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DISSERTATION

USING EXPERIENTIAL CONSTRUCTIVIST TEACHING METHODS IN THE COLLEGE CLASSROOM: LEARNING MOTIVATION IN AN AMERICAN HISTORY COURSE

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

Fort Collins, Colorado

Fall 2000

COLORADO STATE UNIVERSITY

August 14, 2000

WE HEREBY RECOMMEND THAT THE DISSERTATION PREPARED UNDER OUR SUPERVISION BY DONALD GENE QUICK ENTITLED USING EXPERIENTIAL CONSTRUCTIVIST TEACHING METHODS IN THE COLLEGE CLASSROOM: LEARNING MOTIVATION IN AN AMERICAN HISTORY COURSE BE ACCEPTED AS FULFILLING IN PART REQUIREMENTS FOR THE DEGREE OF DOCTOR OF PHILOSOPHY.

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ABSTRACT OF DISSERTATION

USING EXPERIENTIAL CONSTRUCTIVIST TEACHING METHODS IN THE COLLEGE CLASSROOM: LEARNING MOTIVATION IN AN AMERICAN HISTORY COURSE

The teaching of history in the college classroom is seeing a movement away from the traditional classroom methods of lecture and the showing of a video every week or so. Students are being empowered to use primary sources and personal research to learn the historical facts and to "think like historians." The students should be exposed to the historical documents and artifacts and allowed to create their own interpretation.

Experiential and constructivist teaching methods can be used to implement this mandate. Students are allowed to experience the event or material, reflect on that experience and other related life experiences, and formulate their own interpretations of the event. The history course can be organized in such a way as to have a series of these cyclic events that are interrelated to create an ever-expanding upward spiral of learning and knowledge enhancement.

This study looked at the effect that this experiential constructivist method would have on the student's motivation to learn. Two sections of an American History class were selected for the study. One was taught in the traditional way and the other was taught using an experiential constructivist method. The Motivated Strategies for Learning Questionnaire (MSLQ) was used to measure the students' motivation in a learning environment. In both the quantitative and the qualitative data there was found to be no significant difference between the motivation of the students in either section. However,

there were limitations due to experimental mortality and teaching methodology and delivery that were introduced into the study that could not be controlled. Further study needs to be conducted with better controls on the sample size, teaching methods, and measures of learning. Future research may also be more effective if it more closely looks at learning: compare to motivation to final grades and analyze the reflection papers for synthesis and interpretation. Also, conduct interviews or focus groups to provide a richer body of data to analyze.

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CHAPTER I - INTRODUCTION

There is a movement in the teaching of history away from the traditional lecture method to a more student-centered approach, an approach where the students are encouraged to "think like historians" (Brakel, 1995; Kars, 1997; Miller, 1995; Obrochta & Evans, 1996). There is also computer software designed to this end (Miller, 1995) and interactive software is available (Taylor, 1994). Students are encouraged to find resources on the World Wide Web (Web) and other electronic and textual resources (Goldberg, 1996; O'Malley & Rosenzweig, 1997). Thus, students are being encouraged to use primary sources and archival materials whether they be on the Web, from prepared texts, or from visiting museums to understand the historian's task (Kars, 1997; Obrochta & Evans, 1996). Plus, they are being taught to understand that, built into the written history which they are studying, is the historian's personal insights, biases, and limitations, and that this helps them discover not only the perils of studying history but also its pleasure (Brakel, 1995).

Students can be empowered through the use of primary sources and personal research (Goldberg, 1996) and should not be presented with a single celebratory past (Chu, 1996). They should be allowed to develop their own histories, so they can make sense of their present social lives (Blanco & Rosa, 1997) and be allowed to personalize the structures of history (Halldén, 1997).

Borries (1997) found that adults are no longer the persons to whom young people turn for historical interpretation. Lee, Dickinson, and Ashby (1997) conducted studies

with children and have found that they are capable of giving plausible reasons for actions in history. Carretero, López-Manjón and Jacott (1997) report that students will personalize historical events. Voss and Wiley (1997) found that the argumentative essay is better than the narrative essay in internalizing the content, suggesting that it is better to have the students take a position on a topic than it is to have them develop just a narrative of the facts.

Experiential and Constructivist Methods

There are adult learning methods that can be used to implement this student-centered teaching history mandate. Boud and Walker (1992) describe experiential learning as having several levels of learning in an action and reflection model. Karl Marx and Paulo Freire call this "praxis" (Freire, 1970a; Kitching, 1988; McLellan, 1969). During the event, reflection occurs as interaction between the participants and the specific activity. Learners, even in a lecture, will experience an idea and reflect on the idea. Schön (1983) refers to this as reflection-in-action. The activity is a series of these personal experiences and reflections. After the event or experience, reflection also occurs in the form of discussions with fellow students and instructors. Instructors can also encourage personal reflection in the form of journals or diaries. However, some preparation or focusing must be made before entering the learning event (Boud & Walker, 1992; Joplin, 1981). Students must be prepared to learn the concepts. This could be formal preparatory training or just the instructor explaining the intended goal.

Flick (1993) relates that "hands-on activities usually emphasize students' logical-mathematical, linguistic, and spatial intelligences" (p. 1). He goes on to state that "it draws its philosophical support from theoreticians such as Piaget, Dewey, and Bruner,

who collectively represent a constructivist view of knowledge and learning" (p. 1). Simply put, the constructivist notion is that experiences allow students to develop their own meaning of the world around them using past as well as present experiences. Saunders (1992) explains this as:

> Meaning is created in the mind of the student as a result of the student's sensory interaction with her or his world. Because it is created in the mind of the learner, the teacher cannot simply tell it to the student. (p. 136)

This constructivist perspective is consistent with many adult learning theories--self-directed learning, situated cognition, transformational learning, cognitive apprenticeships, situated learning, and reflective practice (Merriam & Caffarella, 1999).

In the American history classroom, this model of constructivist experiential learning can be applied by having the students learn to be historians. There should be some preparatory work to understand the historian's trade (Brakel, 1995; Obrochta & Evans, 1996). Then, comes an experience--reading of primary sources, library and Web research, visiting historical sites or museums (Obrochta & Evans, 1996; Sherman, Grunfeld, Markowitz, Rosner & Heywood, 1998; Sutter, 1994; Wiesner, Wheeler, Doeringer & Page, 1997)--and reflection on that experience--personal reflection, class discussion, reflective/augmentative papers (Boud & Walker, 1992; Voss & Wiley, 1997). This basic cyclic model is then continued throughout the session or course in an ever-expanding upward spiral of learning and knowledge enhancement. The preparation for one experience could be the experience and reflection of the previous one.

Motivation

Several studies in science education (Bredderman, 1983; Cohen, 1992; Hartshorn & Nelson, 1990; Shymansky, Kyle & Alport, 1983) conclude that there is an increase in

learning when activity-based, hands-on, experiential learning events are used. This is especially true with high-risk (potential dropout) students. The idea is that the students become more engaged and motivated to learn when experiential methods are used. In the classroom it has been shown that motivation plays a large part in learning. Components that affect a person's motivation include the classroom environment, high self-efficacy, high interest in the content, and high associated value of the task or material. This study intends to measure the student's motivation based on the Motivated Strategies for Learning Questionnaire (MSLQ) (Pintrich, Smith, Garcia, & McKeachie, 1991).

Research Problem and Questions

The research problem was to investigate the presumed effect of constructivist experiential teaching methods on motivation in the introductory college history course.

Independent Variables

Teaching Method, nominal, two levels: Control Traditional Group (Lecture)

Experiential/Constructivist Group

Time, nominal, two levels: Pretest

Posttest

Possible extraneous variables:

Age

Gender

Past Academic Success

Dependent Variables

Overall Motivation, approximately interval (mean of all of the MSLQ motivation questions)

Intrinsic Goal Orientation, approximately interval (mean of the MSLQ questions: 1, 16, 22, 24)

Extrinsic Goal Orientation, approximately interval (mean of the MSLQ questions: 7, 11, 13, 30)

Task Value, approximately interval (mean of the MSLQ questions: 4, 10, 17, 23, 26, 27)

Control Beliefs, approximately interval (mean of the MSLQ questions: 2, 9, 18, 25)

Self-Efficacy, approximately interval (mean of the MSLQ questions: 5, 6, 12, 15, 20, 21, 29, 31)

Test Anxiety, approximately interval (mean of the MSLQ questions: 3, 8, 14, 19, 28)

Research Questions

The research design was a two factor, mixed quasi-experimental, pretest-posttest design. Since the research problem was to investigate the presumed effect of constructivist experiential teaching methods on motivation in the introductory history course, it yields these research questions:

1. Was there a difference between the overall MSLQ motivation scores of the students in the traditional method and in the constructivist method?
2. Was there a difference between the MSLQ Intrinsic Goal Orientation sub-scores of the students in the traditional method and in the constructivist method?
3. Was there a difference between the MSLQ Extrinsic Goal Orientation sub-scores of the students in the traditional method and in the constructivist method?

4. Was there a difference between the MSLQ Task Value sub-scores of the students in the traditional method and in the constructivist method?
5. Was there a difference between the MSLQ Control Beliefs sub-scores of the students in the traditional method and in the constructivist method?
6. Was there a difference between the MSLQ Self-Efficacy sub-scores of the students in the traditional method and in the constructivist method?
7. Was there a difference between the MSLQ Test Anxiety sub-scores of the students in the traditional method and in the constructivist method?

Definitions

Traditional Teaching Method

This is operationally defined for this study as a method that is generally based on the instructor lecturing. It may also include the use of videos and closed book exams. It will generally not involve the use of reflective discussion in the classroom or in papers.

Experiential Constructivist Teaching Method

In the micro sense, an experiential constructivist teaching method prepares the students for a learning event, the students experience the event, and then they reflect on that event. In the macro sense, it may be a series of these micro events. Both were used in this study because an entire semester long course was covered. The instructor prepared the students to think like historians and reflect on the entire course. However, it is important to note that each activity or section will follow this method. The experiential constructivist teaching method is also referred to as the constructivist method or treatment.

Motivated Strategies for Learning Questionnaire (MSLQ)

This is a self-report instrument that will assess college students' motivational orientation (Garcia & Pintrich, 1996). It has two parts: motivation and learning strategies. In this study only the Motivation section will be given. Further detailed definitions of each sub-scale used are:

Intrinsic Goal Orientation. This is the amount in which a learner perceives herself to be participating in an activity because there is a challenge, she is curious, or she just wants to master the content.

Extrinsic Goal Orientation. This is the complement of intrinsic goal orientation. To what degree does a student see herself as engaging in an activity because of grades, rewards, performance, or competition? It is perceived as a means to an end.

Task Value. Task Value is how a learner perceives the importance of or how interesting the activity to be.

Control Beliefs or Control of Learning Beliefs. This is whether or not students believe they have some control over the learning situation, that if they put out the effort they will learn.

Self-Efficacy or Self-Efficacy for Learning and Performance. This subscale assesses two aspects of expectancy: success and self-efficacy. Success relates to task performance, how well a person sees herself as being able to complete a task. "Self-efficacy includes judgments about one's ability to accomplish a task as well as one's confidence in one's skills to perform that task" (Pintrich & Schunk, 1996, p. 102).

Test Anxiety. . It considers a student's state of worry and emotions while preparing and taking a test.

Delimitations

This study addressed the research questions by looking at two sections in American history at a community college in the State of Colorado. One section was the control group and the other section the treatment group. So a generalization would be restricted to students like these.

Limitations

The students were not randomly assigned to either of the two groups. The two sections were selected as a convenience for the instructor. The day section was the control group and the night class received the treatment, thus, the need for a pretest/posttest study.

Significance

The literature calls for teaching history using methods simulating the historian's thinking. There are studies that look at dimensions of this method concerning student's capabilities, personalizing history, and argumentative essays (Carretero et al., 1997; Lee et al., 1997; Voss & Wiley ,1997). However, these were mostly concerned with children, narrowed to assessment only and were not experimental. This study was significant because it intended to develop a method of instruction simulating the historian's thinking. It was a quasi-experiment designed to measure the motivational differences of the group taught in the traditional way and the constructivist (historian's) method. This should help quantify what is being called for in the literature on teaching history.

Researcher's Perspective

The researcher has a master's degree in history. He found, as he was attaining that degree, that the best courses and, consequently, the most motivating for him, were the

ones where the instructor allowed the students to investigate a problem through reading and discussing it in class and prepare a report. If this is the case, then is there a way to teach all history courses, even the first introductory courses, using this technique? While browsing the available texts, the researcher found both traditional texts and accompanying primary sources of readings (Sherman et al., 1998; Wiesner et al., 1997).

The researcher has also conducted several literature reviews into experiential and constructivist learning, and he has designed and conducted courses using these alternative techniques in adult education and learning, and computer science. However, he felt that the same techniques could be applied to the introductory history course. The researcher found an instructor who would conduct a section of her American history course in the traditional way and one section using primary sources.

CHAPTER II - LITERATURE REVIEW*

Constructivism

The Problem with Absolute Truth

Ernst von Glaserfeld (1995) writes that there is a general perception that high school and college graduates are ill prepared for work today. They not only cannot read, write or perform arithmetic operations, they cannot think beyond the problem solving scenarios presented to them in their classroom activities. He also states that what is needed is a change in philosophy and he feels that money cannot change philosophy.

Von Glaserfeld (1995) noted that behaviorism has dominated the educational field for the past 50 years. It has helped erode the distinction between understanding and performance (training). Behaviorism has taught the "right answer" and not understanding. "Thus, training may modify behavioral responses, but it leaves the responding subject's comprehension to fortunate accidents" (p. 4). Also, if students are thus presented with a problem that does not conform to the parameters learned, then they will not have the tools to solve the problem. What is needed is a conceptual understanding of solutions, and "concepts cannot simply be transferred from teachers to students--they have to be conceived" (p. 5).

*Portions of this chapter appear in a publication of The High Plains Intermountain Center for Agricultural Health and Safety (HI-CAHS), *Experiential Learning: Theoretical Underpinnings* (ETT-95-02) which was authored by Bart P. Beaudin and Don Quick.

From an epistemological point of view, von Glaserfeld (1995) argues that absolute "truth" cannot be established. "The necessary comparison of the piece of knowledge with the reality it is supposed to represent cannot be made because the only rational access to that reality is through yet another act of knowing" (p. 6). It is not that absolute truth does not exist but that there is no way to know it. He claims "that we can define the meaning of 'to exist' only within the realm of our experiential world and not ontologically" (p. 7).

