it made me care a lot more about my research. Due dates did effect me a little bit. I am the kind of person who likes to know when something is due. Without these strict goals I got lost in procrastination. Although the assignment were due in a general time area, it was still difficult. (# 9)

The due dates didn't really affect me that much. However, I sometimes waited to work on it until a day before. It sometimes affected the paper's performance. (#8)

Too much work.

For me this was difficult. The open-ended questions were not really discussed, for me I did not find the class to be a slower paced class because of the large amount of information it was hard to keep up. The essay tests were a little more difficult, but I learned a lot. (#16)

Maybe we were supposed to read the primary source book on our own, but I barely read it at all (Maybe 4 times). When I did read them they didn't help me to understand the situation more clearly. (#9)

That was a lot of work. I don't enjoy working on it. I would rather have simpler work. Sometimes I would rather be told what to do, or be assisted instead of doing it by myself. (#8)

Writing reflection papers helped to put facts together gathered from notes and presentations from class. Writing these papers did not really help me to analyze, synthesize, or evaluate historical facts because for me the topics were too broad to write about. (#16)

Group work.

I despise group learning. I always feel like someone gets off the hook...group projects only encourage goofing around (#9).

I have always had problems working in groups. I have never liked working with other people. So I have a bias to this question. I prefer to work by myself. I always find that I am the person who does all the work and has to tell the class what we learned. If there was a way to make sure that every person in the group participated it would work better. I sat by people who did not like to speak up in class, so I always had to do the talking. Which meant, by process of elimination I had to know more than the rest of them. I had to be able to explain what we read to the class. I ended up knowing more on the test and learning more in general, but I do not like working with others. I do not like being the only person doing work and having others take the credit (#10).

I believe that group learning can be good, but it depends upon who is part of the group. Many of the other students would say comments that were illogical, stupid, redundant or not pertinent to the class. What seemed obvious to me was hard for others to grasp. Because of this I think it slowed the class down and prevented us from finishing on time (#17).

I personally do not do well with group learning, although, it was really interesting to hear personal experiences or points of views from other students. (#16)

Non-participation.

There were some people in this class I wanted to smack along side of the head. They didn't do anything throughout the class, they just sat there. They didn't share, they didn't have any opinions, and as we get older we have the right opinions (laughs). (Interview M. N.)

I have gotten used to that in my college career because it is always like that. That seems to be modern college. There are five or six people who contribute and everyone else is a bump on a log, but does it bother me? No. In a way I kind of like it because it leaves more time for those who are interested to talk. That is kind of a selfish thing. School is like life, you get out of it what you put into it. So if you want to just sit there and breathe that is fine. But I want to make something of myself and start a new career and you get out of it what you put in. On an intellectual level it bothers me that there are so many bumps on a log, but as a student it doesn't bother me because it gives me more time to learn what I am here to learn. (Interview K. R.)

Time constraints.

I thought group learning was good because it opened up different viewpoints, the only downfall to group learning is that time ran out too quickly. I enjoyed the discussions we had. The only thing is there needs to be more control by the instructor because there is so much information that should be covered and not enough time. (#4)

Learning more difficult.

The reflective journals, portfolios, research projects, oral history and essay exams helped, but I found them to be rather hard because I am used to other means of studying and learning. I really enjoyed listening to the lectures and comments from other students about the topics discussed. Unfortunately, I found the class to be tough only because I learn better with handouts. This experience was different and difficult for me compared to other classes. (#16)

Textural Description

"Textural description" (Moustakas, 1994) is the final phase of phenomenological reduction. I combined the information from interviews with the student essays and found common perceptions from which the earlier themes emerged. I developed a textural

narrative that described the experience. Most of the data were consistent with constructivist theories, but some data suggested holistic learning was occurring. In the following textural description many student voices echoed the same thoughts. Students said they learned more in a constructivist classroom because they were more engaged. Students were allowed the autonomy to pursue personal interests. The use of primary resources made history seem more real and multiple perspectives deepened their understanding of people and events. Students also mentioned that active reflection and interpretation kept them thinking critically. Collaborative learning was an important aspect of the class. Although several students said they did not like collaborative learning, they acknowledged that students who anchored the groups learned more and the students who did not as actively contribute to the groups also learned more from their peers in collaborative group discussions. Students presented their research in ways that stimulated interest, listeners were attentive, and multiple perspectives were respected. Research, reflective journals, and essay tests kept students thinking critically through writing. The majority of the student voices were consistent with the elements of constructivism as they were applied in this class.

Appreciation for autonomy within the class was a recurring sentiment. When sharing their research, most students found interesting information with anecdotes to share with the class. Some students brought historical artifacts into class as visual aids for their presentations. To generate interest among their peers, students increased effort and the depth of their own learning. Almost all of the research shared by students was thorough and well prepared.

In this class the memorization of dates, names, and places were secondary to learning how to critically analyze documents and resources. It was my intent to teach students to apply critical thinking skills and learn to construct their own history based upon primary resources. The assignments and assessments were based on constructivist theory. The responsibility for learning rested with the students. For mature learners it was a boon. For less mature learners, it was a challenge.

Students placed a high value on primary resources because the validity and reliability increased when raw data were used to construct knowledge. The need for primary resources in constructing historical knowledge was consistent with constructivism. Oral histories were a variation on the primary source theme. Students learned how to write history through active participation. Primary resources were used to represent multiple perspectives.

There were also some difficulties inherent in implementing constructivism in the classroom. Too much freedom was a dilemma for some students. Ambiguity of due dates caused problems for some. A few students complained about the workload: two or three simply didn't complete the assignments. Several students mentioned time constraints in covering all of the material. Inadequate participation on the part of peers during discussions was an issue for some students. A few students did not make connections between multiple resources and critical thinking, they found conflicting stories to be confusing rather than enlightening. Students said they enjoyed sharing knowledge informally during class discussions, but they disliked formal group learning in which students worked together on assigned projects. Better students believed that less motivated students took advantage of their skills and work. However, for the majority of

students, the experiences they described were consistent with what one would expect from a constructivist point of view.

Imaginative Variation

Imaginative variation (Moustakas, 1994) gave me the opportunity to explore other possible interpretations to obtain a clearer picture of applied constructivism. I examined the data from different directions to see if anything occurred that was not expected. Upon completion of the initial data analysis, I used a matrix (Creswell, 1998; Miles and Huberman, 1994) to provide another direction for analysis and a visual aid in making connections. Patton (1990) said, "It is easy for a matrix to begin to manipulate the data as the analyst is tempted to force the data into categories created by the cross-classification to fill out the matrix and make it work." (p. 412) To avoid that pitfall, I waited until the initial analysis was completed to use a three-dimensional matrix model (Campbell, 1983). The matrix provided a method to review data sources, individual voices, and elements of constructivism simultaneously. The matrix I used was the size of a poster board and was therefore too large to fit into this format, but a sample is included (Appendix B) to give the reader a sense of how the matrix was used. Essay respondents #1 through #14 are included on the vertical columns on the matrix. I did not fill in the diagonal portion of the matrix although I used it on the poster board to review and analyze the data.

There are a number of learning theories that are similar or complementary to constructivist theories. Person centered learning as was suggested by Carl Rogers, holistic learning that was addressed by Abraham Maslow and Carl Rogers, student development theories proposed by Arthur Chickering and adult teaching and learning theories of

Malcolm Knowles all have commonly held assumptions. I completed an additional literature review to draw some comparisons between learning theories in chapter five.