Since absolute truth cannot be obtained ontologically, constructivism breaks away from tradition; it proposes to change this need for absolute truth. Knowledge does not need to represent an independent world; knowledge represents what can be done in our experiential world, the physical as well as the abstract. "One should think of knowledge as a kind of compendium of concepts and actions that one has found to be successful" (von Glaserfeld, 1995, p. 7). Instead of an ultimate truth, think in terms of "viability." If the world is relative to the observer, then there will "always be more than one way of solving a problem or achieving a goal" (p. 8).

A Constructivist View

Other scholars have attempted to define their views of constructivism. For example, Phillips (1995) concludes that humans are born with the capability of cognitive and epistemological potential "but by and large human knowledge, and the criteria and methods we use in our inquires, are all constructed" (p. 5). To Merriam and Caffarella, (1999) "Learning is a process of constructing meaning" (p. 261). For Driver, Asoko, Leach, Mortimer, and Scott (1994) "Knowledge is not transmitted directly from one knower to another, but is actively built up by the learner" (p. 5). Phillips (1995) states "I

hold that there is a very broad and loose sense in which all of us these days are constructivists" (p. 5).

Merriam and Caffarella (1999) believe that constructivism is congruent with much of adult learning theory. Active inquiry, independence, and individuality in a learning task are all adult, as well as constructivist tenets of learning. Experience is central to learning, and student's life experiences are used as a resource to the teacher and a stimulus for the learner. Adult educators feel that learners must interact with what they are experiencing for learning to take place. Specific adult learning models, such as "situated cognition, cognitive apprenticeship, situated learning, reflective practice, and communities of practice," are all consistent with constructivist theories (p. 263).

Phillips (1995) presents a framework for studying constructivism. He lists the main constructivist authors as: Ernst von Glaserfeld, Immanuel Kant, Linda Alcoff and Elizabeth Potter, Thomas S. Kuhn, Jean Piaget, and John Dewey. They all present a slightly different view of constructivism along three continuums: 1) How much is learning due to individual psychology or as a function of social discipline? 2) How much is created versus how much is discovered? and 3) How much learning is an active or passive process?

Individual versus Social Interaction

The most delineated of Phillips' (1995) three continuums is society versus the individual. Cobb (1994) believes that "mathematical learning should be viewed as both a process of active individual construction and a process of enculturation into the mathematical practices of wider society" (p.13). Driver et al. (1994) believe that the learner must make personal sense of the ways of science which "involves social

interactions, in the sense that the cultural tools of science have to be introduced to learners . . . [and] individuals have to make personal sense of newly introduced ways of viewing the world" (p. 11). Merriam and Caffarella (1999), when reviewing constructivism, strongly suggest that there are two dichotomies in the world of constructivist literature: "This approach involves learning the culturally shared ways of understanding and talking about the world" (p. 262).

However, if it is looked at from the point of view that a social interaction is just part of the experience, or the environment in which the experience takes place, then there is no delineation. There is only an individual construction of knowledge (von Glaserfeld, 1995). "You construct 'others' out of elements of yourself, and soon these others contribute to the image of yourself . . . we must find a way to explain our knowledge of others on the basis of individual experience" (p. 12). Von Gaserfeld goes on to state that "the 'society' in which we find ourselves living can be conceptually constructed on the basis of our subjective experiences" (p. 12).

Learning-By-Doing

At the core of constructivist and experiential learning is action. Rather than merely thinking about abstract concepts, learning-by-doing involves a direct encounter with the phenomenon being studied. It utilizes actual experience with the phenomenon to validate a theory or concept. Several authors suggest that ideas can not be separate from experience; they must be connected to the learner's lives in order for learning to occur (Boud, Cohen & Walker, 1993; Gass, 1992; Keeton & Tate, 1978).

Lewis and Williams (1994) suggest that the twentieth century has seen a move from formal, abstract education to one that is more experienced-based. The most

renowned advocate of this concept was John Dewey (1938). He stresses that there is to be a *having* which is the contact with the events of life and a *knowing* which is the interpretation of the events. A learning experience does not just happen; it is a planned event with meaning and with constructivist learning the meaning is reaffirmed by the learners. Phillips (1995) affirms that Dewey is one of the major authors of constructivist theory. "Knowing is not the act of an outside spectator but of a particular inside the natural and social scene" (cited in Phillips, 1995, p. 6).

Kurt Lewin, who notably said, "there is nothing so practical as a good theory" (cited in Kolb, 1984, p. 9), believed that theory and practice should be integrated together. Lewin is best known for his action-research methodology and his work with T-Groups and sensitivity training. Because of Lewin's work "the discovery was made that learning is best facilitated in an environment where there is dialectic tension and conflict between immediate, concrete experience and analytic detachment" (Kolb, 1984, p. 9).

Kolb (1984) indicates that there should be a link between the classroom and the future work for which the classroom is supposedly preparing the learner. There is a need to "translate abstract ideas of academia into the concrete practical realities of these peoples' lives" (p. 6). Students need to test ideas discussed in the classroom on real life situations. Kolb believes that college graduates are unprepared for work. He affirms the need for facilitators to bring practical experiences into the classroom so that there is a link to reality that would better prepare the graduate for life experiences.

Enns (1993) and Tisdell (1993) see this in terms of the Belenky, Clinchy, Goldberger, and Tarule (1986) concept concerning separate and connected knowing—the former, dealing with ideas in the abstract that are separate from life, and the latter,

making connections of those abstract ideas with life experiences. Traditionally teachers and trainers have designed learning events for more of a separate knowing, rather than a connected knowing and the learning has not been complete. Learners must "relate theoretical concepts to real-life experience" (Tisdell, 1993, p. 98). Thus, they can think of themselves as creators of knowledge and move to become independent thinkers.

In science education this learning through experience is called "hands-on" science. It centers the learning strategies on problem solving and student investigation of the problem (Rossman, 1993). Flick (1993) relates that "hands-on activities usually emphasize students' logical-mathematical, linguistic, and spatial intelligences" (p. 1). He goes on to state that "it draws its philosophical support from theoreticians such as Piaget, Dewey, and Bruner, who collectively represent a constructivist view of knowledge and learning" (p. 1). Simply put, the constructivist notion is that experiences allow the students to construct their own meaning of the world around them. Saunders (1992) explains this as:

> meaning is created in the mind of the student as a result of the student's sensory interaction with her or his world. Because it is created in the mind of the learner, it cannot simply be told to the student by the teacher (p. 136)

Reflection in Learning

In order for learning to occur, reflection on an action must take place. Reflection happens in all human activity. People often say they need to think about an event that has occurred in their lives in order to assimilate the meaning of the activity. Other learners are sought to share the experience with and to discuss its ramifications in their lives. This need for reflection is often overlooked in the design of workshops and courses (Anderson, 1992; Boud, Keogh & Walker, 1985).

Facilitators assume that reflection is occurring and that it is occurring effectively with everyone. This assumption may not be valid. Encouraging reflection needs to be a conscious effort on the part of the facilitator to do more than just say "reflect on this"; it needs to be a planned activity. Even with lectures there is the need for students to process the information, to relate it to their previous knowledge, and to test their understanding of what took place (Boud et al., 1985).

What is Reflection?

"Reflection consists of those processes in which learners engage to recapture, notice and re-evaluate their experience, to work with their experience, to turn it into learning" (Boud et al., 1993, p. 9). Reflection is a process that needs to be actively pursued after every learning experience and in some cases during the learning event.

Boud et al. (1985) consider reflection to be the central part of a person's experiences. It needs to be incorporated throughout the activity. At the beginning of the activity the learner needs to consider what will occur. Instructors should take the time to explain the activity and make sure the learners understand the expectations. During the experience, the learner needs to deal with the information experienced and cope with the feelings that occur as a result of the experience. Instructors should not just assume that the learner is understanding the material; solicit feedback from the learners. Set aside time after the experience to consider and record what has occurred. Solicit the learners' meanings of the activity.

Reflection as an Individual or Group Process

In the classroom, reflection can take the form of an individual activity, within small groups, or with the entire class. Engaging in the reflective process with another individual or with a small group or class can change the meanings that can be drawn from the experiential activity. Individually it might be "thinking quietly, mulling over events in our mind or making sense of experiences we have had" (Boud et al., 1985, p. 8). In a group it might be "comparing notes, [having] roundtable discussions, carrying out a post mortem (metaphorically speaking), [or] having an informal group discussion" (p. 8).

It is important to neutralize the power structure within the group so that everyone will feel free to contribute her ideas. This includes the facilitator's relationship with the learners, as well as the learner-to-learner relationship. "There must be a structure which allows equal power relationships between group members, including the teacher or facilitator, if the freedom to choose is to be a valid one" (Boud et al., 1985, p. 14).

Even though reflection can be a group process, Boud et al. (1985) warn that the learners are still individuals and only they can know their feelings and reflect on those feelings. However, reflection is not idle day-dreaming; pursue it with some goal in mind. "The reflective process is a complex one in which both feelings and cognition are closely interrelated and interactive" (p. 11). Von Glasersfeld (1995) also stresses that knowledge is obtained on the personal level, that group activities are part of the environment of the learning event.

Experiential Learning as Action and Reflection

Action and reflection are the core attributes of learning through experience or experiential learning. Experiential learning traditionally applies to three areas of

educational endeavor: field-based experiences, prior learning assessment, and experiential classroom-based learning (Lewis & Williams, 1994). See Table 1 for details of these major categories in experiential learning.

The emphasis in this study is on experiential classroom-based learning. Burnard (1989) defines experiential knowledge as that "knowledge gained through direct encounter with a subject, person or thing" (p. 6). So, the design of the course must ensure that the learner directly experiences what the instructor wants to convey to the learners.

Table 1

Major Experiential Learning Categories and Their Descriptions

Category	Description
Field-Based Experiences	Working with practitioners of the learners' field of study, actually doing the job that they are being trained to do. Included in this category are learning activities like internships & practicum assignments.
Prior Learning Assessment	Credit or certificates are given for knowledge attained from life experiences. These are generally in the form of standardized tests such as CLEP, or portfolio assessments given by some colleges and universities
Experiential Classroom-Based Learning	In a formal setting this includes teaching methods that involve the students in doing activities and reflecting on what they did. This includes such techniques as case studies, simulations, or any activity that uses real life experiences as its basis of instruction.

A Pragmatic Philosophy

Experiential learning "offers the foundation for an approach to education and learning as a lifelong process that is soundly based in the intellectual traditions of social psychology, philosophy, and cognitive psychology" (Kolb, 1984, p. 2). A discipline needs a philosophic position that describes the nature of its reality, truth, and value in

order to be able to systematically and coherently develop solutions to issues that plague their profession (Miller, 1994). Experiential learning as a discipline and a profession is grounded in pragmatism. It has its roots in the pragmatic methods of William James, John Dewey, and F. C. S. Schiller. It is the "philosophical rationale for the primary role of personal experience in experiential learning" (Kolb, 1984, p. 18).

From the Greek word meaning "practical; dealing with practice; matter-of-fact" (*The Oxford English Dictionary*, 1989, p. 278), the concept of pragmatism had its birth when C. S. Peirce published a series of essays on "truth" in *Popular Science Monthly* in 1878. The essay, "How to Make Our Ideas Clear" (Peirce, 1878), is generally considered to be the beginnings of the idea of pragmatism as published material (James, 1907; Dewey, 1925/1984). However, James, and Peirce with others in the Metaphysic Club had discussed the concept throughout 1870's (James, 1907; Peirce 1905). Even though Peirce does not actually use the word pragmatism in the article, the concept is developed and defined; "thus, we come down to what is tangible and practical, as the root of every real distinction of thought, no matter how subtle it may be" (Peirce, 1878, p. 293). As was mentioned, he never used the word in writing at the time, but he did use it in his discussions at James' house and others in the Metaphysic Club (Peirce, 1905). Peirce considered "the most striking feature of the new theory was its recognition of an inseparable connection between rational cognition and rational purpose" (p. 163), ideas and action, reflection and experience.

James (1907) and others (Dewey,1934/1964; Schiller, 1907) carried the concept, or method as they identified it, further than Peirce intended (Pierce, 1905). However, it is James' concept of pragmatism that is the basis of experiential and constructivist learning

today. A pragmatist "turns away from abstraction and insufficiency, from verbal solutions, from bad *a priori* reasons, from fixed principles, closed systems, and pretended absolutes and origins. He turns towards concreteness and adequacy, towards facts, towards action and towards power" (James, 1907, p. 51). What influences our practice or action? In what way would the world be different if one alternative or another were true? If nothing would change, then that point has no sense of purpose. "It is astonishing to see how many philosophical disputes collapse into insignificance the moment you subject them to this simple test of tracing a concrete consequence" (James, 1907, p. 49). Another way to explain the concept would be to think of physics as professor W. S. Franklin puts it: "'the science of the ways of taking hold of bodies and pushing them'" rather than "'the science of masses, molecules, and the ether'" (cited in James, 1907, p. 49). Consider the 'actions' of the science rather than the theories, concreteness rather than abstractness. Von Glaserfeld (1995) explains this as *viability*. "To the constructivist, concepts, models, theories, and so on are viable if they prove adequate in the contexts in which they were created" (pp. 7-8).

Pragmatism, like all new ideas, was not readily accepted. Even Peirce changed the name of his concept to "pragmaticism" to differentiate between his original ideas and that of James (Carus, 1908; Peirce, 1905). Paul Carus, editor of *The Monist* in 1908, wrote a scathing editorial that claimed James to be unscientific and uncritical, and he felt that James even had a dislike for science. "I would deem it a misfortune if his philosophy would ever exercise a determining and permanent influence upon the national life of our country" (Carus, 1908, p. 362). It has survived to influence our learning theories through the influence of John Dewey.

John Dewey's Influence

From these chaotic beginnings, Dewey applied the pragmatic method to education. He felt that pragmatism places *action* as an intermediary between *thought* and *application*. "In order to be able to attribute a meaning to concepts, one must be able to apply them to existence" (Dewey, 1925/1984, p. 5). James, he felt, "wished to establish a criterion which would enable one to determine whether a given philosophical question has an authentic and vital meaning or whether, on the contrary, it is trivial and purely verbal" (p. 8). Also, he felt that James "claimed the right of a man to choose his beliefs not only in the presence of proofs or conclusive facts, but also in the absence of all proof" (p. 10). The keyword here is "beliefs." James referred to a person's "right to believe." Dewey felt that James considered the personal aspect of beliefs and motives. He claimed that "Peirce wrote as a logician and James as a humanist" (p. 10).

Dewey believed that reason was orderly and effective action, that ideas result from action, and ideas help in obtaining better control of that action. He believed that education "is a process of living and not a preparation for future living" (Dewey, 1897/1972, p. 87). "The educational end and the ultimate test of the value of what is learned is its use and application in carrying on and improving the common life of all" (Dewey, 1934/1964, p. 11). Dewey believed that education transmits culture and provides other views of the world and allows students to explore them through their own experiences (cited in Bruner, 1966).

Thus, James and Dewey understood experience to have a primary role in learning. Dewey believed in the relationship between the process of life experience and the process of education (Dewey, 1938; Kolb, 1984). As Keeton and Tate (1978) express it,

experiential learning "involves direct encounter with the phenomenon being studied rather than merely thinking about the encounter or only considering the possibility of doing something with it" (p. 2).

A Humanist Tradition

James, Dewey, and Schiller established the roots of experiential learning solidly as a humanist concept, not a behaviorist tradition. "The emphasis on the process of learning as opposed to the behavioral outcomes distinguishes experiential learning from the idealist approaches of traditional education and from the behavioral theories of learning created by Watson, Hull, Skinner, and others" (Kolb, 1984, p. 26). Human experiences cannot be neatly classified into behaviorist categories. "Ideas are not fixed and immutable elements of thought but are formed and re-formed through experience" (p. 26). In experiential learning there is an integration of the cognitive learning processes and emotional experiences that promote understanding of the material being covered (Kolb & Fry, 1975).

Kolb (1984) stresses that humans are not the 'empty-organism' that behaviorist theories of learning assume. They have past experiences that they bring with them to a learning activity. Maslow's (1954) and Rogers' (1961) humanistic psychology "emphasized the uniqueness of human experience and human interpretation of the world" (Burnard, 1989, p. 11). Experiential learning stresses humanistic values in emphasizing that feelings are part of the learning process as well as cognition. "The humanistic approach to experiential learning pays particular attention to the emotional aspect of the individual's experience" (Burnard, 1989, p. 14). This humanistic scientific process "stimulated the modern participative management philosophies (variously called Theory

Y management, 9.9 management, System 4 management, Theory Z, and so on)" (Kolb, 1984, p. 11). Humanist theory suggests that learning can occur only where "personal values and organizational norms support action based on valid information, free and informed choice, and internal commitment" (Kolb, 1984, p. 11).

David Kolb's Approach to Experiential Learning

"David Kolb's 1984 book on experiential learning is one of the more influential works linking theory to actual practice" (Lewis & Williams, 1994, p. 6). Kolb describes experiential learning as a four part process where the learners are asked to engage in a new experience, actively reflect on that experience, conceptualize that experience, and integrate it with past experiences. Furthermore, they must make decisions based on their created concepts. "In the process of learning, one moves in varying degrees from actor to observer, and from specific involvement to general analytic detachment" (Kolb, 1984, p. 31). There is a dichotomy between concrete involvement and abstract detachment (Bruner, 1966). In one of the original documents on the model, Kolb and Fry (1975) describe the process in this manner:

> (1) here-and-now experience followed by (2) collection of data and observations about that experience. The data are then (3) analyzed and the conclusions of this analysis are feedback to the actors in the experience for their use in the (4) modification of their behavior and choice of new experiences. (p. 33-34)

According to Kolb, the learner must continue cycling through the four parts, thus creating a "learning spiral of ever-increasing complexity" (cited in Lewis & Williams, 1994, p. 7). A picture of a conical helix comes to mind in trying to describe the process. A learner might begin anywhere in the cycle at any level of knowledge concerning the subject matter. The facilitator's job is to guide the learner through each part in an ever increasing level, expanding her learning of a topic. "Kolb considers any one learning

style to be an incomplete form of processing information . . . all four stages of the cycle must be negotiated by the learner" (p. 7). For Kolb, then, learning becomes a process where "ideas are not fixed and immutable elements of thought but are formed and re-formed through experience" (Kolb, 1984, p. 26). This also follows the constructivist view of knowledge acquisition where the goal is to construct a coherent model of the experiential world. As new experiences occur, a new model may need to be formed in the mind of the learner (von Glasersfeld, 1995).

Boud and Walker's Stages in Experiential Learning

Boud and Walker (1992) see experiential learning as a series of stages where there is some kind of preparation before a learning event, the actual experience itself, and then reflection to "debrief" the learner on what took place. This incorporates two important aspects of Kolb's model: experience and reflection. It also adds a third, preparation for the event, which they feel is important to have learning take place. "Greater use can be made of learning events if the learners prepare beforehand" (p. 165). In history education this could be helping the learners think like historians (Obrochta & Evans, 1996).

When considering preparation for a learning event, the facilitator needs to focus on what experiences the learners bring and what they want to learn. "Learners bring with them 'intent,' which may or may not be able to be articulated, and which influences their approach to the event" (Boud & Walker, 1992, p. 166).

Dean's Process Model of Experiential Learning

Dean (1993) presents a process model of experiential learning in adult education as a series of stages in the process of developing and implementing an experiential learning activity:

1. Planning—Getting Ready to Start
2. Involvement—Getting Started
3. Internalization—Learning by Doing
4. Reflection—Making Meaning
5. Generalization—Making Connections
6. Application—Transfer of Learning
7. Follow-up—Assessment & Planning

As with Boud and Walker (1992), Dean (1993) sees experiential learning as a process the facilitator goes through to develop the learning experience. The central concepts of his model relates to the other theories of experiential learning in that there needs to be *experience* (involvement and internalization) and a *reflection* on that experience.

Laura Joplin's Five Stage Model

The Agricultural Education Magazine devoted an entire issue to the concept of experiential learning (Leske, 1994). In it, some authors described using Kolb's model, however, several used a model proposed by Laura Joplin (1981). Joplin follows the "action-reflection" process, then she adds three other stages that are similar to Boud and Walker's and Dean's. Her first stage is *focus,* which defines the task to be completed and focuses the learner's attention on that task. Second is *action,* where that student must become involved with the subject matter in a physical, mental, or emotional manner. Her

third and fourth stages are *support* and *feedback*. These are present throughout the learning experience and are provided by the instructor or fellow learners. The fifth and last stage is *debrief*, where the learners and facilitator sort and order the information and reflect on its implications. Joplin stresses that "experience alone is insufficient to be called experiential education, and it is the reflection process which turns experience into experiential education" (p. 17).

Science Education and the Learning Cycle

While visiting his child's second grade class in 1957, Robert Karplus, a Berkeley physicist, became interested in the elementary science curriculum. After years of experimentation and thought, he, along with Herbert Their, published a book in 1967 that first articulated the three phases of what is today known as the *learning cycle* and has become widely accepted in science education (Lawson, Abraham & Renner, 1989; Marek, Eubanks & Gallaher, 1990). Over the years the names of the phases have changed; however, the central concept of this experiential learning model has stayed the same. Lawson et al. (1989) use the labels "Exploration-Term Introduction-Concept Application" (p. 4), which shall be used here to describe the learning cycle model.

"During Exploration, the students learn through their own actions and reactions in a new situation" (Lawson et al., 1989, p. 5). The instructor provides the students with the topic and materials, and then allows the students to explore on their own. With "Term Introduction," the teacher introduces a new term or terms that relate to the students "exploration." The terms may be articulated through a lecture, a film, a discussion, or any other method. The students reflect on their own observations in light of what is being taught or discussed. In "Concept Application, students apply the new term and/or

thinking pattern to additional examples" (p. 5). This is important because it helps the students generalize the abstract concepts to other problems or situations.

The importance in using the learning cycle is the order in which the phases are performed, not necessarily the method used in each phase. "Exploration" and "Concept Application" could be accomplished through library research, discussion, or lecture, as well as laboratory hands-on methods. As mentioned earlier "Term Introduction" could be accomplished in several different ways. "The key point to keep in mind is that one can change the learning format of the three phases of the learning cycle but one cannot change the sequence of the phases or delete one of the phases" (Lawson et al., 1989, p. 5).

Several studies in science education (Bredderman, 1983; Cohen, 1992; Hartshorn & Nelson, 1990; Shymansky, Kyle & Alport, 1983) conclude that there is an increase in learning when activity-based, hands-on, experiential learning events are used. This is especially true with high risk (potential dropout) students.

Praxis as an Experiential Learning Model

Burnard (1989) states that "experiential learning is learning through doing [and] . . . learning through reflecting on the doing. . . . If we are to learn from what we do, we must notice what we do and reflect on it" (p. 2). This concept of action and reflection is central in the early writings of Karl Marx in the 1840's and in the contemporary writings of the Brazilian educator, Paulo Freire. They used the term *praxis* to denote action and reflection.

From a Nineteenth Century philosophy. The term praxis became popular in the 1960's, when Karl Marx's early works were translated into English and widely

disseminated (*The Oxford English dictionary*, 1989). It was actually August von Cieszkowski, in 1838, who first used the term to denote "action and reflection." He felt that the real power of ideas was in acting upon them, not just thinking about them. "A practical philosophy or rather a philosophy of practical activity, of 'praxis', exercising a direct influence on social life and developing the future in the realm of concrete activity" (McLellan, 1969, p. 10). In his early work, *Theses of Feuerbach,* Marx outlines his philosophy of praxis and how thought must be acted on in the world. In this quotation from *Karl Marx and the Philosophy of Praxis*, Kitching (1988) sums up Marx's ideas on the subject:

> It is human activity which, as it were, 'joins' thought to the world. Conversely, it is speculating about 'thinking' and 'thought' in abstraction from practice, from activity, which creates nearly all philosophical puzzles. It is in this context that we must see the most famous of all the *Theses on Feuerbach*, the eleventh and final one:
>
> > Philosophers have only *interpreted* the world in various ways, the point however is to *change* it.
>
> Here Marx is taking 'philosophers' to task, not for interpreting the world, but for only interpreting the world. (p. 29)

To Twentieth Century Education. Paulo Freire, in his sentinel work, *Pedagogy of the Oppressed* (1970a), uses the term *praxis* extensively to describe a process of dialogue and interaction between the teacher and the student. The facilitator must not tell the learner what to learn. He must explore the content with the learner. The learner must then act on that content. The learner and facilitator must reflect on that action. As Freire defines it: "praxis: the action and reflection of men upon their world in order to transform it" (p. 66) or in the original Portuguese, "é práxis, que implica a ação e a reflexão dos homens sobre o mundo para transformá-lo" (Freire, 1970b, p. 67). Both Freire and Marx used praxis, or acting on theory, to arrive at their liberatory philosophies.

Action-Reflection and Experiential Learning

One of the underlying foundations to Kolb's experiential learning model is the concept of praxis. In explaining Freire's concept, Kolb says, "the dialectic nature of learning and adaptation is encompassed in his concept of praxis (Kolb, 1984, p. 29).

Enns (1993), in associating Kolb's experiential learning model with feminist pedagogy and Belenky et al.'s (1986) concept of separate and connected knowing, explains that "concrete experience is associated with the activity of experiencing, reflective observation with examining, abstract conceptualization with explaining, and active experimentation with applying" (Enns, 1993, p. 9). Gelwick (1985) indicates that Kolb's concepts of reflection and abstraction are associated with mental processes, traditionally *masculine,* or using Belenky et al.'s term, a *separate* way of knowing. Concrete experience and active experimentation are movement or bodily processes, traditionally *feminine,* or a *connected* way of knowing. Concerning Kolb's model, Gelwick goes on to state that the "theory is at least supportive of women's cognitive development in that it explicitly states the equal importance of the concrete with the abstract and of experience with reflection" (p. 36).

Brookfield (1986) sees praxis as a process of exploring a question or problem, taking an action concerning the question, and then reflecting on that action. "Praxis is placed at the heart of effective facilitation. Learners and facilitators are involved in a continual process of activity, reflection upon activity, collaborative analysis of activity, new activity, further reflection and collaborative analysis, and so on" (p. 10). Brookfield goes on to state that "this notion of praxis as alternating and continuous engagements by teachers and learners in exploration, action, and reflection is central to adult learning" (p.

15). It is exploring, acting and reflecting in a continuous expanding process. The learning continues to expand in a continuous spiral, or conical helix, of exploration, activity and reflection.

Boud & Walker (1992) describe experiential learning as having several levels of learning in an action and reflection model. During the event, reflection and action occur as interaction between the participants and the specific activity at hand. Learners, even in a lecture, will experience an idea and reflect on the idea. Schön (1983) refers to this as reflection-in-action. Praxis is action and reflection that occurs with the session or activity as a whole. The activity is a series of these personal experiences and reflections.

Experiential Learning Methods

To facilitate action and reflection in the college classroom, instructors need to use methods that are not traditional, methods that capitalize on the learners' experiences and connect those experiences to the learning event.

More Than Traditional Methods

Classroom-based experiential constructivist learning methods need to be more than the traditional methods of lecture, discussion, or even demonstrations. They need to be active, experienced based, and related to the participants previous and possible future experiences. "It turns us away from credit hours and calendar time toward competence, working knowledge, and information pertinent to jobs, family relationships, community responsibilities, and broad social concerns" (Chickering, 1977, p. 86). There must be a development of competence-based methods that have identifiable outcomes of learning from experience (Kolb, 1984). The facilitator must create a learning environment where students choose to learn, where the "participants become personally involved in the

activities" (Remnet, 1989, p. 6). Active rather than passive involvement in the activity makes for more meaningful and permanent learning (Darkenwald & Merriam, 1982).

Also, the learner must see the problem or goal as one's own. Use examples from the person's everyday life, shopping, driving, social activities, sports. Employ things that are within the learner's field of experience and everyday representations. If this is not done, then they will have no reason for comparison and no reason to change their thinking (Cobb, 1994; Driver et al., 1994; von Glaserfeld, 1995). "It is far more important to teach students to see why a particular conception or theory is considered scientifically viable in a given historical or practical context than to present it as a kind of privileged truth" (von Glaserfeld, 1995, p. 15).

Traditional methods, or "banking" in Freire's (1970a) terms, is where what the teacher says is the right way and there is no other way of thinking or doing. Students bank the information fed to them for use later and do not reflect on that information for validity. What Freire suggests is for the teacher to create a problem-posing atmosphere, to form a dialogue between the student and the teacher. Thus, the teacher will reflect with the student and will re-form ideas and thoughts through consideration of the student's reflection. "The students—no longer docile listeners—are now critical co-investigators in dialogue with the teacher" (p. 68). It is also a learning process for the teacher (Driver et al., 1994).

Not only is there a need for active involvement, there needs to be active reflection. "Reflective activities such as the keeping of learning portfolios, debriefing sessions, guided reflection and periods of quiet contemplation following experience-

based classroom activities" (Boud & Walker, 1992, p. 165) help to develop the learner's active involvement in the reflection process.