Structural Synthesis

The “structural synthesis” (Moustakas, 1984) is the final step in this phenomenological analysis. The structural synthesis is the essence of the experience. Themes emerged which were consistent with constructivism, as did others with more subtle implications. After completing each step of the analysis it appeared to me that constructivism provided a holistic approach to teaching and learning. Cognitive growth was expected, but learning involves more than memorizing facts and formulas. Personal, ethical, and character growth are also important. Throughout the study the data suggested that student development, both cognitive and affective, occurred. Holistic learning in which the entire student is considered is an important result of this study.

What were the students' perceptions of a constructivist classroom? For high achievers and average students it was a boon. It was a seldom-found opportunity to take responsibility for their own learning because students had more autonomy than is usually seen in undergraduate classes. It boosted their self-confidence and willingness to share ideas. It encouraged students to trust themselves and to believe that their ideas were valuable and important. The slower paced discussions promoted dialog among students so they could validate their ideas or changing perceptions among their peers. Primary resources that were representative of many perspectives taught students to accept multiple realities. The diversity within the class promoted tolerance and an appreciation for walking in someone else's shoes. The oral history assignment that required interviewing

an elder increased their understanding of living in another era and respect for the experiences of others.

Constructivism was a challenge for less mature learners. A few students did not have the self-discipline to complete assignments independently and they were more comfortable if I told them the "right answers." These less mature students also developed the cognitive and affective domains, but by smaller increments and with more difficulty. Whether these students were intellectually challenged by this experience or if they were simply unwilling to expend the necessary effort is a question that is open to debate.

I suggest that the essence of this study is that constructivist teaching promotes holistic learning, civility, and increased understanding. Student voices refer to increased confidence in their own thoughts and abilities. Students wanted to produce interesting research because they knew they would share it with their peers. Students said they were interested in their own topics but that they really wanted to know what their peers were interested in. Many students report that their own worldview was expanded because of listening to multiple perspectives from their peers. Students reported trying to think what it was like to walk in someone else's shoes thus leading to more tolerance of differences. Students took the time to talk with an elder and really listen to the stories they had to tell promoting better intergenerational communication. Students were polite and listened attentively when their peers were speaking. After reviewing all of the data, I found only one comment that was derisive about fellow students. Students asked good questions to encourage class discussions and demonstrated respect for their peers and for me. All of these things point to better relations in the college classroom, a positive learning environment, and a person centered learning situation.

Confirming Findings

Miles and Huberman (1994) suggested methods for testing conclusions. Checking for representativeness, examining outliers, triangulating, and ultimately getting feedback from the participants, helped me to confirm that my findings accurately reflected the students' experience. The following is a procedural account of the verification process that I used. (pp. 263-273)

1) Checking Data

To be sure that the data were representative of the phenomenon I read and re-read the data from students and listened to the taped interviews again. The study took place within narrow parameters and the participants were asked questions that related to the elements of constructivism. I felt confident that these data were representative of the experience. I gave each student's voice equal value while interpreting the data.

2) Researcher Effects

I was aware of the phenomenon called researcher effects and that my role as researcher and teacher could bias the study or my interpretation of it. Miles and Huberman (1994) said there are two types of biases, "the effects of the researcher on the case, and the effects of the case on the researcher." (p. 265) To try to avoid researcher biases I explained the study to students the first days of the semester by telling them what I was doing, why I was doing it, and what their role would be if they chose to participate. I promised students anonymity. I assumed my role as teacher rather than researcher for the duration of the fifteen-week semester to make my observations less obtrusive. The second

type of bias, in which the participants affect the researcher, may have an effect on the study. Miles and Huberman point out that increased contact makes the first type of bias less likely to occur, but the second type of bias more likely. Since I was in constant contact with the participants throughout the study they may have had a greater affect on me.

3) Triangulation

Miles and Huberman (1994) quote Denzin (1978) to describe the methods of triangulation "we can think of triangulation by data source (which can include persons, times place, etc.), by method (observation, interview documents), by researcher (investigator A, B, etc.), and by theory. To this we can add data type (qualitative text, recording, quantitative)." (p. 267) I used triangulation by using multiple data sources (student focus groups, individual interviews, essays and personal observations), different methods (interviews, observations and essays), and data types (recorded interviews and written essays). "In effect, triangulation is a way to get to the findings in the first place—by seeing or hearing multiple instances of it from different sources by using different methods and by squaring the finds with others it needs to be squared with." (Miles and Huberman, 1994, p. 267) I built a matrix (see Appendix B) as suggested by Miles and Huberman (1994) to visually note inconsistencies and make connections.

4) Weighting Evidence

Miles and Huberman (1994) suggested attentiveness to the quality or strength of the data. They provided a chart with a list of data that is perceived as stronger, which included repeated contacts for data collection; primary resource reports; observation of activities; informal setting for data collection; and private interviews. I collected data at

the end of the semester after fifteen weeks of contact, the students who reported on their experiences provided primary resources, I recorded my observations throughout the semester, and students completed essay questions and interviews to provide the raw data for the study in informal settings. Some of the interviews were conducted privately and others were in focus groups.

5) Understanding Outliers

Outliers were variables or exceptions to the findings. Miles and Huberman (1994) suggested that outliers are helpful in developing your final analysis. One or two students who provided data for this study did not perceive constructivism as a better learning experience. I tried to understand why the outliers perceived their experiences so differently from the others. My interpretation of their experiences related to inadequate intellectual maturity or lack of willingness to complete assignments.

6) Surprises

Surprises within the data were important when something occurred that was simply not expected. The most surprising data I found were the students' disdain for collaborative learning. Collaborative learning required a high degree of motivation from the students and willingness for active participation. The lower achieving students liked collaborative learning because they could learn from or lean on their peers. Although several mature learners perceived the benefit they received as group anchor; many students resented their less active peers. Average and high achieving students perceived students who chose to participate infrequently were using them. One comment from a mature learner, "you can tell the students who didn't do any work, because they wanted you to do

it for them" (Interview M.N.). Another student said, "It is just best if you take ownership and complete the work yourself" (Interview G. C.).

8) Rival Explanations

I looked for statements to disprove what I believed had occurred. To do that I looked at the outliers. Since this study was confined to narrow parameters at the outset, it was easier to look for cases that did not support constructivism as a method of teaching. There is a strong correlation between student effort and success. Several students, #8, #9, and #16 said they wanted the teacher to tell them the right answers. They did not or could not construct their own knowledge. Immature learners, regardless of chronological age, had the most difficulty with constructivism. Their perception was that constructing your own knowledge was confusing because multiple realities exist. They did not understand the lesson that was not specifically taught to them, that the answers to all of the life's questions are not right or wrong. There are multiple realities.

9) Replication

I teach post-Civil War American history every semester at the college. A colleague proposed a study regarding constructivism as well. His research question explored whether student motivation differed substantially between constructivist and traditionally taught courses. He asked me to participate in the study by teaching two classes, one using constructivist methods and the other using traditional methods. I agreed to participate in his study. The following semester I taught a second course using the same methods employed in this study. Upon completion of the course, I talked informally with a representative group of students to see if their perception of the learning experience was comparable to the original study group. I found that students during the

second semester had perceptions that were similar to my study group. Learners developed both in the cognitive and affective domains. For the less mature or less willing students the experience was also more challenging.

10) Feedback

Upon completion of the analysis chapter I asked a small representative group of students from the study to review my analysis to see if my perceptions matched theirs. The students told me I had captured the essence of their experience. One comment was "Yes, that seems right." (Conversation M. N.)