Characteristics of Experiential Constructivist Learning

When developing a learning activity, it is good to understand what characteristics make the activity an experiential learning event. Burnard (1989) describes several underlining attributes that define an experiential learning activity:

1. *action*—the learner is not a passive receptacle but an active participant, and there is physical movement, not just sitting.
2. *reflection*—learning only occurs after the action is reflected upon.
3. *phenomenological*—objects or situations are described without assigning values, meanings or interpretations; the learner must ascribe meaning to what is going on; and the facilitator's meaning must not be automatically forced upon the student.
4. *subjective human experience*—a view of the world that is the learner's not the facilitator's.
5. *human experience as a source of learning*—"experiential learning then is an attempt to make use of human experience as part of the learning process" (p. 14).

Joplin (1981) feels that experiential programs consist of several overarching characteristics:

1. *student-based rather than teacher-based*—the learning encounter starts with the students' ideas and concepts rather than the teacher's or the book's.
2. *personal not impersonal nature*—personal experiences and personal growth are valued in the classroom.
3. *process and product orientation*—emphasis is placed as much on learning as it is on the "right" answer.
4. *evaluation for internal and external reasons*—assessment is considered to be a learning experience that the students can learn to do on their own.
5. *holistic understanding and component analysis*—students are urged to fully understand the content through the analysis of primary sources of the material and/or experiences with the material.
6. *organized around experience*—the students previous experiences are taken into account when creating the curriculum, as well as the new experiences that will be provided in the classroom, lab, or field trip.

7. *perception-based rather than theory-based*—"experiential learning emphasizes a student's ability to justify or explain a subject rather than recite an expert's testimony (p. 20).
8. *individual based rather than group based*—group identity and socialization skills are stressed, however, emphasis is placed on the individual learning within the group rather then on the group as a whole; criterion-referenced rather than norm-referenced.

The goal of constructivist education is to teach the learner to construct "as coherent a model as possible of the experiential world" (von Glaserfeld, 1995, p. 8). Driver et al. (1994) see this as an intervention and negotiation with the teacher. This "authority figure" must present concepts and tools as needed, and she needs to provide the support and guidance for students to make sense of these for themselves. Thus, learning becomes more than a stimulus-response phenomenon. "It requires self-regulation and the building of conceptual structures through reflection and abstraction" (von Glaserfeld, 1995, p. 14).

The Pivotal Role of the Learner's Experiences

Malcolm Knowles (1980) states that a learner's experience is important whether it be accumulated experiences in school, work, or private life. Learners "derive their self-identity from their experience. They define who they are in terms of the accumulation of their unique sets of experience" (p. 50). If the facilitator does not recognize the learners' experiences, "it is not just their experience that is being rejected—they feel rejected as persons" (p. 50).

Kolb (1984) shares Knowles' view and goes on to state that science and technology, rationalism and behaviorism have distorted the learning process away from this emphasis on experience and feelings. "This learning process must be reimbued with

the texture and feeling of human experiences shared and interpreted through dialogue with one another. . . .We lost touch with our own experience as the source of personal learning and development" (p. 2).

Piaget found that older children were not *smarter* than younger children; they merely think about things in different ways, because of their greater experiences. He went on to find that experience shaped intelligence and that learners must interact with their environment (cited in Kolb 1984).

Belenky et al. (1986), in examining Perry's (1970) model of intellectual development during the college years and conducting their own studies, found that college men preferred the abstract theories learned in college and that female college students preferred experiencing the effects of these theories. They defined this as separate knowing (masculine) and connected knowing (feminine). Enns (1993) summarizes this very succinctly:

> Young men learned to value the mastery of ideas and abstract principles, to distance themselves from the content they studied, and to establish themselves as experts. In contrast, many women learned most effectively by empathizing with or understanding another person's viewpoint and by relating ideas and theories to personal events and meanings. These connected knowers were often uncomfortable with competitive learning environments that require individuals to set themselves apart from others, defend ideas, and debate opinions. (p. 7)

Malcolm Knowles (1980) found that, since experience is so important to the adult learner, there are three main assumptions to consider when planning a learning event:

1. Adults are a rich resource of experiences that can contribute to the learning of others.
2. Adults have a rich foundation of experience that can be used to relate new experiences.
3. With experience comes "fixed habits and patterns of thought, and therefore tend to be less open-minded" (p. 50).

Adult learners "demand that the relevance and application of ideas be demonstrated and tested against their own accumulated experience and wisdom" (Kolb, 1984, p. 6).

Boud et al. (1993) consider it vital that a person's past experiences be used in planning a learning event. Learners bring many diverse ideas and experiences with them to a workshop or learning activity. "The linking of new experiences with those of the past can provide new meanings and stimulate us to explore again those parts of our world which we have avoided" (p. 9). When incorporating these experiences into new learning events, care should be taken, for earlier negative experiences could suppress new learning.

Enns (1993) sees that facilitators must create learning experiences to relate the content to the learner's past experience because many learners learn better when the learning is tied to life experiences. "Relatedness and connectedness are often expressed and valued by powerless people, regardless of gender or race, because they have limited or no access to traditional methods of influence" (p. 8-9).

In describing the liberatory model of feminist pedagogy, Tisdell (1993) states that women, and possibly most non-white males, tend to resist traditional learning because they can not relate to the teacher's experiences and examples used during classes and workshops.

> Because the curriculum, the knowledge base, and the examples used in books and materials are created by and are primarily about the white middle-class male experience, white middle-class males are more likely to be successful both in the education system and in society that accords greater value to that experience. (p. 95)

She emphasizes connectiveness and personal relationship with the content and experiences of the learner, rather than separateness from it.

Cranton (1989) suggests that facilitators base experiential activities on the learner's experience. Set aside some time at the beginning of the session to find out what the learner wants to learn and why. Find out who the audience is and why they have come to the learning event. Facilitators should carefully appreciate the experience and "the intentions of the learner before any particular strategy is even contemplated" (Boud et al., 1993, p. 7). Remember, it is the experience that prompts learning, not the acts of the facilitator. "The teacher creates an event which the learner experiences and may learn from" (p. 9).

The Affective Side of Experience in Learning

Affect is an often overlooked aspect of learning. Boud et al. (1993) believe that today's learning encounters lean more "towards the intellect and to the analytical . . . leading to a lack of emphasis on people as whole persons" (p. 13). How learners feel about what they are learning is just as important as their cognitive engagement. Boud et al. believe that if learners deny their feelings, then they are not getting the most out of the learning event. They must accept their feelings and believe that those emotions will frame their actions. "It is impossible to have cognitive experience without an accompanying affective component and vice versa" (Remnet, 1989, p. 6).

The facilitator of learning must consider all the domains of learning—cognitive, affective, and psychomotor. "No one aspect is discrete and independent of the rest and no one aspect should generally be privileged over the rest" (Boud et al., 1993, p. 12). This means having a holistic view of learning and understanding that there is more to learning than cognition. As Enns (1993) proposes:

> Instead of rejecting traditional concepts of critical thinking, we should expand our notions of critical thinking to include affective components, such as empathizing with others and valuing diversity; cognitive aspects, such as defining issues clearly, engaging in logical analysis, and synthesizing ideas; and behavioral elements, such as gathering data, listening actively, and applying knowledge to new situations. (p. 9)

Separate Versus Connected Methods

In reflecting on Belenky et al.'s (1986) concept of separate and connected knowing, Enns (1993) suggests that methods where abstract analysis and the comprehension of great ideas are "a form of learning that is dominant in most educational institutions and most consistent with men's experiences in western culture" (p. 7). She suggests using methods that express a connected knowing, such as the "expression of feelings, personal reflection, subjective reactions, active exploration, and consciousness-raising" (p. 7).

Tisdell (1993) considers the facilitator a midwife. The teacher should draw out the students. Tisdell's methods and strategies for the facilitator of experiential learning follow the connected form of knowing in that the facilitator needs to use a variety of examples—female and minority as well as white male. Tie theory with practice using the student's own experiences. She goes on to say that facilitators need to reflect on their unconscious, *separate* behavior, recognize when it occurs, and try to make more of a connected effort around action and reflection. "Discussion of highly theoretical concepts must be integrated with a consideration of how they relate to the lives of real people, including the students in the class" (p. 100).

Special Attention to Reflection

There are three aspects of reflective activity: "returning to the experience . . . attending to feelings . . . [and] re-evaluating the experience" (Boud & Walker, 1992, p. 164). This can be translated for the facilitator into three questions that he or she might ask: What happened? What did I feel? What does it mean? Allow the learners time to express themselves internally. With the class as a whole, discuss what took place, what were their feelings toward the activity, and what it meant to them.

Anderson (1992) discusses several things that should occur during the reflective process. Allow the learners to reflect on the results: "values measured, conclusions reached, system designed, diagrams drawn, reports made" (p. 242). Also reflect on the process: "steps taken, methods used, difficulties encountered, errors made" (p. 242). Facilitators can use "questions, checklists, standard results, and other learners' work" (p. 242). There should be something concrete that they can produce from the reflective process, such as: "a piece for further reflection, a lab report, a short write-up, an oral report, or an interview" (p. 242).

The learning activity needs to incorporate an experience that ties the material being learned to the lives of the participants. It must also allow time for reflection on how the information can be used in everyday life. The pleasure of solving a problem on one's own that was chosen by one's self and is related to one's interests is an effective motivator. This is the essence of the constructivist approach. It enhances conceptual development, it will engender a rapport between teacher and student, and it will establish a favorable mood among the students (von Glaserfeld, 1995):

> The desire to reach what one believes to be at the end of an effort is the most reliable form of motivation. To have searched and found a path to the goal

> provides incomparably more pleasure and satisfaction than simply to be told that one has given the right answer (p. 14).

Teaching History

Carretero et al. (1997) report that there are few studies that deal with students' understanding of historical content. However, in those they discuss different teaching methods and students' reactions to those methods. Several authors also cover techniques that they have found useful in the history classroom and why they use them.

Why Study History?

Several authors have expounded on the reasons for studying history. Carretero et al. (1997) feel that students should not only know historical facts, but they should also be able to understand the events they are studying and be able to explain that understanding. Blanco and Rosa (1997) feel that studying history should allow students to make sense of their social lives.

Obrochta and Evans (1996) believe that the goals of studying history are to help students acquire higher level thinking skills. They should be able to better speculate on peoples' actions and create a hypothesis as to why someone acted the way she did. Thus, studying history gives them better reasoning skills. Through their historical studies, students should be able to do research and document that research. In short, Obrochta and Evans want their students to be able "to think like historians" (p. 48). Other authors (Kars, 1997; Miller, 1995) also reflect the need for students to understand the historians methods and to think like historians.

Shrock and Shrock (1994), in looking at responses from *The Journal of American History* questionnaire and in reflecting on their own teaching, found that historians want

students to have a sense of the past; this includes the students' roots. They also feel that this expands to include their communities, their regions, their country and the world. Thus, students should have a broader view of the local and expanded community they live in. Like Obrochta and Evans (1996), Shrock and Shrock (1994) feel historians want students to acquire higher level thinking skills; "we practice history to foster a critical and analytical spirit . . . a spirit that is probing, questioning, seeking what is logical and consistent . . . [and students will] develop skills in reading, research, writing, and discussion" (p. 1094).

> Students are expected to participate, to listen for the voice of an author and for the voices of classmates, replying on the basis of what they have heard, not what they want or expect to hear, and to search for their own voices, their own reasoned responses to the text (p. 1095).

Using primary sources is the best way to teach these skills. Develop courses and learning activities using primary sources and archival materials. "In working with primary sources, teachers quickly realized they were doing the work of historians" (Obrochta and Evans, 1996, p. 49).

However, these may not be the skills that the students are seeking or are prepared to obtain. Many come from high schools where teachers used techniques of memorization and passive learning (lecturing). They may also be uncomfortable, uninterested or unable to actively engage in a discussion about statements made by the authors or the instructor. "History may simply be one more hurdle on the way to a degree" (Shrock & Shrock, 1994, p. 1094).

The Historian's Perspective

Students need to understand that the histories they are studying are just the interpretations of the textbook author; they interpret primary source documents and artifacts (Brakel, 1995). Students seem to understand that histories are developed from these sources, but they do not seem "to see that historical work is shaped less by the sources than by the historian" (Kars, 1997, p. 1341). However, when students understand that these histories reflect the insights, biases, and limitations of the historian, they realize they are free to construct new meanings from the sources. They also discover that they have biases and limitations. They too have subjective viewpoints (Brakel 1995).

Thus, because of the author's perspective of history, history will always be changing; the students, teachers and historians change; they all interpret the primary sources differently (Obrochta & Evans 1996). "Writing history is ultimately a moral endeavor in which historians bring their own understanding of the world to bear on the past" (Kars, 1997, p. 1342). "Since they address large questions through small, discrete events, they help students understand that the essence of craft lies in constructing perspective through context" (p. 1340).

Halldén (1997), in an observational study of students, found that history has an open structure; "history is lived forwards and described backwards" (p. 203). However, students are taught history as if it were a closed structure, such as science and mathematics. They are given one interpretation of the facts, one conception of what the evidence of the primary sources reflect. "The interpretations of evidence and events accepted in the classroom are treated as being unequivocal in order to construct the historical narrative that is to be learned and that is the object of assessment" (p. 203).

Students have their own personal structure of history. There are two views of history, one as viewed by the students and one by the school. "It would seem that students have a view of history in which everything that has ever happened, particularly the efforts made by individual human beings, has a role in the chain of events forming historical development" (p.207).

Teaching the Historians Trade

Brakel (1995) suggests having students inspect their classmates' drivers licenses and tell the class what they have found as a way of introducing the students to the study of primary sources. He also describes an exercise of leaving the room and then returning. The students are to write one sentence about his entrance. They find out that all of the students wrote something different, different interpretations of the same event.

Kars (1997) has students investigate an event in their family's past. They are to gather primary sources, such as oral histories, family papers and photos, and other memorabilia. In this way, the students will be able to personalize history.

Miller (1995) feels that normal primary source texts are limited in the amount of material that they can publish. He developed a software system that allows the students access to large amounts of data. He also notes that care must be taken when teaching with primary sources, that the student doesn't start to consider that source as the authority in the same manner as they have with lectures and textbooks. "The students were engaged in high-level intellectual tasks of their own, and there really was no need to enrich that fare with a steady diet of monographs" (p. 40).