Summary

In chapter four I analyzed the data to synthesize an answer to the primary research question. How did students perceive learning in a constructivist classroom? Most of the data regarding the students' experiences were consistent with constructivist theories. Students confirmed increased learning and enjoyment of the process. There were a few variables. Although most of the students liked most of the methods that were used, two or three students found learning in a constructivist classroom more difficult.

As I studied the data I found student voices commenting on growth in the affective domain. Frequently I saw comments that alluded to affective as well as cognitive development it seemed that constructivist theories, as applied in the classroom, provide students with the opportunity for holistic development. It occurred to me that constructivist methods could be used to in the classroom to teach to the entire student.

CHAPTER FIVE

Discussion

Introduction

This study described the students' experiences in a constructivist classroom.

Student voices provided the data to construct the essence of the experience. Moustakas (1994) said Husserl's (1931) concept of essence is commonly held universal thoughts.

The essences are the "qualities without which the thing would not be what it is." (p. 100)

In other words, the essence is the sum and substance of anything. The essence of the phenomenon experienced in this constructivist classroom was student development in both the cognitive and affective domains. Although it was not my goal to teach holistically, that appeared to be the outcome. Students learned the content. Virtually every student said, "I learned more" at some point in their essays or interviews, but they also talked about affective development. Although the students did not use the term affectivity, I read it in their essays and heard it in their interviews.

Study Summary

Chapter One: Introduction

I described the phenomenological study of constructivism as applied in this undergraduate American History II survey course. I defined modern constructivism as a psychological learning theory introduced approximately sixty years ago by Jean Piaget, in which all people construct new knowledge from pre-existing background knowledge and new stimuli. I described the ideas of John Dewey and Lev Vygotsky and how their

assumptions regarding situated social constructivism complement Piaget's theory of cognitive constructivism. I explained the broad underpinnings of constructivism and how interpretations of constructivism as a learning theory vary among psychologists, educators, and philosophers. I presented the problem statement, which was the students' perception of applied constructivism in the classroom, and the anticipated results of the completed study. The study is significant because its focus is on the students' experience as a learner. I had a dual role, in that I was teacher and researcher whose goal was to try to describe the students' experience in a constructivist classroom. I listed and explained the research questions that were used to discover or uncover the essence of the student's experience. The central research question was "What is the experience of college level history students in a course in which constructivist learning theories guide the teaching methodology?"

Chapter Two: The Review of Literature

I began a literature review of the theories supporting constructivism and the methods by which constructivism had been applied. I researched the various theories and interpretations of constructivism. I utilized the work of many authors who have applied constructivism to classroom teaching to formulate the most commonly used traits or elements of applied constructivism. Drawing from the literature, especially Brooks and Brooks (1994), I divided the information into the ten basic elements of constructivism. Constructivist educators most frequently suggest these elements. The ten elements I included are as follows. 1) The acceptance and support of the concept of constructing ones' own knowledge, 2) student autonomy to choose topics of interest and approximate due dates for assignments, 3) extensive use of primary resources, 4) development of

higher order thinking skills 5) requirement of active collaborative learning, 6) open discussions in which multiple perspectives were expressed, 7) disequilibrium was expected to build knowledge, 8) scaffolding was provided to help students through periods of disequilibrium, 9) real assessment was used and, 10) multiple perspectives were encouraged and expected.

Chapter Three: Methodology

In this chapter I described how the research project was implemented. I presented the purpose of the research, which was to describe the students' perceptions of a constructivist classroom. The research approach was a phenomenological qualitative study.

The father of phenomenology was Edmund Husserl. I included a discussion of Husserl's writings, ideas, and terminology. Clark Moustakas and Michael Patton have written about implementing phenomenological qualitative studies. I drew from their work also to complete this study.

Twenty students who were enrolled in an American History II survey class at a Colorado community college participated in the study. They were a self-selected sample as the course is elective, and they had the option of choosing a more traditionally taught American History II survey course if they desired. This is an emergent study and I did not have a formal hypothesis going into the study. It was my presumption that students would enjoy interaction and active class participation. Student participation in a constructivist class is an expected and necessary component. I was aware that some students might find the experience a bit unusual and perhaps a bit challenging. The procedures and methodology section of this chapter included examples of how the elements of

constructivism were applied in my classroom. Issues of validity and trustworthiness were addressed as components of the verification process were also described in this chapter. I included the essay and interview questions and a statement of the processes used while gathering data for the study.

Chapter Four: Analysis

I used the model for analysis suggested by Douglass and Moustakas (1984), which included establishing Epoche, phenomenological reduction, theme variations, and synthesis of meaning. In keeping with the theory of qualitative research I found multiple realities. The essence of a student's experience was dependent upon the individual and his or her perceptions of what occurred in the classroom. The majority of the students responded positively to applied constructivism in this classroom. Nineteen out of twenty essay respondents and five out of five interviewees said they learned more and enjoyed the process of learning in a constructivist classroom. Details of how and why students said they learned more are included in chapter four. I used student quotes to tell the stories and to elucidate my findings. Consistent with constructivism is cognitive development. Virtually all of the students said increased learning resulted; however, the more subtle implications of the students' experience in a constructivist classroom relate to development in the affective domain. In their essays, or while chatting with me during interviews, students talked about improved self-confidence, a wider worldview, increased understanding and appreciation for multiple perspectives, a recognition of elderly people as real people, improved critical thinking abilities, honing independent thinking skills, and a greater toleration for others. I consider constructivism a holistic approach to teaching

and learning because content mastery occurred, but so did development in the less tangible affective domain.

Chapter Five: Discussion

I provided a summary of the study. I did not have a formal hypothesis because of the nature of this study, but I explained the perceptions I had prior to the study and in what ways the data supported my ideas and where they were different. The essence of the study, holistic learning was discussed. I described the highlights of the study and implications, along with the strengths and limitations. The themes that emerged from this study related to learning and affective development. I augmented the literature review in chapter five by researching various learning theories that related to student development and holistic learning theories.

Restating the Hypothesis

I did not have a formal hypothesis. My purpose in this study was to describe how the students' perceived learning in a constructivist classroom. It was my opinion that students would be likely to enjoy constructivist teaching and learning because of the freedom, independent learning, critical thinking and active involvement. I was aware that constructivism demanded more from the students and I did not know whether students would believe that constructing or building their own knowledge was worth the added effort. It occurred to me that students might like some elements of constructivism and dislike others. Regardless of any of my own ideas, my perspective was a teacher's perspective. The purpose of this study was to learn about the student's perspective and to do that I had to wait until the study was completed and the data were reviewed to construct the students' experience.

Although I did not have a formal hypothesis, the data that emerged from this study supported my assumptions about applied constructivism. Most of the students enjoyed most of the elements of constructivism. The less mature learners had trouble thinking critically and writing or verbalizing their thoughts. A few students were at a point in their intellectual development in which it appeared to be difficult for them to see any colors in the world but black and white or the moral equivalent of right or wrong. Constructivism, as applied in this classroom, helped students learn about and accept the fact that multiple realities exist. All students liked the autonomy, but a few disliked the amount of work and self-discipline that applied constructivism entailed.

Highlights of the Results

The highlights of the results include the positive way in which most students experienced constructivism. Although students agreed they had to work harder in this class, when given adequate support and tools they were able to construct new knowledge themselves. They stated that learning was more interesting or more enjoyable because they had autonomy in choosing topics they found most interesting and could choose general due dates for their work. Students reported greater understanding from using primary resources and examining multiple perspectives. The majority of students found reflective journals helpful in reviewing what they had learned and critically assessing why the event or a perspective was important. An ongoing question to students during this class was what do you think about this and why do you think so? It forced students to reflect upon at least ten different events or eras and to synthesize a narrative response.

Greater cognitive development was an expected outcome or highlight of the study. What I did not expect was the affective development students reported. Students stated

that sharing knowledge in the class encouraged them to work harder. They mentioned that the use of multiple perspectives and primary resources helped them learn to see that multiple realities exist. They began to trust their own intellect rather than depending on the ideas of others for all of their knowledge.

Implications of the Study

The implications for using constructivist theories in an undergraduate history classroom are quite good. The application of constructivism in this class was effective. Students involved themselves in their own learning to be successful in the class. Critical thinking, a necessary component of constructivism, was important for all learners to practice.

It was relatively easy foster student cooperation for a successful class. The first step was to introduce the concept of constructivism to pique student interest. I explained that they would be autonomous in choosing research topics and due dates to appeal to their independent thinking. Some students had previous experience with primary resources, but for others the concept was new. I introduced them to primary sources by demonstrating the reality and validity of stories told in the first person. I introduced them to multiple perspectives by reading a number of primary sources regarding the same event, thus demonstrating to students that since people in the resources had a variety of experiences they would also have different points of view. I encouraged the class to be student driven and involved students in peer teaching and learning via their research assignments. I did not want to overwhelm students by leaving all of the teaching and learning to them, so I provided a guided overview of each era before students began their presentations.

The majority of the students in this particular class said they enjoyed learning in a constructivist classroom, their curiosity about the discipline was increased, they appreciated the autonomy, they understood the value of primary sources, and the necessity of multiple perspectives. Students said they worked harder but they learned more.

As part of another study, I continued with constructivist methods with another U.S. History II class the following semester at the same college. In my informal conversations with students I found that the results were much the same. Students who were interested in learning for the sake of learning took to constructivism like ducks to water. Those who were not willing to expend adequate effort were not as successful regarding their final grade, but they said they still liked certain elements of constructivism.

Important Strengths and Limitations

An important strength of this study is that it describes the students' classroom experience regarding constructivist learning theory. Too often, students are the last people educators ask about the effectiveness of teaching methodologies. I asked students to answer the question, what do you think about this learning experience? Their answers helped me to build upon what worked well in the classroom and to eliminate or modify what didn't work as well for future semesters. This study may help other teachers hone classroom methods; ultimately resulting in improved learning experiences for students.

One limitation of this study was that some of the students enrolled in the course were learners with whom I had previously worked. They were familiar with my expectations and teaching methods. Although I modified my normal methods to conform to constructivism, about 20%-25% of the students in this study were former students. Students, who enroll in consecutive courses I teach, tend to be bright and willing to

stretch themselves academically, particularly regarding historical thought. This may have had an impact on their perceptions of constructivism and the success of the class in general. Many of my former students were the core learners and student leaders of the class. It was the mature learners who volunteered to be interviewed. They were the students in the class who utilized freedom in learning to its fullest. It was mature learners, not necessarily chronologically older learners, that constructivism fit the best. Mature learners had the mental capacity to appreciate that multiple realities not only exist and make sense, but that the ideas were intellectually stimulating. These students had the necessary self-discipline to complete assignments in a timely manner without being reminded that they had assignments due soon.

There were also a large number of students who were academically average. They were neither high achievers nor non-achievers. For those students, the intellectual freedom and opportunity to discover increased their learning and their perceived enjoyment of learning. Average students liked most of the aspects of constructivism. The one exception was formalized collaborative learning. The dislike of collaborative learning was nearly unanimous among average to high achieving students.

Other students did the bare minimum to get by. The less mature learners, whether because of inability or unwillingness, were not as successful in the class. In any classroom, there is a strong correlation between effort expended and learning accomplished. I do not believe that constructivist methods failed in comparison to more traditional methods for less mature learners, but that traditional methods allow non-achievers to skim by more successfully than in constructivist classrooms. Constructivist classrooms demand a high degree of student involvement and critical thinking. Class discussions occurred every day

and mature learners were very aware of their peers who participated infrequently. The work was self-guided, but nonetheless involved a great deal of time to reflect on learning and to write about what was learned. What mature learners perceived as opportunities for guided growth and learning in a relatively autonomous environment, less mature learners perceived as freedom from learning because no one made them produce work on a given schedule or told them what they must learn. A college physics teacher who used constructivism in his classroom made the following observation about similar students.

Of course there are still those students of college age who just want the answers and who are quite sorry that I have decided to do things differently. But the challenge of understanding these students well enough to get inside and facilitate disequilibrium in them is also exciting. I am convinced that, whether they realize it or not, many of the students have looked deeper into their own ideas and into the phenomena than their peers who have not had a similar course experience. When you have invented an idea for yourself, it is much more a part of you than when you memorize a description of it from someone else (Dykstra, 1996, p. 202).

A limitation to this study is that it is possible that my interpretation of student perceptions could be interpreted differently by other researchers. I had the opportunity to observe students throughout the fifteen-week semester. Students came to see me during my office hours, so I knew who was having problems and how to ameliorate them. I used my teacher's intuitive sense to provide scaffolding for the entire class when I thought it was necessary. I also worked with individuals when they were not tracking the information well. I used all of my senses when I taught and was very aware of students. Their eyes or body language told me whether or not they understood the concepts. I teach at a community college where classes are small, so I had the opportunity to get to know my students. I observed the students' progress throughout the semester. What has

worked well for me with this class and within this discipline may or may not work well for others in different or similar situations.

As Von Glasersfeld (1996) said, many teachers have intuitively utilized elements of constructivism in their classes. The literature states that constructivism has been applied in virtually all disciplines and has been used with students of varying ages from elementary school through college. The elements of constructivism are implemented in different ways depending upon the academic discipline and the age of the learners. Good teachers can take the valuable lessons from this or any other study and apply the appropriate lessons to his or her circumstances.

Additional Literature Review

After completing the analysis portion of this study, ideas emerged that required further research. It occurred to me that the difference between constructivism, as it was applied in my classroom, and traditional teaching was the affective as well as the cognitive development that occurred by using constructivist methodologies. Cognitive development and deeper learning is consistent with constructivist theories. Students who provided data for this study indicated that cognitive and less tangible affective development occurred. I completed additional review of literature to see how constructivism fit with other teaching and learning theories particularly those concerned with holistic learning. A holistic approach to learning is "one that views the human condition in its totality and each person as more than a collection of physical, social, and psychological components." (Vander Zanden, 1995, p. 45)

Humanism

As I began a search on holistic learning, I found that humanists strive for cognitive and affective development in teaching and learning. Carl Rogers and Abraham Maslow are humanists who believed in maximizing human potential by allowing students freedom of choice and self-direction (Maslow, 1968; Rogers, 1970).

Maslow is best known for his hierarchy of human needs (1954, 1960). He theorized that certain basic needs must be satisfied before one can become what he termed "self-actualized". Self-actualization is the development of human beings to reach their full potential. Constructivist methods allow students to be autonomous and begin to see the limitlessness of their own potential. One of the study participants commented, "We are just spoon fed so much information. How do you form an opinion if you don't have one?" (Interview K. R.) In other words, this student believed having freedom to explore thoughts and ideas independently makes people think. Self-actualization is more difficult for passive recipients of information.

Humanists believe students learn only to the degree that the information makes sense to them as individual learners (Myers, 1998). Humanists ascribe to learner-centered teaching. Students are actively involved in deciding what to learn, how they will learn, seeking resources, and ultimately living with the consequences of their choices. Teachers are facilitators of the process (Myers, 1998). Carl Rogers (1977) said he questions whether anyone can teach anyone else anything of value because real learning is intrinsically motivated and must come from within. As quoted by Myers (1998), Hamachek (1977) described humanism in education.