In solving the problem of students being able to visualize what they are studying, especially military battles, Votaw (1994) and Sutter (1994) suggest students visit

historical military museums and battlegrounds. They can get a feel for the terrain involved in the battle. Several museums have interactive displays that allow the student to see images and hear sounds that simulate the actual battle. It should not be a lecture; the students should interact with the facilities. "Use of local history helps to establish a greater sense of pride in where your students live. History is no longer something they read in books, but something that happened where they live" (Sutter, 1994, p. 76).

In a study of high school students as compared to history master students, Carretero et al. (1997) found that, when students could identify with the subject matter, the understanding was greater than when they were studying more remote concepts. Thus, students tend to personalize historical events and will learn more when this occurs. "The principle differences result from the greater importance attributed to the personalistic causes by the non-experts in history in contrast with the experts" (p. 252).

In a series of studies, James F. Voss and Jennifer Wiley (Voss & Wiley, 1997) were concerned with the differences in how students process historical information when learning from primary sources versus a textbook. They also considered the type of assessment used, whether it was better to use a narrative essay or an argumentative essay. In either of the combination of conditions, in terms of recall, there was no difference in the methods used. However, Voss and Wiley found that when students are given primary sources and asked to construct an argumentative essay, they made more connections between textual factors, and they could construct casual models to a greater extent than under the other conditions. The researchers felt that the students understand important conceptual relationships, and they have an 'ownership' of the text.

> This seems to be because developing an argument involves selecting and organizing information as well as transforming it and relating it to information in

> memory. This process can be quite a constructive and creative act. . . . By writing their own arguments, students may begin to see that history is not just about learning names and dates, but an on-going debate about what those facts may mean. In addition to providing a more motivating context, instruction that emphasizes the historian's role of integrating and interpreting isolated facts into explanatory arguments has the potential to improve not only understanding of specific historical content, but the understanding of history as a subject matter as well (Voss & Wiley, 1997, p. 264-264).

By 'doing' history using primary sources, students reported that they were actually having fun, they were intrigued by the methods, and they were more engaged in the class (Kars, 1997; Miller, 1995). They also learned about themselves, as well as history; they learned to think and question their own values. Students "thoroughly enjoyed their exploration of the historian's craft, noting that it not only taught them about history but also demystified academic work in general" (Kars, 1997, p. 1344).

Motivation in Learning

In a general sense, "motivation is the concept we use when we describe the forces acting on or within an organism to initiate and direct behavior" (Petri, 1996, p. 3). There is general disagreement over what motivation is and how it affects learning (Pintrich & Schunk, 1996). However, these can generally be grouped into two approaches, mechanistic or cognitive. The first assumes that changes in external or internal factors will affect how or to what degree a person will engage in suitable behavior (Petri, 1996). Thus, researchers try to measure rate, frequency, and form of behavior or responses that a person has to their environment. "From a behavioristic standpoint, motivation is nothing more than a high rate or likelihood of behavior" (Pintrich & Schunk, 1996, p. 26).

The cognitive approach assumes that how a person interprets information influences her engagement. This approach demonstrates how a person processes

information and stimulus, looks at a person's beliefs and mental structures, and considers her social interactions. It is an internal process; it can not be measured directly but can be inferred from observing a person's behavior (Bandura, 1986; Petri, 1996; Pintrich & Schunk, 1996). "Cognitive theories of motivation are attributions, perceptions of competence, values, affects, goals, and social comparisons" (Pintrich & Schunk, 1996, p. 27). "People are neither driven by inner forces nor automatically shaped and controlled by external stimuli" (Bandura, 1986). This study follows the cognitive approach.

In learning, motivation is studied by measuring student's engagement in classroom tasks, or trying to master a concept (Brophy, 1983). They are apt to engage in activities that are of interest to them and this will help them learn. "Cognitive theories emphasize learners' thoughts, beliefs, and emotions" (Pintrich & Schunk, 1996, p. 27). There are both external factors and social experiences that affect a student's motivation to learn. It must also be noted that motivation can not be separated from learning. Motivation influences learning outcomes, and these outcomes also influence motivation (Pintrich & Schunk, 1996).

The Motivational Factors of the MSLQ

This study's general dependent variable, "motivation in learning," uses the Motivated Strategies for Learning Questionnaire (MSLQ) (Pintrich et al., 1991) to measure several different areas of motivation. The MSLQ is a self-report instrument based on a general cognitive view of motivation where the student is "an active processor of information whose beliefs and cognitions are important mediators of instructional input" (p. 801). The MSLQ is designed for use in college classrooms by instructors and researchers. It has two different sections, one for the assessment of the student's

motivation orientation and one that looks at the student's use of different learning strategies. There are fifteen different scales that can be used as a whole, or individually, and are designed to fit the needs of the researcher (Pintrich et al., 1991). This study will only use the six scales that are contained in the motivation section.

The Motivation section of the MSLQ was designed around three general motivational constructs of the cognitive view of motivation: value, expectancy, and affect. "Value components focus on the reasons why students engage in an academic task" (Pintrich, Smith, Garcia, & McKeachie, 1993, p. 802). These components are: intrinsic goal orientation, which looks at learning and mastery; extrinsic goal orientation, which deals with grades and approval; and task value beliefs, which are "judgments of how interesting, useful, and important the course content is to the student" (p. 802).

There are two expectancy-related subscales: perceptions of self-efficacy and control beliefs for learning. Affect is assessed "in terms of responses to the test anxiety scale, which taps into students' worry and concern over taking exams" (Pintrich et al.,1993, p. 802). These three general constructs and the six subscales will be expanded in later sections.

Value. The Value construct is made up of three scales: intrinsic and extrinsic goal orientation and task value. Whether intrinsic or extrinsically motivated, a student needs to set clear goals that should be difficult to attain but within the student's capabilities. The instructor should provide constructive feedback to the students concerning their progress of obtaining those goals.

Deci and Ryan (1985) see motivation as "energy" or a person's innate needs and the direction of the satisfaction of those needs, whether those needs be internally or

externally contrived. They believe that intrinsic motivation "could account for play, exploration, and a variety of other behaviors that do not require reinforcements for their maintenance . . . organisms are innately motivated to be effective in dealing with their environment . . . based in the organimistic needs to be competent and self-determining" (p. 5). They go on to explain that:

> The desire to explore, discover, understand, and know is intrinsic to people's nature and is a potentially central motivator of the educational process. Yet, all too frequently, educators, parents, and policymakers have ignored intrinsic motivation and viewed education as an extrinsic process, one that must be pushed and prodded from without" (p. 245).

A student is intrinsically motivated when she participates in an activity out of curiosity, a need to know more about something, for the sake of participating in and completing a task, and the desire to contribute. On the other hand, a student is extrinsically motivated when she undertakes a task for the sake of attaining a reward or for avoiding some punishment. "Extrinsic motivation can, especially in learning and other forms of creative work, interfere with intrinsic motivation" (Dev, 1997, p. 13).

Deci and Ryan (1985) found that rewards and punishments can undermine intrinsic motivation. Students may be able to do well on tests, but they lack the ability to think creatively. If the goal of a course or learning session is to learn a concept, then a parent's promise of money or even grades may have a negative effect on that learning and be interpreted as controlling. If they are freed from the control of rewards and punishments, then students will learn to think and learn. Even rewards that everyone might receive, like the good-player award or the good attendance award, can undermine intrinsic motivation. "By learning what to do to get rewards and by doing just what the teacher wants, children can become overachievers, but they will fail to develop the

capacity to transform their learning into flexible, useful cognitive structures" (p. 246). Rewards do motivate students to prepare and do well on tests, but they have a negative affect on attitudes and self-esteem. Students are more anxious and are less confident. Intrinsic learners "tend to interpret their successes and failures as information rather than as rewards and punishments" (p. 247).

Scholars have long agreed that the educational environment should be relevant to learners. Constructivist scholars argue that learners should be given the opportunity to explore the topic and to discover for themselves the concepts. This can only occur if the learners "are allowed to be active in the learning process, to follow their own interests and direct their own learning" (Deci & Ryan, 1985, p. 247). However, some direction is needed. Learners should be given tasks that are of interest to them and will challenge their abilities, but are not too difficult. Failures are just as important as successes. Receiving feedback on the activity and reflecting on the results is important in enhancing intrinsic motivation (Deci & Ryan, 1985; Pintrich & Schunk, 1996). "Allow student's choices in activities and a voice in formulating rules and procedures. Foster attributions to causes over which they have some control" (Pintrich & Schunk, 1996, p. 280). Deci and Ryan (1985) found that, whenever an activity sparks a learner's natural curiosity and interest, their academic achievement is higher and their anxiety is lower, the learner is also more likely to complete the activity.

The Value Component of the MSLQ, Intrinsic Goal Orientation, is the process by which a learner perceives herself to be participating in an activity because there is a challenge, she is curious, or she just wants to master the content. "Having an intrinsic orientation towards an academic task indicates that the student's participation in the task

is an end all to itself, rather than participation being a means to an end" (Pintrich et al., 1991, p. 9).

Extrinsic goal orientation is the complement of intrinsic goal orientation. To what degree does a student see herself as engaging in an activity because of grades, rewards, performance, or competition? It is perceived as a means to an end. "The main concern the student has is related to issues that are not directly related to participating in the task itself (such as grades, rewards, comparing one's performance to that of others)" (Pintrich et al., 1991, p. 10).

Value Component of the MSLQ, Task Value, is how a learner perceives the importance of or how interesting the activity to be. "Task value refers to students' perceptions of the course material in terms of interest, importance, and utility" (Pintrich et al., 1991, p. 11).

Expectancy. The MSLQ measures two components of expectancy: Control of Learning Beliefs and Self-Efficacy. Control of learning is whether or not students believe they have some control over the learning situation, that if they put out the effort they will learn. They believe that, if they study, then the effort will be rewarded in increased learning, and they will make an effort to study more effectively. "That is, if the student feels that she can control her academic performance, she is more likely to put forth what is needed strategically to effect the desired changes" (Pintrich et al., 1991, p. 12).

Self-efficacy is defined as "people's judgments of their capabilities to organize and execute courses of action required to attain designated types of performances"(Bandura, 1986, p. 391). This is also related to outcome expectations where these judgments affect a person's behavior as related to the anticipated outcome

(Pintrich & Schunk, 1996). Instructors can help learners by keeping assignments challenging but reasonably difficult, so that the student will succeed, and they will feel that they accomplished growth in learning. They should refrain from publishing grades or relative class ability levels, such as passing the students papers back in order of grade level or showing the class distribution. Students need feedback on performance but not in respect to others in the class. Keep the expectations related to the content at hand. "It is more productive for academic learning to help students develop their self-perceptions of competence rather than their global self-esteem" (Pintrich & Schunk, 1996, p. 102).

The second MSLQ component of expectancy, Self-Efficacy for Learning and Performance, assesses two aspects of expectancy: success and self-efficacy. Success relates to task performance, how well a person sees themselves as being able to complete a task. "Self-efficacy includes judgments about one's ability to accomplish a task as well as one's confidence in one's skills to perform that task" (Pintrich et al., 1991, p. 13).

Affect. The affective component of the MSLQ is a measure of the learner's perceived anxiety concerning tests. "Test Anxiety can be a major problem in the classroom at all levels, from elementary through postsecondary classrooms" (Pintrich & Schunk, 1996, p. 308). Test anxiety can come in two different ways, as a trait where a person is highly anxious in many different situations or as a state that occurs in just specific situations. Either way it causes "poor performance, is negatively related to self-esteem, and is directly related to students' defensiveness and fear of negative evaluation" (Pintrich & Schunk, 1996, p. 309).

One simple thing that studies show that instructors can help with test anxiety is by removing the time constraints on tests. "If demonstrating mastery of the material is the

most important aspect of assessment, then the amount of time taken to do so should not be an issue, particularly given individual differences in students' speed and ability to perform" (Pintrich & Schunk, 1996, p. 311). Other things that instructors can do is to reduce the perceived importance of the test and avoid any public display of grades, even if the student is not identified. The idea of having your grade be the lowest in the class can cause anxiety (Pintrich & Schunk, 1996).

Test anxiety is negatively related to expectancies and academic performance. It considers a student's state of worry and emotions while preparing and taking a test. Worry is a learner's negative thoughts that affect their performance. Emotions refers to affective and physiological arousal aspects of anxiety (Pintrich et al., 1991).

Motivation and Constructivism

"The MSLQ is based on a general social-cognitive view of motivation . . . with the student represented as an active processor of information whose beliefs and cognitions are important mediators of instructional input and task characteristics" (Garcia & Pintrich, 1996, p. 323). Constructivism emphasizes the importance of the student's point of view in learning. Classroom motivation from a social cognitive point of view is one where students are not there to perform but to learn. Learning is enhanced when the students are allowed choices in assignments and how to accomplish them. Learning is also enhanced when the students choose to engage in an activity for their own reasons rather than to earn a reward, to avoid punishment, to meet time limits, or a desire to win a competition (Brophy, 1983).

From a social constructivist perspective, it is important to focus the student's perceptions within a specific social context and to take into consideration the classroom

culture. "Meanings are constructed and negotiated within the uniqueness of each classroom culture" (Oldfather & Dahl, 1995, p. 3). In following the social constructivist perspective, the MSLQ collects data on students' beliefs and perceptions about their abilities and behavior, not from data generated by observational means from teachers or parents within the context of a specific classroom environment (Garcia & Pintrich, 1996).

CHAPTER III – METHOD

Research Approach and Rationale

This study was a two factor, mixed quasi-experimental, pretest-posttest design; see Figure 1. The Teaching Method (control and treatment sections of the same course) and Time (Pretest and Posttest) were the independent variables.

	Time	
	Pretest	Posttest
Traditional method (group 1, n=9)	0 0 0 0 0 0 0	0 0 0 0 0 0 0
Teaching Method		
Constructivist method (group 2, n=17)	0 0 0 0 0 0 0	0 0 0 0 0 0 0

Figure 1. Two Factor, Mixed Quasi-Experimental, Pretest-Posttest Design

The researcher did not assign participants to groups; they were allowed to pick which class they wanted to take by convenience. The only difference between the two classes that the students knew about was the time of day. The main independent variable was active and had two categories. There were several dependent variables concerning motivation that were measured in this study using the Motivated Strategies for Learning Questionnaire (MSLQ) (Pintrich et al., 1991) -- Overall Motivation, Intrinsic Goal Orientation, Extrinsic Goal Orientation, Task Value, Control Beliefs, Self-Efficacy, and Test Anxiety (see Appendix A).