Humanistic approaches to teaching and learning keep in mind that students bring their total selves to class. They bring heads that think and feel. They bring values that help

them to selectively filter what they see and hear, and they bring attitudinal sets and learning styles that render each student unique and different from all the rest. Humanistic teachers start out with the idea that students are different, and they recognize that students may still be different at the end of an academic experience.” (p. 156)

Carl Rogers (1980) uses the term affective-experiential learning to describe the phenomenon of holistic learning. Rogers (1980) said genuineness, acceptance, and empathy establish an environment conducive to learning and student development. He defines genuine as a real and honest relationship between teacher and learner. An environment of acceptance in the classroom allows learners to believe that "someone understands how it feels and seems to be me, without wanting to analyze or judge me. Now I can blossom and grow and learn." (Rogers, 1980, p. 272) Empathy provides a more humane environment where learners are respected for their knowledge and abilities. These environmental factors result in significant learning (Rogers, 1980). Rogers (1980) produced a list of fundamentals for person-centered learning. These elements are the basis for humanistic teaching: 1) teachers trust their students have the capacity to think for themselves; 2) responsibility for learning is shared; 3) learners provide additional resources; 4) students explore their own interests; 5) an atmosphere of sharing ideas is present; 6) the content is important, but learning how to learn is more important; 7) self-discipline replaces external discipline; 8) self evaluations are the norm; and 9) growth promoting climate leads to deeper learning.

Rogers' fundamentals of person centered learning contain elements that are very similar to those of constructivism. His goal was to develop the affective, while in my classroom affective development appeared to be an outgrowth of constructivism. The

only real difference between my classroom applications of constructivism and Rogers' person centered learning was his suggestion of self-evaluations. I used traditional exams because there were average learners and non-achievers in my class. My first choice would have been to assess based exclusively upon classroom activities rather than exams, but many students are not interested in topics that will not be on the examinations. Without tests I did not think there would have been adequate accountability. I like Rogers' humanistic learning theory and I think more elements of his theory can be blended with constructivism to improve upon student centered learning.

Student Development

Arthur Chickering (1969) said colleges are developmental communities. His seven vectors of student development as quoted by Widick, Parker, and Knefelkamp (1978) include "developing competence, managing emotions, developing autonomy, establishing identity, freeing interpersonal relationships, developing purpose, and developing integrity." (p. 20) The vectors of student development fit well with constructivist theories and affective development. Chickering (1969) says this development occurs not as a result of maturation but as a result of stimulation. Chickering added that to stimulate development colleges should: "(1) engage students in making choices, (2) require interaction with diverse individuals, (3) involve students in direct and varied experiences, (4) involve students in solving complex intellectual and social problems without demands for conformity to authority's views, and (5) involve students in feedback and making objective self assessments." (Widick, Parker, and Knefelkamp 1978, p. 27)

Many of Chickering's ideas are consistent with constructivism. What he describes as student development falls within the affective domain. In my study students made

choices, they interacted with diverse classmates and their elders. Their learning involved writing, reading, observing, critical thinking, and discussion. Chickering also suggested self-assessment as part of student evaluation.

Intellectual and Ethical Development

William Perry (1970) developed a theory regarding intellectual and ethical development. His theory depicts a nine-position continuum representing student development. His theory is clustered into four categories (King 1978). The first is dualism. This is seeing life in terms of black and white, or right or wrong, with nothing in between. The second is multiplicity, where differing perspectives are not necessarily wrong, just different. Third is relativism, in which building blocks make up the big picture. The last is a commitment to relativism, in which students accept their responsibilities in a complex world.

I found this to be interesting. Awareness of this hierarchy illuminated the experiences students described about what occurred in the classroom. Some of my students told me they had a difficult time seeing the world in anything but black and white, which is an example of dualism, but as the semester progressed they began to see shades of gray. I had other students who understood and appreciated multiple perspectives, which is an example multiplicity. Multiple realities were acceptable and intellectually stimulating to some students. Building the bigger picture from discrete facts within the classroom was practicing relativism. Perhaps a few the mature learners in the class had progressed to a commitment to relativism. It could be suggested that constructivism encourages students to develop intellectually and ethically based upon how constructivism appears to help students progress through the steps of Perry's theory.

Andragogy

Andragogy, which is adult teaching and learning, rests on two principles. First, knowledge is constructed by the learner and second, learning is a process of interpretation, integration, and transformation (Pratt, 1993). Malcolm Knowles (1984), as quoted by Pratt (1993), described seven elements of andragogy which include: 1) setting the climate, 2) learner involvement, 3) learners choose what they need to learn, 4) learners develop objectives, 5) learners design plans, 6) learners complete plans, and 7) learners evaluate their learning. These principles of learning are consistent with constructivism and affective as well as cognitive development. According to Knowles (1984), the andragogical model centers on the student.

Knowles (1984) said that andragogy assumes a great deal of background knowledge, acknowledges that adult learners seek knowledge on a need to know basis, that they are problem centered, and are intrinsically motivated to learn. Although not consistent with all of the elements of constructivism, many of these principles were applied in my classroom. Constructivism and andragogy support holistic learning in which students are actively involved. Many of the methods (1 through 6) used in andragogy are consistent with constructivism as it was applied in my class. The exception here is also self-evaluation.

Principles of Good Practice

Arthur Chickering and Zelda Gamson (1991) produced a list of good practices in undergraduate education. Many of their ideas are also consistent with constructivism and suggest a holistic approach to student development. Good practice includes these

principles: 1) student and faculty contact, 2) cooperation among students, 3) active learning, 4) prompt feedback, 5) time on task, 6) communication of high expectations, and 7) respect for diverse talents and ways of learning. Communication is a key component of these best practices that contribute to cognitive and affective development.

These "good practices" are also consistent with constructivism as it was applied in my class. The student and faculty contact was consistently good, students were actively involved in their own learning, and diversity was accepted without question. Students frequently worked collaboratively. However, at the time I didn't realize the intensity of the students' dislike for collaborative learning or as they termed it group work.

Transformational Learning

Transformational learning changes an individual from that time of the experience and beyond. Transformational learning is based on the humanistic ideals that people need to have control of their lives and how they learn. An article by Carolyn Clark (1993) compares Jack Mezirow, Paulo Friere, and Laurent Daloz. Mezirow believed that learning is filtered through the lens of the learner and that reflection allows broader perceptions to develop. Friere, more radical than the others, believed that transformational learning should focus on social changes. Daloz perceives transformational learning in a formal educational setting as a risky journey for students. Students have to let go of old concepts to explore new ideas. Daloz (1986) believes teachers should strive to mentor students in a caring environment to foster personal development over content. Transformational learning is another theory that takes a more holistic approach to learning.

In the study, learners viewed everything through their own lens of reality. When I graded the exams I looked for critically thinking, supporting evidence for the hypothesis,

and the ability to express abstract thoughts. Facts in the answers were important, but also important was how the facts were interpreted. Exposure to multiple resources encouraged students to explore new and different thoughts. Daloz said teachers should be more concerned with personal development than content; it appears to me from the data in this study that constructivism can do both. Increase cognitive and personal development in the classroom.