Participants

The theoretical population for this study was all undergraduate college students. The actual participants were from two sections of American History II (post-Civil War to

the present) from a community college in the suburbs of a large western U.S. city. Both sections had the same instructor of record. However, there was a different substitute instructor in each section for three weeks at the beginning of the study semester due to a death in the instructor of record's family. The section with the larger number of enrolled students was chosen to be the treatment group, and the smaller was chosen as the control group. The instructor was estimating 30 in the treatment group and 20 in the control group before the semester began, and the decision needed to be made as to which section would get the treatment. In actuality, the control group had 17 students who completed the pretest questionnaire, and of those, 9 completed the posttest, or an attrition of 47%. The treatment group had 20 who completed the pretest, and of those, 17 completed the posttest, or an attrition of 15%. The instructor did not know why there were so few at the time of the posttest for the control group. Only those students who completed both the pretest and posttest instruments were used in this study.

Demographic data was collected on the students: gender, year of high school graduation (HSGrad), and college level courses taken (Courses) as part of the pretest instrument (see Appendix B). This was to give some indication of the student's academic preparation. There were 63% female and 37% male with both groups combined. The treatment group had 60% female and 40% male and the control had 67% female and 33% male. The mean and standard deviation of the HSGrad year was 1995 (SD=4.25 years) and for Courses it was 10.6 (SD=7.1 number of courses). A correlation was calculated using the students from both groups to see if there was a significant relationship between year of high school graduation and college level courses taken. It was found to not be significant $r=-.262$, $p = .264$.

Measure

The instruments that were used in this study are presented in Appendices B and C. These are the same questions from the motivation section of the MSLQ for both the pretest and posttest instruments, with slightly different introductory statements. The demographic variables--gender, year of high school graduation, and college courses completed--are included in the pretest instrument, Appendix B, but not in the posttest. There is also a question asking for the students' reflection on their learning in both instruments.

The MSLQ is a self-report instrument that has two major sections: Motivation and Learning Strategies. Only the motivation section had data accumulated in this study. This section was based on three general motivational constructs: expectancy, value, and affect. Expectancy, or the student's belief that she can accomplish a task, has two subscales: self-efficacy and control. Value has three sub-components: intrinsic goal orientation, extrinsic goal orientation, and task value beliefs. Affect measures the "student's worry and concern over taking exams" (Garcia & Pintrich 1996, p. 327).

The questionnaire was designed to be used at the course level. The assumption was that a student's motivation would vary depending on the course content, instructor and other variables. Thus, norms can not be provided for the MSLQ. It was a self-rated questionnaire, using a seven point Likert scale from "not at all true of me" to "very true of me." The scale scores were constructed by taking the mean of the items that make up that scale (Pintrich et al., 1991).

The MSLQ was first tested "at three collaborating institutions in the Midwest, a four-year, public, comprehensive university; a small liberal arts college; and a

community college" (Pintrich et al., 1991, p. 4). It was then revised, and the subscales were constructed. The final version was constructed from five years worth of data collected previous to the development of the manual (Pintrich et al., 1991). The participants in these studies came from several different classrooms and from several different subject areas and disciplines (Pintrich et al., 1991).

The scales were correlated with the final grade and were shown to be moderately significant, thus demonstrating some predictive validity. A confirmatory factor analysis indicates a reasonable factor validity. In an article in 1993 the authors of the questionnaire presented the results of the confirmatory factor analysis in more detail. "The data presented were gathered from a validation sample of 380 Midwestern college students, most from a 4-year, comprehensive university (n=356). This MSLQ was administered once, toward the end of the Winter 1990 (January to May) semester" (Pintrich et al.,1993, p. 805). Rather then use an exploratory factor analysis where the items were allowed to fall at will, "confirmatory factor analysis required the identification of which items (indicators) should fall onto which factors (latent) variables" (p. 805). This in turn allowed for a quantitative test of the theoretical model.

> The results suggest that the Motivated Strategies for Learning Questionnaire has relatively good reliability in terms of internal consistency. The general theoretical framework and the scales that measure it seem to be valid given the results of the two confirmatory factor analyses (p. 811-812).

The six motivational subscales represent an empirically validated framework for assessing student motivation, appear to be conceptually coherent, and are related to academic performance. "The MSLQ seems to represent a useful, reliable, and valid means for assessing college students' motivation" (p. 812).

The scale Cronbach's alphas ranged from .52 to .93, thus demonstrating a pretty good reliability (Pintrich et al., 1991). For this study the researcher computed internal consistency reliability, Cronbach's coefficient alpha, on the posttest data. The overall result was .88 with an N of 26. However, there were several items that showed low corrected item-total correlations, .07 to .79, with eight below .4. An alpha was computed for each scale (see Table 2). Intrinsic was the only one with low, alpha .63, but it would only be improved to .68 if the lowest item was deleted. These individual scale alphas seem to be in line with the findings of the previous studies and are pretty good.

Table 2

Cronbach's Alpha Scores for the MSLQ with Corrected Item Correlations

Scale	Alpha	Corrected Item Correlation (min-max)
Intrinsic	.63	.30-.58
Extrinsic	.69	.41-.58
Task Value	.84	.42-.73
Control Beliefs	.78	.41-.74
Self-Efficacy	.90	.61-.79
Test Anxiety	.88	.63-.85
All 31 Questions	.88	.07-.79

Note: N=26

An Alpha between .7 and .9 shows reasonably good reliability coefficients with some studies accepting .6 as the low end. Over .9 indicates that the questions may be repetitious or the scale larger than necessary. Again, Intrinsic shows a marginal but acceptable Alpha of .63 (Morgan & Griego, 1998, pp. 129-130)

Procedure

Both sections met on Tuesday and Thursday for 75 minutes of face-to-face class time each week during the semester. The control group met from 5:35 to 6:50 in the evening and the treatment group met from 11:25am to 12:40pm. Because of a delay in getting the permission from the community college to do the study, the researcher wasn't able to attend class until the fourth class session, a Thursday during the second week of class to distribute the consent forms (see Appendix D). This was a short session: telling the students about the study, informing them that they were not obliged to take part in the study, passing out the consent form, and telling them that if they were under 18, then they needed to have their parents or guardian sign the form and bring it back on the following Tuesday. The researcher and the instructor informed the students that this was voluntary and their participation, or lack of participation, would not be reflected in their grade. The instructor would have no knowledge of who participated or how they answered the questions.

During the time between this Thursday introductory session and the Tuesday session where the participants were to complete the pretest questionnaire, the instructor's son passed away suddenly. After conferring with the researcher's committee members, it was decided to proceed with the study. The sections had different substitute instructors, but both were informed that the questionnaire would be given during the last half of class. The consent forms were again distributed and they were read and signed in class. Anyone under 18 was asked to turn in the copies that they had signed by their parent or guardian. After the consent forms were collected, the researcher distributed the questionnaire and the participants completed it and turned it in to the researcher as they left the classroom.

The questionnaire was anonymous, but the students needed to fill out a code at the top of the page so that the posttest could be matched to the pretest, see Appendix B and C for the codes algorithm. This process was followed with both sections.

During the semester, the researcher visited the classroom to observe the teaching method of the instructor for the two different teaching sections. Since the instructor of record was gone during the first three weeks of the study, the researcher did make a short observation of the substitutes during the class time before the pretest was given to the students. The researcher also observed the instructor of record during two more sessions during the semester.

The Thursday before the last week of class, the researcher again visited the class and distributed the posttest questionnaire (see Appendix C), using the same procedure as with the pretest, except this time there was no permission form to be completed. The time between completing the pretest and the posttest was 86 calendar days, 12 class weeks and 22, 75-minute class sessions for both sections.

Control Group's Instructional Method

The control group had a traditional approach to teaching history. Most of the instruction was conducted by using lectures and videos. Even the substitute for the first three weeks followed this method well. The students had three in-class exams and some minor research papers.

In one class that was observed, the students were completing posters of a particular area of the History of the U.S. The students then presented their posters, basically by reading them to the class. The instructor then gave a short lecture on the particular topic of the poster. In another class on World War II, the instructor lectured the

whole time giving facts about the topic. Periodically she would ask questions of the students, and the students would parrot back the answers. No true discussion was developed.

Treatment Group's Instructional Method

The treatment group was to receive the same content but use more experiential and constructivist methods. The substitute tried to follow the design that the instructor of record set out but seemed to revert to the lecture often. However, this was only three weeks of the class and in the opinion of the researcher the regular instructor did a better job using the method. The students had two take-home essay exams and were required to put together a portfolio that was a collection of their nine reflection papers on various topics, an oral history of a World War II participant, summaries of the oral research presentations, and their two take-home exams.

In one of the sessions that were observed, the instructor started the session by giving a brief overview of the topic and then divided the students into pairs, who were then asked to answer questions on preprinted slips of paper. Each group had a different question. The instructor then asked for the groups to report. Generally, one person would read the question, and the other would answer. The instructor would summarize or elaborate with some discussion involving the whole class. This was not a great deal different from the poster session in the control group, but the students did seem to be more on task. The other groups did ask questions, whereas in contrast, the poster session contained no discussion.

In the other session the instructor did a little show and tell at the beginning of class about World War II. She then asked open-ended questions about the content and

was able to generate discussion with the students and created a true dialogue, as opposed to the same topic that was covered with the control group using the lecture method as described above.

Data Analysis

Because this is a pretest-posttest study, there is a place to record a code on the instrument. The students were asked to make up a unique code by listing the student's birth month, the last 2 digits of his/her current phone number, and his/her mother's first initial. Data from the questionnaires were entered into SPSS statistical computer application.

Because this was a pretest-posttest design, three different analysis methods could be used: the mixed ANOVA approach, the gain score approach, and the analysis of covariance approach (Gliner & Morgan, 2000). "The gain score approach provides the gain or effectiveness of each condition over time" (p. 286). By comparing the gain scores of the students in the traditional method with those in the constructivist method, a conclusion can be reached as to the effectiveness of the regular instructor's constructivist method. This was calculated on all six subscales of the MSLQ by using the means of the individual differences between the pretest and the posttest scores within each scale. Also, reversing the Test Anxiety score and taking the mean of all 31 questions achieved an overall motivation score.

CHAPTER IV - RESULTS

Quantitative Analysis

Research Questions Answered

To answer research questions proposed in Chapter One, the gain score *t* approach was calculated. The research questions are:

1. Was there a difference between the MSLQ motivation scores of the students in the traditional method and in the constructivist method?
2. Was there a difference between the MSLQ Intrinsic Goal Orientation sub-scores of the students in the traditional method and in the constructivist method?
3. Was there a difference between the MSLQ Extrinsic Goal Orientation sub-scores of the students in the traditional method and in the constructivist method?
4. Was there a difference between the MSLQ Task Value sub-scores of the students in the traditional method and in the constructivist method?
5. Was there a difference between the MSLQ Control Beliefs sub-scores of the students in the traditional method and in the constructivist method?
6. Was there a difference between the MSLQ Self-Efficacy sub-scores of the students in the traditional method and in the constructivist method?

7. Was there a difference between the MSLQ Test Anxiety sub-scores of the students in the traditional method and in the constructivist method?

Simply, the answer to all of these questions is *no significant difference*. The gain score *t* test results are reported in Table 3. Again, the gain score is the mean of the pretest score subtracted from the posttest score. They were all significant with Levene's Test for Equality of Variances, so equal variances are not assumed, and that is what is reported in the table (Morgan, Griego & Gloeckner, in press). If one of these questions would have been significant and a positive *t*, then it could be said that the treatment had a possible positive effect on the variable (motivation or one of the subscales). However, with no statistically significant *t*, then it must be said that there was no statistical difference between the two methods.

Table 3

Teaching Method Differences in Overall Motivation and the Sub-Scales, Using the Gain Score Values

	Constructivist[a]		Traditional[b]			
	M	SD	M	SD	t	p
intrinsic goal orientation	.120	.780	.330	.450	-.764	.452
extrinsic goal orientation	-.056	.895	.167	.573	-.682	.502
task value beliefs	-.078	.656	.315	.724	-1.404	.173
control beliefs	-.103	.656	.139	.574	-.931	.361
self-efficacy	.037	.553	.153	.643	-.481	.635
test anxiety	-.047	1.299	-.178	.682	.280	.782
overall motivation	-.019	.509	.154	.335	-.916	.369

[a]N=9
[b]N=17

Differences Prior to Intervention

One of the drawbacks of using the gain score *t* is that "it does not provide information about differences prior to the intervention (pretest scores)" (Gliner & Morgan, 2000, p. 286). To provide some information on this, a *t* test was calculated on the pretest data, again with the method as the independent variable and the motivation scales as the dependent variables. The results are in Table 4. Again, there was no

Table 4

Teaching Method Differences in Overall Motivation and the Sub-Scales, Using the Pretest Scores

	Constructivist[a]		Traditional[b]			
	M	SD	M	SD	t	p
intrinsic goal orientation	5.309	.622	5.42	.530	-.441	.663
extrinsic goal orientation	4.779	1.281	5.194	.975	-.848	.405
task value beliefs	5.892	.784	5.500	.719	1.248	.224
control beliefs	5.824	.828	5.444	1.074	1.003	.326
self-efficacy	5.787	.737	5.555	.763	.752	.459
test anxiety	4.190	1.570	4.200	1.550	-.018	.986
overall motivation	5.362	.616	5.247	.618	.453	.655

[a]N=9
[b]N=17

statistically significant difference between the motivation sub-scores of the students in the traditional method and in the constructivist method. Going into the study, no statistically significant difference was found between the two groups as far as these motivation variables were concerned.

Mixed ANOVA Approach

Pretest-Posttest studies can be analyzed using a mixed ANOVA approach. It is only useful if there is "significant interaction effect between the treatment conditions and time" (Gliner & Morgan, 2000, p. 285). The reason for this is because pretest scores are

combined with the posttest scores, thus, "between groups main effects" provides little meaningful information and the "within subjects main effect" does not tell us which group changed if there was a significant change. To see if there was a significant interaction, this ANOVA was calculated using the method (Traditional and Constructivist) and time (Pretest-Posttest) as the independent variables and the same motivation dependent variables. As expected the interaction Fs from this test gave exactly the same p as the gain score approach.

MANOVA

A Multivariate Analysis of Variance (MANOVA) was also run on the data using the Method as the Independent variable and just the six sub-scales as the dependent variables. The gain scores were used so that the difference between the pretest and posttest scores could be studied. Again there was no significance, with the Wilks' Lambda reporting a p of .717. Of course, this was to be expected since none of the individual p's were significant.

In conclusion, the quantitative data showed no significant difference on any of the dependent variables with respect to the two different teaching methods. The question on the last page of the pretest and posttest was then analyzed using qualitative techniques to find patterns and develop categories (Patton, 1990).