Affectivity and Learning

Piaget believed that cognitive development without affective development is incomplete. Most of his studies related to cognitive development rather than affective development because Piaget was most interested in cognitive disequilibrium so that is where he focused his attention. He thought studying affectivity was more difficult than studying cognition, and because affectivity is frequently associated with "mushiness" and is less scientific (Wadsworth, 1996) he focused on cognitive development instead. Brown and Weiss (1987) suggested that although Piaget approached a synthesis of the affective and the cognitive, it was not completed. As quoted by Wadsworth (1996) Piaget said, "There is no behavior pattern, however intellectual, which does not involve affective patterns as motives." (Piaget and Inhelder, 1969, p. 158) A metaphor used by Brown and Weiss (1987) suggested that affectivity sorts through new ideas and decides which ideas will live and which will die. "This gatekeeper role of affectivity has largely been overlooked by many interpreters of Piaget's theory. Those interested in the implication of Piaget's theory of education or clinical practice are encouraged to attend to Piaget's affective and well as cognitive conceptions. Intellectual development is a unity of the two." (Wadsworth, 1996, p. 146)

Bliming (1999) said that active learning is important from a student affairs perspective also because it provides "inclusive learning environments by inviting the experience of all of the students to become part of the learning process." (p. 30) The model suggested is consistent with constructivist teaching and learning. Bliming (1999) defined active learning as utilizing students' background knowledge, encouraging students to reflect on their learning, using multiple perspectives to broaden understanding, and helping students learn to use what they learn in the classroom in other experiences.

Summary of Additional Literature

I explored many theories of personal and student development that are similar in content or structure to constructivism. Theorists have posited many of the same ideas with slightly different verbiage to improve student and human development through formal education. The theories have different names and sometimes different foci, but I find it curious that there are so many compelling arguments for involving students in their own learning, but yet traditional methods of transmitting knowledge are still the most common. If there are teaching methods that not only increase mastery of content (cognitive domain) but also aid in intellectual and ethical development (affective domain) educators may be doing students a disservice by maintaining the status quo.

Perhaps my conclusion that constructivism aids in cognitive and affective development, thus providing a holistic approach to teaching and learning, is not a surprise to constructivists. When I was researching constructivism at the outset of this study I wasn't looking for affective development, I was looking for cognitive development. Regardless, students' voices remarked on both cognitive and affective development.

Consistencies with the Literature Cited

The majority of the studies regarding applied constructivism took place in elementary and secondary schools. The academic disciplines in which constructivism was applied included math, social sciences, English, communications and especially science. Most of the studies I read that related to higher education were specific to teacher training programs for elementary through secondary schools and how pre-service and in-service teachers could utilize constructivist principles in the classroom. I searched for studies on constructivism that focused on the students' perceptions of the learning experience in an American History II survey course, but I did not find any that specifically addressed it. Most of the literature I read presented compelling arguments for implementing constructivism in the classroom rather than studies about applied constructivism.

One study (Cross & Steadman, 1996) that took place in a college history course focused on peer learning, intellectual development and critical thinking. Although these goals are related to constructivism they are different. The research question in this study asked if "it" was working. There were multiple realities in the study with no clear answer. The researcher made several recommendations, one of which was to ask the students to evaluate if the methods were working. Asking students the question seems like a straightforward approach to finding out if your methods are working.

In other research, constructivist methods were applied in middle school and high school history and social studies classes. Teachers used the National History Day program as a springboard to implementation. The National History Day program supports active learning of history for students and educators in elementary and secondary schools. The National History Day program is a national contest among elementary and secondary

students to develop and present original history projects. Many of the active learning strategies suggested by the National History Day program have similar components to applied constructivism. In a study quoted by Marlowe & Page (1998), Page, (1992) said involvement in The National History Day program allowed students to "learn content, gain self confidence, gain mastery and a feeling of competence, gain a sense of who they are in relation to others, and learn the importance of group work." (p. 85) Although it was not articulated, it appeared that affective development accompanied cognitive development in this study of active learning projects in grades four through twelve.

Constructivist methods are frequently used in science classrooms. Proponents of constructivist methods in science classes say that teaching students to construct their own knowledge will result in better scientists. Original scientific thought is valued more highly in the scientific community than reproduced thoughts. A rubric to measure science teaching in a constructivist classroom is called Expert Science Teaching Educational Evaluation Model (Burry-Stock & Oxford, 1994). This quantitative measure is used for assessment of schools and teachers more than to measure for student success.

In comparing my study with the literature on constructivism my data supported the expectations theorists have posited. The majority of students (nineteen out of twenty essays and five out of five interviews) in my class support the constructivist premise that students learn more in a constructivist classroom. In the interviews or essays almost every student commented on increased learning and enjoyment of the process. Students appreciated the autonomy in choosing their assignments and due dates. Real assessments were helpful in shifting information to long term memory for students. Students said their

knowledge of history was deepened and they enjoyed learning via constructivist methods. Their perceived understanding of history increased.

Inconsistencies with the Literature Cited

It appears that the motivating factor for writing about constructivism is the author's desire to share information on what he or she perceives as a better teaching methodology. For that reason I can understand why authors emphasize the positive aspects of constructivism. Many of the authors are also linked with elementary and secondary schools and therefore have different circumstances and agendas. Students in grade schools have to produce work, they have to attend class, and the teachers have to meet state-imposed standards to receive funding for their schools. There is more coercion involved to make sure all students are involved in class work.

College students have more autonomy. Students choose whether or not to attend classes, whether or not to complete the assignments, and the amount of effort they will expend. The only control college faculty have over students relates to the student's grade for the course. An inconsistency when comparing my results with the literature is that one college level physics teacher said that some students simply are not adequately motivated to learn independently. Over the past decade, it has been my experience that a small percentage of freshmen students attend college because they do not want to get a job and their parents are willing to pay for them to attend college. As a teacher, I try to motivate students by making the classes interesting through varying the teaching techniques, methods, activities and agendas, but there are some students who are extremely difficult to motivate. I found that to be true of students in my class for this study. I suggest that traditionally taught classes are simply easier for uninspired students. Constructivist

methods demand a high degree of student involvement and active learning. Most of the students were willing to accept the challenge of constructing their own knowledge, but for the less mature students it was simply "a lot of work!" (#8)

Future Studies Envisioned

I suggest possible quantitative studies and one qualitative study. The quantitative studies, simple comparisons, would be relatively easy to implement and to measure. A hypothesis could be that students in a constructivist classroom learn more or improve their critical thinking skills as a result of the constructivist classroom experience, that there is no difference between traditional or constructivist methods, or that traditional methods are more effective than constructivist methods. Some people consider quantitative studies with a formal hypothesis and supporting statistics more compelling.

Another quantitative study could focus on student outcomes. Do students learn more in a constructivist classroom or not? Quantifiable tests could be administered comparing achievement scores between two classes, one a traditionally taught course and the other a constructivist course. The independent variables would be the teaching methodologies (constructivism or traditional methods) and the dependent variable would be the performance or achievement of the students. The measures could simply be pre and post tests given to both classes to assess comprehension and competency.

Another quantitative study would be the measure of critical thinking development in a constructivism classroom. There are various instruments used to test critical thinking abilities. The Watson-Glaser Critical Thinking Appraisal (Pascarella and Terenzini, 1991, p. 143), The California Critical thinking Skills Test, or the California Critical Thinking Disposition Inventory tests are instruments that are easily accessible and would provide

the statistics needed for a quantitative study. Comprehension tests could be administered on a pre-test and post-test basis. The same students could be tested twice, or two tests could be completed as a comparison with a traditionally taught course.

An area that I would find interesting would be a qualitative study on affective development or holistic learning. If or how a student is affected by teaching methods that are inclusive of the student's entire self. A qualitative study about the less tangible affective development and how it affects teaching to the entire student would be more challenging but also very interesting.

Concluding Remarks

I have enjoyed watching students construct knowledge. Although the quality of learning was dependent upon the students' intellectual maturity and their willingness to complete assignments, students consistently reported learning more. Constructing one's own knowledge was a great way to learn about history. It forced students to take ownership of creating rather than mimicking knowledge and to think independently and critically. These are lessons that can be applied in other areas of students' lives and good experience for living in our complex world. Constructing their own knowledge encouraged students' engagement in the process because if they were not engaged in the coursework they would not pass the class. Students could not simply count seat time toward learning anything in a constructivist classroom; they had to be active participants in the process.

The affective development that occurred is also important. The potential for using this holistic, learner centered methodology is quite good. The added benefit to students of learning in an environment that encourages the construction of knowledge through their

own lens of reality if good. That constructivism also promotes increased civility, understanding, tolerance, and acceptance of differences is impressive.

Elements of constructivism have been used in all of my classes since this study was completed. I have reduced the number of required reflection papers and provided options regarding the sharing of research. The rest of the course requirements are consistent with my syllabus from this study. It was a pleasure to see students actively seeking knowledge through the multiple lenses of reality. In the words of one of the students who participated in this study, "Constructing your own knowledge! What a concept!" (#15)

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APPENDIX A

Glossary

Accommodation: one's current understanding or schema to incorporate new information (Myers, 1998, G-1)

Assimilation: A cognitive process in which new experiences become part of one's existing schemas.

Big Ideas: Discrete information is combined to formulate a global view through inductive reasoning. As learning occurs, new schemata develop. As learners try to make meaning, shifts in perceptions occur or are constructed (Schifter and Fosnot, 1996). The shift from one-dimensional to multi-dimensional thinking occurs.

Constructivism: A psychological theory of learning (Piaget) that states all learning is constructed through the learner's lens of reality. New information is added to background knowledge and learning occurs.

Equilibrium: Balance that occurs between assimilation and accommodation. (Wadsworth, 1996).

Equilibration: The process of moving from disequilibrium to equilibrium (Wadsworth, 1996).

Disequilibrium: The imbalance that occurs between accommodation and assimilation (Wadsworth, 1996).

Learning: A permanent change in one's behavior due to experience (Myers, 1998, p. 243).

Mature learner: Learners who understand abstract ideas and multiple realities. This is not dependent upon chronological years.

Noema: The noema is more concrete. It is the physical experience of a phenomenon (Husserl, 1931).

Noesis: The noesis is less concrete. It is the way in which the noema or the physical phenomenon is experienced (Husserl, 1931).

Phenomenology: Participants in a study describe their experiences in detail. It is also a modern philosophy founded by Edmund Husserl (Creswell, 1994).

Scaffolding: The support teachers give to students to help them expand their knowledge from a lower to higher level (Hogan & Pressley, 1997).

Schema: The mental structures with which individuals organize and adapt to their environment (Wadsworth, 1996).

Schemata: Plural of schema.

Zone of Actual Development: (ZAD) The level at which learners can independently solve problems (Wadsworth, 1996).

Zone of Proximal Development: (ZPD) The level at which learners can solve problems with the aid of a teacher or more advanced peer (Wadsworth, 1996)

APPENDIX C

Information given to students with the course syllabus

I am a doctoral candidate in the School of Education at Colorado State University. I am gathering research on a theory of learning called constructivism (learners construct their own knowledge based upon primary sources and his/her own background knowledge) and how it can be applied to classroom settings. There are many proponents of constructivism, many of whom you may be familiar with, people like John Dewey, Jean Piaget, Lev Vygotsky, and others. I will publish the results as part of doctoral dissertation.

The reason I chose this topic is because I am a proponent of constructivist methods in the classroom. I think students should be active in the classroom because they will learn more and be able to apply that knowledge to real life situations. All students have valuable cultural experiences that are worthy of sharing and discussion. I chose this site to complete my research because I am employed here as a full time faculty member. I teach a full load of classes each semester and I am an experienced college faculty member. The reason this class was selected is because it is an elective in the social sciences. It is a sophomore level course. Students who enroll in an American History II survey course are usually among my best students every semester.

The possible benefit you may accrue from being included in this study is a better understanding of American History and how it is interpreted. You may also gain friendships, as you will be working closely with one another. You will have the opportunity to be actively involved in your own learning and deciding what you want to learn about history.

The possible risks to you as a participants are that you will be learning to think about history in a different way and learning how to construct your own learning at the same time. It may be frustrating at times. Psychologist Jean Piaget talks about cognitive dissonance as an important step in intellectual development. You will hear about ideas or perspectives that may not agree with your old ideas or perspectives, this cognitive dissonance will help you to grow intellectually, but it can be uncomfortable until you reach new conclusions based upon the old and new information.

Your anonymity will be respected and anything you tell me in will not be traceable back to you in my final paper. You can be assured of total confidentiality. You can also be assured that your perceptions as a student in constructivist classroom will in no way affect your grade for the class. I will ask all of your to answer several essay questions at the end of the semester anonymously. I will also ask for volunteers to participate in recorded interviews after the semester is over and grades have been posted so I can better understand the phenomena. If you agree to be a participant in this study, you will be asked to sign a release form stating that you are voluntarily participating in this phenomenological qualitative study about constructivist theories adapted for classroom usage

APPENDIX D

Lay Summary given to students with the informed consent forms

My name is Joanne Maypole. I am a doctoral candidate in the School of Education at Colorado State University. I am gathering research on a theory of learning called constructivism (learners construct their own knowledge based upon background knowledge, primary sources, research, classroom discussions) and how it can be applied to classroom settings. There are many proponents of constructivism, some of whom you may be familiar with. John Dewey, Jean Piaget, and Lev Vygotsky are the more famous names, but many educators whose names are less well known support constructivist theories adapted for classroom use.

I chose this topic because I am a proponent of constructivist methods in the classroom. I think students should be active participants in their own learning because I believe they will be better able to apply that knowledge to other situations. However, I want to know what the experience is like from a student's perspective.

I chose this site to complete my research because I am a full time faculty member at this institution. The reason this class was selected is because it is an elective in the social sciences. There are other sections available if you prefer to enroll in a traditionally taught course. This is a sophomore level course, and students enrolled in an American History II survey course are among my best students each semester.

Your anonymity will be respected and anything you tell me about the experience will not be traceable back to you in my dissertation. You can be assured of total confidentiality. You can also be assured that your perceptions as a student in constructivist classroom will in no way affect your grade for the class. I will ask

volunteers to anonymously answer several open-ended essay questions at the end of the semester. I will ask for volunteers to participate in recorded interviews after the semester is over and grades have been posted. By talking with some of you I can gain a better understanding of the phenomenon. If you agree to be a participant in this study, you will be asked to sign a release form stating that you are voluntarily participating in this phenomenological qualitative study about constructivist theories adapted for the classroom. There are no known benefits or risks to you for participating in this study. I will publish the results of this study as part of my doctoral dissertation.

APPENDIX E

Course Syllabus

Course Description:

This is a survey course of an American History II survey course. We will study the political, social, economic, and cultural events that have shaped America post 1865.

Course Responsibilities:

There will be two essay exams.

You will be required to maintain a reflective journal to state your conclusions or interpretations of some of the events and/or people we will discuss in class.

You will be required to complete one oral history assignment.

You will be assigned other research assignments throughout the semester that will contribute to your grade.

You will keep all of your assignments and put them into a portfolio for an additional grade for the course.