Qualitative Analysis

To get a qualitative sense from the student's reasons for being in the class and how they best learn, a question was asked on the pretest instrument after the students answered the MSLQ questions: "Please take a minute to consider why you are taking this

course and what you expect to learn from it. Include any thoughts about your expectations to learn the material and/or about how you learn best." Research expectations are that on the pretest question students will be generally the same on both the Constructivist and Traditional groups. If motivation was higher in the constructivist classroom then it would be expected that the posttest responses would be more positive to the question: "Please take a minute to consider why you took this course and if you learned what you expected to learn from it. Include any thoughts about your expectations to learn the material."

Pretest Constructivist Group

From the pretest question, there emerged four categories of answers: learning methods, what to learn, content enjoyment, and whether or not the course was required.

Discussion and lecture were the preferred methods of this group but some mentioned more hands-on, self-directed and loosely structured approaches. Also, some mentioned that they were visual learners:

> I enjoy class discussions, because you can listen to everyone's opinion!
> I learn best from lecture and visual aids.
> I like a class that lets me be free to do extended research in areas that are of particular interest to me.

"What to learn" was divided into two general categories: facts and knowledge, both getting about equal attention in the write ups. "Facts" is fairly self-explanatory, as one student put it:

> I also want to know the important facts and dates in a concise, chronological order.

Knowledge, on the other hand, is when the student mentioned more than just learning facts, expressing a desire to *understand* history:

> I'm interested in how things come to be what they are.
> I expect to take from this course a broader idea of what my family went through when they came to the United States, what the world was like, what their motivation was.
> I hope to have a clear understanding of the major historical events in our country.

"Content enjoyment" reflects comments from the students liking history or not.

Interestingly enough, no one said they hated history and several stated they liked history:

> I find American History to be an intriguing subject.
> I love history.

Then there were the more traditional responses:

> I am taking this class for my future job working for the foreign service.
> Taking this class as a requirement.
> Because I have to.
> To fulfill a college requirement
> Core class that will transfer.

Pretest Traditional Group

The traditional group had fewer students in it so the data are not as rich but it still seemed to break down into the same four major categories: learning methods, what to learn, content enjoyment, and whether or not the course was required. Again, "learning methods" saw an expectation of lecture, discussion, and visual learners:

> Watching things or having diagrams and notes available.
> I also learn well by listening to lectures and taking notes on the contents

Still, several students wanted facts but there was also a strong knowledge component:

I hope to learn many new things about this nation's history and be more informed.
I hope to gain a better understanding of history after this class.
Where I came from.
I think it is important to understand the past and see the reasons why our culture is the way it is.

And there were still the ones who enjoy history:

This class lets me learn about what I am highly interested in.
History intrigues me.

And, of course, the students reported that they must take it for transfer:

To fill my history requirement so it will be transferred.
To earn credits for a 4 year college to get a Business Degree.

Posttest Constructivist Group

The Posttest question was structured a little bit differently: "Please take a minute to consider why you took this course and if you learned what you expected to learn from it. Include any thoughts about your expectations to learn the material." Even with this change in the question to be more after the fact, the data still broke down into the same four general categories, but with a little different detail flavor: methods, depth of learning, liking the content, and whether or not the course was required.

Lecturing and discussion were not mentioned. However, the students did mention: freedom of learning activities, and the fact that it was what the student did, not what the teacher did:

The teacher let us do research on any topic of our choice, and I really liked that because I had the ability to learn about information I was interested in!
I learned a lot from what I did and others.

However, there was a negative statement concerning the large number of student presentations. The statements were more heavily weighted toward more depth of leaning and away from facts:

> I did learn what I expected and much more.
> I believed I would be learning the same information I learned in high school. That was not the case, thankfully.

There was the "I like history" statements much more of the time than in the pretest and a little more depth, plus they mentioned the instructor more:

> History interests me a lot and I think every American should understand American History.
> Very enjoyable to learn.

Of course, there was the statements about being required:

> This class was very important for me to take since the career I am pursuing is in history.
> I took this course to fulfill a course requirement.

Posttest Traditional Group

The traditional section showed the same general grouping, however, again the details differed. Again, no mention of the lecture or discussions appeared. However, there were various other learning methods mentioned: the instructor relating personal stories, the topic being related to his job, and the use of videos:

> I did learn a lot about the History of labor which is kind of useful in my job.
> My instructor brought in stories from her personal life which made the class really interesting.

The depth of learning was about the same as the constructivist classroom:

> I feel the material in this class should be common knowledge for all Americans.
> I have had it since elementary school but I never really grasped the information and now I feel much more confident about the material.
> What effect the past events have had on the present.

And there were the "I like history" statements:

> I really like to learn new things about our country's history.
> I enjoy History.

However, there was only one student who mentioned that it was a requirement:

> Required to get credit towards a degree.

In summary, the qualitative data also shows the effect of the differences in the two methods to be minimal and if anything weighted towards the traditional method as being the better of the two methods according to the student responses. These results are similar to the quantitative data from the previous section.

Classroom Observations

The original study design called for two observations of each section, once during the 6th week and another during the 10th week of the semester. Because of the death in the instructor's family, the researcher decided to do a short observation of the substitutes during the third week of class. Also, because of having different substitutes, the two sections were not synchronized as far as content. So, to observe the two different treatments of the same content the first observation of instructor of record was accomplished during the 6th week for the Treatment section and a week later for the Control group. The observation for the 10th week ran into an exam, so it was moved to the 12th week. However, in both cases the same content was covered for both sections.

Patton (1990) relates that organizing observational data is greatly facilitated if you know how it is to be presented. Since the research problem is to look at the difference between the two methods, this will drive the analysis of the observation. There were two different observations during the semester over the same content between each section.

So, all will be reported in the following paragraphs. There will be syntheses of the data around the tenets of the experiential constructivist method. The two substitutes' observation, however, were so short in duration they will merely need a mention of their differences from the instructor's lesson plan.

The Effects Of Substitute Teachers

In the short time that the researcher had to observe the substitute teacher for the constructivist section, she tried to follow the lesson plans that the instructor of record laid out. However, it could be seen how uncomfortable that was for her and, looking at the summary of activities that she wrote up for the instructor, she did revert to a lecture a few times. However, these were not directly observed by the researcher.

The researcher was able to observe the substitute for the traditional section for a longer time. He lectured the entire time, the students never said a word, and he never tried to engage them in a discussion.

In summary, it appears that the substitute for the constructivist section may have "poisoned" the students slightly towards the traditional method, and the substitute for the traditional class might have given the traditional group even more lecture then the instructor of record would have. This will be seen in an analysis of the instructor's constructivist and traditional methods.

Teaching the Progressive Era - Constructivist Method

The instructor of record returned to class the week before this class period was observed. She taught this Progressive Era content by passing out preprinted slips with questions on them. The students were asked to pair off and formulate an answer to the

question that they received. These questions had some depth to them and required the students find the answers in the book or books. During this time the instructor circulated through the class answering oral questions from the students with short answers. However, after a short while she would spend more time with one or two groups. The rest of the class time was spent reporting back to the class. Generally, one student would read the question and their partner would answer it, and then the instructor would give a short summary. Sometimes, this would develop into a dialogue, but mostly it ended with a report-summary method with little reflection from the students over and above the students' initial "lecture" answering the question.

Teaching Progressive Era - Traditional Method

The same content was taught to the traditional class a week later using the lecture method. The instructor would make a few statements, write something on the board, and ask a fact-finding question, waiting for someone to raise their hand or express the answer verbally. This proceeded, lecture-question-answer, until the end of the class period. Some stories were interspersed in the lecture by the instructor. No true dialogue was observed with the student or the instructor reflecting on the facts.

Teaching WWII - Constructivist Method

A student giving a presentation by just reading her report took up the first part of the class. The instructor was successful in summarizing the facts and asking questions, and other students did join it with some dialogue. The rest of the class was taken up with the students going around the room talking about their oral history projects. They discussed who they interviewed and some of the stories about what that person did during

WWII. Most students interviewed their relatives so it was of personal interest to them also. The interviews were mostly stories about what people were doing during WWII. A few students had artifacts and a few others, as well as the instructor, were able to add to the story. However, little true dialogue or reflection on the stories were attempted.

Teaching WWII - Traditional Method.

The class was started with a video comparing Hitler and FDR. The instructor then stopped the video, and lectured, asking questions comparing and contrasting the two. Some dialogue was developed and some depth was reached in the reflection of the students. The instructor then proceeded to lecture on the next topic, giving facts and asking the students to answer some fact-finding questions. There was some storytelling on the part of the instructor.

In summary, by the models presented in Chapter 2 the best ways to identify an experiential constructivist method are by the students' use of experience, reflection on that experience, and some synthesis of the information constructing an interpretation (Anderson, 1992; Boud et al, 1985; Burnard, 1989; Joplin, 1981; von Glaserfeld, 1995). The constructivist methods used by the instructor were strong in experience (research for the question answers and the oral histories) and some group and individual reflection did occur (student answers and instructor summary and some student dialogue was developed about the oral history stories). However, very little interpretation and synthesis was attempted. In looking at the syllabus and portfolio directions, the researcher found that the students were not asked for a reflection paper on the oral histories. However, they were asked to reflect and analyze in other content areas in the course, so it could be that,

in general, the course did require more analysis and interpretation then the researcher observed in these two sessions. The traditional methods exhibited some experience (they were expected to have read the book, they were shown a video, and the instructor did tell some stories); very little if any reflection occurred (what discussion occurred was around the facts); and there may have been some interpretation occurring, but that was mostly on the part of the instructor, not the student.

CHAPTER V - DISCUSSION

With no statistical difference in the motivation of the students between the two groups, there are several issues or problems that occurred with this study that may have helped contribute to this outcome. However, before delving into those issues, it seems appropriate to this discussion to look at some implications for practice, summarize the study, and then discuss the issues and problems as recommendations for further research.

Implications for Practice

Teaching History

Even though the experimental section of this study showed no significant difference in motivation to learn between the two groups, there was much found in the literature about teaching history using experiential constructivist methods that is not nullified. Looking at methods of teaching history in the literature, several authors and studies were found that support methods that do not follow the traditionalist approach of lecturing, showing videos, and giving multiple-choice exams. Using this method, students are taught history as if there is one right interpretation. They are given one interpretation of the facts, one conception of what the evidence of the primary sources reflect (Halldén, 1997).

Students should know historical facts, and they should be able to explain an understanding of the events that formed those facts. They should be able to sharpen their reasoning skills through their historical studies, do research, and document that research.

Plus, students should develop skills in reading, writing, and discussion (Carretero et al., 1997; Kars, 1997; Miller, 1995; Obrochta & Evans, 1996; Shrock & Shrock, 1994). In short, students should learn the historian's trade, to think like historians. One good way to teach these skills is through the use of primary sources.

Instructors should develop courses and learning activities using primary sources and archival materials. In this way, students will learn to understand that the histories they are studying are just the interpretations of the textbook author (Brakel, 1995). Students also discover that, when they interpret these primary sources, they have the same insights, biases, and limitations that the historians do; they too have subjective viewpoints. However, they sharpen their research, reasoning, reading, writing, and discussion skills.

Several practical, everyday experiences can be used to teach the historian's trade using primary sources: examining a person's driver's license, describing events, investigating the students family tree, or family events, photos, oral histories, memorabilia, local archives, museums, battlefields, guest speakers, as well as standard, compiled primary source material, such as what was used in the class sections in this study. When it is personalized, the students will have a deeper understanding of the remote concepts (Carretero et al., 1997). Even assessment needs to be changed to use argumentative essays and not narratives (Voss & Wiley, 1997).

In developing the experiential constructivist methods used in this study, the researcher and the instructor used these methods. The instructor gave an oral history assignment on World War II, and most of the students interviewed a relative, grandparent, or an aunt or uncle. They looked at life during the war at home, as well as

abroad, receiving a first-hand description of life during those times. They also developed reflective papers on each aspect of the history of the US during the course. Artifacts were brought into class for the students to see and touch. Primary source texts were used, as well as the standard text, to develop research papers. Their assessment consisted of take-home essay exams to interpret what they had read and learned in class from the instructor and their fellow students.

By 'doing' history, students were actually having fun; they were more engaged in the class; they learned about themselves, as well as history; they learned to think; and question their own values.(Kars, 1997; Miller, 1995). Even though this study did not demonstrate an increase in their motivation to learn, instructors can use these experiential constructivist methods to improve the student's reading, writing and thinking skills.

Classroom Motivation

While this study was inconclusive about the effect of experiential constructivist techniques on motivation, previous literature shows that learning motivation can be enhanced by having the students engage in activities that are of interest to them and, thus, will help them learn. Motivation cannot be separated from learning. Motivation influences learning outcomes, and these outcomes also influence motivation (Brophy, 1983; Pintrich & Schunk, 1996).

This study also identified from the literature three general motivational constructs of the cognitive view of motivation: value, expectancy, and affect. Value has three components: intrinsic goal orientation, which looks at learning and mastery; extrinsic goal orientation, which deals with grades and approval; and task value beliefs, which are

"judgments of how interesting, useful, and important the course content is to the student" (Pintrich et al., 1993, p. 802).

Rewards and punishments can undermine intrinsic motivation. External rewards, even grades, may have a negative effect on learning and can be interpreted as controlling. If students are freed from the control of rewards and punishments, then students will learn to think. Even the good attendance award can undermine intrinsic motivation. Rewards do motivate students to prepare and do well on tests, but they have a negative affect on attitudes and self-esteem. Students are more anxious and are less confident when they are in class for external reasons (Deci & Ryan, 1985). The key is to minimize these external factors of learning and concentrate on the internal factors. Scholars have long agreed that the educational environment should be relevant to learners. Constructivist scholars argue that learners should be given the opportunity to explore the topic and to discover for themselves the concepts. This is best accomplished by allowing students to explore topics of interest to them. Learners should be given tasks that spark their natural curiosity and interest and will challenge their abilities but are not too difficult. Failures are just as important as successes (Deci & Ryan, 1985; Pintrich & Schunk, 1996).

There are two expectancy-related concepts used in this study: perceptions of self-efficacy and control beliefs for learning. To help a student's self-efficacy for learning, instructors can help learners by giving assignments that challenge but are within their ability to succeed. They will feel that they have accomplished growth in learning. Do not publish grades by relative class ability levels. Students need feedback on performance but not whether they are better or worse then others in the class. This will also help in task

performance, or how well a person sees themselves as being able to complete a task (Pintrich & Schunk, 1996).