Much of the learning in any class goes on in the classroom, therefore, you will be expected to attend class regularly and to participate in all class activities. If you are absent **it is your responsibility** to find out what you have missed. I will frequently give assignments to be completed during class, if you are absent you forfeit the points, no make up points will be given. If you are assigned a research presentation you will be expected to present your research to the class, turning in notes on the research at a later date is not acceptable.

Extra Credit:

Extra credit may be earned by answering several open-ended questions that are relevant to history.

OR

An equal number of extra credit points may be earned by answering several open-ended questions regarding a research project on constructivist teaching theories as applied in the classroom.

Late and Missing Work:

If you turn in assignments after the due date, your grade will be lowered accordingly. If you fail to complete any assignment you will receive a zero.

You must do our own original work on all assignments.

Course Grade:

Each exam is worth 100 points

Miscellaneous assignments are worth 5 to 25 points

Oral history assignment is worth 50 points

Reflective journal entries will be worth 10 points each

Portfolio of completed coursework is worth 25 points

Extra credit assignment (either history OR research questions) is worth 25 points

Grade Distribution:

90% to 100% = A

80% to 89% = B

70% to 79% = C

60% to 69% = D

59% or lower = F

TENTATIVE schedule of topics and assignments:

Week One: Course Introduction. Reconstruction. Read chapter 16.

Week Two: American West. Read chapter 17.

Week Three: Industrialization and Urbanization. Read chapters 18 and 19.

Week Four: Political Realignments in 1890s. Read chapter 20.

Week Five: The Progressive Era and Progressivism. Read chapter 21.

Week Six: The Great War. Read chapter 22.

Week Seven: The Great Depression. Read chapter 23.

Week Eight: The New Deal. Read chapter 24. Mid-term essay exam.

Week Nine: America in World War II. Read chapter 25.

Week Ten: World War II.

Week Eleven: Truman and the Cold War. Read chapter 26.

Week Twelve: 1950s. Read chapter 27.

Week Thirteen: 1960s Turbulence. Read chapter 28.

Week Fourteen: Vietnam and Decline in Confidence. Read chapters 29 and 30.

Week Fifteen: Reagan, Bush Eras, and America in flux. Chapters 31 and 32. Final Essay Exam Portfolio is due.

APPENDIX F

COLORADO STATE UNIVERSITY INFORMED CONSENT TO PARTICIPATE IN A RESEARCH PROJECT

TITLE OF PROJECT: The Student's Perceived Experience in the Constructivist Classroom

NAME OF PRINCIPAL INVESTIGATOR: Dr. Tim Davies

NAME OF CO-INVESTIGATOR: Joanne Maypole

CONTACT NAME AND PHONE NUMBER FOR QUESTIONS/PROBLEMS:
Joanne Maypole (303) 404-5375

SPONSOR OF PROJECT: N/A

PURPOSE OF THE RESEARCH:

The purpose of this qualitative research is to describe the essence of the student's perception of a constructivist classroom experience. Constructivists theories have yet to be transformed into prescriptive teaching models. A teacher practitioner is the most appropriate researcher to study the students' perceptions of a constructivist learning experience in the classroom.

PROCEDURES/METHODS TO BE USED:

I am researching a theory of learning called constructivism. In a constructivist classroom, students are active participants in their own education. Students "construct" their own knowledge based upon the interaction of their past experiences and new ideas. Constructivists do not believe there is a body of knowledge that exists independently of the learner. They believe that people construct their own knowledge by assimilating new thoughts into their existing body of knowledge.

The history course you have enrolled in is part of this study. I will teach the course using primary sources, discussions, guest speakers, research assignments, field experiences, a secondary source textbook, and media presentations. What makes this course different from others is that I will expect you to construct your own interpretations of history based upon your own experiences and the new ideas you will encounter in the class. When you need my help to do this, I will assist you.

Will all of you make the same interpretations or come to the same conclusions? Probably not. Is that okay? Most definitely. You will learn to think more critically using these methods, and if you think critically you may not always agree with everyone else. That is acceptable and encouraged as long as you have used sound reasoning to come to your conclusions.

The formal research study will begin approximately four weeks into the semester. The pedagogical reasoning for this is to provide you with a better understanding of the constructivist learning through scaffolding. Scaffolding means that during the first few weeks of the semester I will be more active in the presentation of materials. As you grasp a better understanding of constructivist learning and what it means you will gradually take more control of your learning processes. By the time the study begins formally, you will know what is expected of you as learners and what to expect of me as facilitator.

Subject Initials_____ Date_____

I will ask for volunteers to participate in the data collection aspect of the study. I will give you extra credit to answer a few open-ended essay questions regarding the experience of being a student in a constructivist classroom. If you don't want to answer questions regarding the study, I will give you an opportunity to earn an equal number of extra credit points by answering open-ended essay questions about history instead. (I will have a colleague collect the essays so it will not have a negative effect on your grade if you choose to not participate in the study). I will also ask for six to eight students to allow me to tape interviews with them after the semester is over and grades have been posted. By talking with student volunteers, I can get a deeper and richer understanding of your experience. The interview should take about one hour of your time. We may have individual or focus group discussions to facilitate that process. You don't have to have enjoyed learning in a constructivist classroom, only be willing to tell me what you thought about it.

Many educators and psychologists support constructivism as a learning theory, but it is important for me as a teacher to understand how the student perceives learning in a constructivist classroom.

RISKS INHERENT IN THE PROCEDURES:

It is not possible to identify all potential risks in research procedures, but the researcher(s) have taken reasonable safeguards to minimize any known and potential, but unknown, risks. There are no known risks involved in this study.

BENEFITS:

There are no known benefits to participating in this study. It is possible that you will gain a better understanding of historical interpretation and hone your critical thinking skills. You may gain new friends, as you will be working cooperatively for a good portion of the course. You may improve your presentation skills, as you will also be presenting research assignments in class also. You will have the opportunity to be actively involved in your own learning in a course that values all ideas, cultures, and experiences.

CONFIDENTIALITY: As suggested in Gliner and Morgan (1998) your names will not be used on transcriptions, tape recordings, questionnaires or data forms. I will use a numerical code, kept separately from the data, which will allow me to link the data with the people. Characteristics of individuals will be changed to protect confidentiality. Audiotapes of the interviews will be listened to in privacy so there will not be an issue of eavesdropping. The location of the college, the college name, and the names of the participants will not be used in the final dissertation. Any demographic information that might identify an individual participant will not be included in the study. Data will be kept for a period of three years in a locked file cabinet with the names of participants stored separately. After three years has passed, (federal law requires that the data be kept for three years) the information will be destroyed.

LIABILITY:

The Colorado Governmental Immunity Act determines and may limit Colorado State University's legal responsibility if an injury happens because of this study. Claims against the University must be filed within 180 days of the injury. Questions about subjects' rights may be directed to Celia S. Walker at (970) 491-1563.

Page 2 of 3 Subject initials _____ Date _____

PARTICIPATION:

Your participation in this research is voluntary. If you decide to participate in the study, you may withdraw your consent and stop participating at any time without penalty or loss of benefits to which you are otherwise entitled.

Your signature acknowledges that you have read the information stated and willingly sign this consent form. Your signature also acknowledges that you have received, on the date signed, a copy of this document containing 2 pages.

Participant name (printed)

Participant signature

Date

Witness to signature (project staff)

Date

PARENTAL SIGNATURE FOR MINOR

As parent or guardian you authorize _____ (print name) to become a participant for the described research. The nature and general purpose of the project have been satisfactorily explained to you by _____ and you are satisfied that proper precautions will be observed.

Minor's date of birth

Parent/Guardian name (printed)

Parent/Guardian signature

Date

Page 3 of 3 Subject initials _____ Date _____