Affect in this study is a measure of the learner's perceived anxiety concerning tests. Removing the time constraints on tests is one simple way that instructors can help with test anxiety. If speed is not of importance in learning the concept, why have it as part of the assessment process. Reduce the perceived importance of the test and avoid any public display of grades. This will reduce text anxiety and increase motivation (Pintrich & Schunk, 1996).

Experiential constructivist methods of learning respect the learner and the learner's knowledge and follow the tenets laid out for enhancing a learner's motivation. The constructivist method used in this study promoted the learner's ability to succeed and honored their interpretation of the facts from the primary sources. There also needs to be consistent attention to reflection on their interpretations of the facts.

Recommendations For Further Research

With no statistical difference in the motivation of the students between the two groups, there are several issues or problems that occurred with this study that may have helped contribute to this outcome. These can be organized into two major categories: experimental mortality and methodology problems. However, first a review of the study is in order.

Study Summary

Originally, this study was conceived to work with two sections in a large university. However, when it came down to implementation, the history department decided against it. Those sections would have had at least 50 students, even after any

kind of experiential mortality; each section is normally filled to the maximum of 120 students.

The study was then moved to the community college that was eager to accommodate it. In preliminary discussions with the instructor of the course, she estimated 30 students in both sections. As the beginning of the semester drew near, this estimate changed to 30 in one section and 20 in the other, and the decision was made to have the larger of the two be the treatment group. In actuality, the control group totaled 17 students who completed the pretest questionnaire, and of those, 9 completed the posttest for an attrition rate of 47%. The treatment group consisted of 20 who completed the pretest, and of those, 17 completed the posttest for an attrition rate of 15%. Consequently, there was a large difference in the mortality of the two groups.

In measuring motivation using the MSLQ, there was no significant difference between the section of students that was taught traditionally and the section that was taught using an experiential constructivist method. An analysis of the written comments also seemed to show no difference between the two groups. Classroom observations demonstrated that there was a difference in the two methods but perhaps not enough to show a difference in motivation using such a low number of participants.

Experimental Mortality

It is extremely difficult to do applied research when the researcher has little control over the treatment and the selection of the participants. Ideally, the researcher should randomly assign the students to each section. However, this is practically impossible. As mentioned earlier, this study was done using a convenience sample, in that the students could enroll in either section at their convenience. The researcher was

not able to randomly place them in a section. "Non-equivalent comparison groups" is the main reason for the pretest-posttest design. If they were equivalent, then a posttest only would have been a better design.

In this study, the instructor did not know the reason for the poor posttest attendance for the control group. Were they absent because of the method? Was their attendance poor the entire semester because of the method? Further investigation needs to be conducted to see why the control group had such a high mortality rate.

It also points out that the study's design had an subject mortality limitation, which, if recognized earlier, perhaps could have been controlled. One implication for future research is to expect an attendance problem and control for it or start with larger enrollments. Also, using more qualitative methods, such as interviews, analysis of reflection papers, and focus groups would enrich the data even with a small sample.

Teaching Methodology Control Problems

From the results of the observations, the differences between the traditional and the constructivist methods may not have been great enough to show a difference in motivation. One hypothesis is that this could have been a result of using the same instructor. The instructor in this study was comfortable with both methods but the course designs may not have been different enough to demonstrate a contrast in the dependent variables. Her greater comfort was with the constructivist method, so her traditional approach may have been a stretch, lacking sufficient and sustentative differences. This could be improved by having two different instructors. For the control group, a subsequent study could employ an instructor with a long tradition of teaching the course using "traditional" techniques. This, however, introduces other limitations that will need

to be accounted for, such as general differences in personalities and the student's predisposition towards a particular instructor. Also, dropping the use of primary source text in the control group completely would come closer to a traditional course design.

In retrospect, it also seems that the constructivist method should be changed so that the students do not hear a traditional presentation but learn to create a dialogue with other students, with the class as a whole, or in small groups. The instructor or the students can facilitate this. Students could complete oral reports as a learning experience for the entire class. However, this would require more up-front training of the students and even the instructor.

Furthermore, the constructivist section could be centered around the primary source text, instead of the content sections from the traditional text. The primary source text could be used as a basis for the course outline. Students would, then, draw their knowledge and interpretations here. The traditional text could be dropped from the constructivist section.

Unfortunately, an unexpected death in the instructor's family caused a three-week span of time where each section had someone different than the instructor of record. This was at the beginning of the semester and may or may not have been a limitation in the study. There was no way to predict this, and there is no way to tell its exact affect at this time. It might have been minimized with more planned differences structured into the two methods.

Student/Instructor Development

This researcher plans to approach the history department of a large university to replicate this study implementing the recommendations listed above. Getting an increase

in the sampling method with a large convenience sample size could be easily accomplished with a larger number of students in each section. This should help the quantitative analysis of the MSLQ data. An analysis of learning through comparisons of final grades or a common exam could also improve the validity of the study. Adding an analysis of the reflection papers would help enhance the qualitative analysis of the two sections. Also, conducting interviews with students in each section would help in understanding their motivation to learn.

However, one important factor becomes clear in the analysis of the classroom observations. There is a need for staff development in the use of experiential constructivist teaching methods. The instructor of this method needs to be trained in the philosophy and details of this approach. The design needs to be experientially based and not a slight modification of a traditional classroom strategy. The instructor needs to be taught how to immerse the students in constructivist activities so that reflective papers and discussions result both in and out of the classroom.

Trips need to be made to local museums and historical monuments so that the students can get a feel for the history they are studying. They also need to visit archives and databases on the web to find data on certain topics. The course needs to be structured around the primary sources that are available, and the instructor needs to be taught these related techniques of instructional design. Also, the development of a session that introduces the students to the ways of the historians is a necessity.

As mentioned earlier, several practical, everyday experiences can be used to teach the historian's trade using primary sources: examining a person's driver's license, describing events, investigating a student's family tree or family events, photos, oral

histories, memorabilia, local archive, museums, battlefields, as well as standard compiled primary source material. When activities are personalized, the students will have a deeper understanding of even remote concepts (Carretero et al., 1997). Even assessment needs to be changed, for example by using the argumentative essay (Voss & Wiley, 1997).

Conclusion

This study showed that there appears to be no difference in learning motivation with students who are taught history in the traditional fashion and those taught using an experiential constructivist method. However, it is also apparent that enough limitations were identified after the fact to warrant the study's replication using a larger class, having the control section designed more distinctly as an established traditional class, and having the constructivist classroom be designed with more experiential techniques. Besides the motivation dependent variables, there also needs to be a tie to learning. Future research may be more effective if it more closely looks at this aspect of student performance. Future research could analyze final grades and analyze the reflection papers for synthesis and interpretation. Much could be accomplished by improving the instructor's knowledge of experiential constructivist methods through faculty development. Finally, the course could be better designed to immerse students in the content matter of various primary sources.

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APPENDIX A - MOTIVATED STRATEGIES FOR LEARNING QUESTIONNAIRE (MSLQ) SUBSCALES

Motivated Strategies for Learning Questionnaire (MSLQ) Subscales

Intrinsic Goal Orientation

1. In a class like this, I prefer course material that really challenges me so I can learn new things.

16. In a class like this, I prefer course material that arouses my curiosity, even if it is difficult to learn.

22. The most satisfying thing for me in this course is trying to understand the content as thoroughly as possible.

24. When I have the opportunity in this class, I choose course assignments that I can learn from even if they don't guarantee a good grade.

Extrinsic Goal Orientation

7. Getting a good grade in this class is the most satisfying thing for me right now.

11. The most important thing for me right now is improving my overall grade point average, so my main concern in this class is getting a good grade.

13. If I can, I want to get better grades in this class than most of the other students.

30. I want to do well in this class because it is important to show my ability to my family, friends, employer, or others.

Task Value

4. I think I will be able to use what I learn in this course in other courses.

10. It is important for me to learn the course material in this class.

17. I am very interested in the content area of this course.

23. I think the course material in this class is useful for me to learn.

26. I like the subject matter of this course.

27. Understanding the subject matter of this course is very important to me.

Control Beliefs

2. If I study in appropriate ways, then I will be able to learn the material in this course.

9. It is my own fault if I don't learn the material in this course.

18. If I try hard enough, then I will understand the course material.

25. If I don't understand the course material, it is because I didn't try hard enough.

Self-Efficacy

5. I believe I will receive an excellent grade in this class.

6. I'm certain I can understand the most difficult material presented in the reading for this course.

12. I'm confident I can learn the basic concepts taught in this course.

15. I'm confident I can understand the most complex material presented by the instructor in this course.

20. I'm confident I can do an excellent job on the assignments and test in this course.

21. I expect to do well in this class.

29. I'm certain I can master the skills being taught in this class.

31. Considering the difficulty of this course, the teacher, and my skills, I think I will do well in this class.

Test Anxiety

3. When I take a test I think about how poorly I am doing compared with other students.

8. When I take a test I think about items on other parts of the test I can't answer.

14. When I take tests I think of the consequences of failing.

19. I have an uneasy, upset feeling when I take an exam.

28. I feel my heart beating fast when I take an exam.

APPENDIX B - MOTIVATED STRATEGIES FOR LEARNING QUESTIONNAIRE FOR THE BEGINNING OF THE COURSE

Your Code (Birth Month+Last 2 Phone Digits+Mother's First Initial):_____

Motivated Strategies for Learning Questionnaire

Beginning of the Course

The following questions ask about you motivation for and attitudes about this class. **Remember there are no right or wrong answers, just answer as accurately as possible.** Use the scale below to answer the questions. If you think the statement is very true of you, circle 7; if a statement is not at all true of you, circle 1. If the statement is more or less true of you, find the number between 1 and 7 that best describes you.

		not at all true of me						very true of me
1.	In a class like this, I prefer course material that really challenges me so I can learn new things.	1	2	3	4	5	6	7
2.	If I study in appropriate ways, then I will be able to learn the material in this course.	1	2	3	4	5	6	7
3.	When I take a test I think about how poorly I am doing compared with other students.	1	2	3	4	5	6	7
4.	I think I will be able to use what I learn in this course in other courses.	1	2	3	4	5	6	7
5.	I believe I will receive an excellent grade in this class.	1	2	3	4	5	6	7
6.	I'm certain I can understand the most difficult material presented in the reading for this course.	1	2	3	4	5	6	7
7.	Getting a good grade in this class is the most satisfying thing for me right now.	1	2	3	4	5	6	7
8.	When I take a test I think about items on other parts of the test I can't answer.	1	2	3	4	5	6	7
9.	It is my own fault if I don't learn the material in this course.	1	2	3	4	5	6	7
10.	It is important for me to learn the course material in this class.	1	2	3	4	5	6	7
11.	The most important thing for me right now is improving my overall grade point average, so my main concern in this class is getting a good grade.	1	2	3	4	5	6	7
12.	I'm confident I can learn the basic concepts taught in this course.	1	2	3	4	5	6	7
13.	If I can, I want to get better grades in this class than most of the other students.	1	2	3	4	5	6	7
14.	When I take tests I think of the consequences of failing.	1	2	3	4	5	6	7

Please continue to the next page.

	not at all true of me						very true of me
15. I'm confident I can understand the most complex material presented by the instructor in this course.	1	2	3	4	5	6	7
16. In a class like this, I prefer course material that arouses my curiosity, even if it is difficult to learn.	1	2	3	4	5	6	7
17. I am very interested in the content area of this course.	1	2	3	4	5	6	7
18. If I try hard enough, then I will understand the course material.	1	2	3	4	5	6	7
19. I have an uneasy, upset feeling when I take an exam.	1	2	3	4	5	6	7
20. I'm confident I can do an excellent job on the assignments and test in this course.	1	2	3	4	5	6	7
21. I expect to do well in this class.	1	2	3	4	5	6	7
22. The most satisfying thing for me in this course is trying to understand the content as thoroughly as possible.	1	2	3	4	5	6	7
23. I think the course material in this class is useful for me to learn.	1	2	3	4	5	6	7
24. When I have the opportunity in this class, I choose course assignments that I can learn from even if they don't guarantee a good grade.	1	2	3	4	5	6	7
25. If I don't understand the course material, it is because I didn't try hard enough.	1	2	3	4	5	6	7
26. I like the subject matter of this course.	1	2	3	4	5	6	7
27. Understanding the subject matter of this course is very important to me.	1	2	3	4	5	6	7
28. I feel my heart beating fast when I take an exam.	1	2	3	4	5	6	7
29. I'm certain I can master the skills being taught in this class.	1	2	3	4	5	6	7
30. I want to do well in this class because it is important to show my ability to my family, friends, employer, or others.	1	2	3	4	5	6	7
31. Considering the difficulty of this course, the teacher, and my skills, I think I will do well in this class.	1	2	3	4	5	6	7

Please continue to the next page.

1. Gender (circle one). **Female** **Male**

2. What year did you graduate from high school? _____

3. How many other college level courses have you passed? _____

3. Please take a minute to consider why you are taking this course and what you expect to learn from it. Include any thoughts about your expectations to learn the material and/or about how you learn best.

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Thank You for Participating in This Study

APPENDIX C - MOTIVATED STRATEGIES FOR LEARNING QUESTIONNAIRE FOR THE END OF THE COURSE

Your Code (Birth Month+Last 2 Phone Digits+Mother's First Initial):_____

Motivated Strategies for Learning Questionnaire

End of the Course

The following questions ask about your motivation for and attitudes **about another history class using teaching methods similar to the one you are completing. Remember there are no right or wrong answers, just answer as accurately as possible.** Use the scale below to answer the questions. If you think the statement is very true of you, circle 7; if a statement is not at all true of you, circle 1. If the statement is more or less true of you, find the number between 1 and 7 that best describes you.

		not at all true of me						very true of me
1.	In a class like this, I prefer course material that really challenges me so I can learn new things.	1	2	3	4	5	6	7
2.	If I study in appropriate ways, then I will be able to learn the material in this course.	1	2	3	4	5	6	7
3.	When I take a test I think about how poorly I am doing compared with other students.	1	2	3	4	5	6	7
4.	I think I will be able to use what I learn in this course in other courses.	1	2	3	4	5	6	7
5.	I believe I will receive an excellent grade in this class.	1	2	3	4	5	6	7
6.	I'm certain I can understand the most difficult material presented in the reading for this course.	1	2	3	4	5	6	7
7.	Getting a good grade in this class is the most satisfying thing for me right now.	1	2	3	4	5	6	7
8.	When I take a test I think about items on other parts of the test I can't answer.	1	2	3	4	5	6	7
9.	It is my own fault if I don't learn the material in this course.	1	2	3	4	5	6	7
10.	It is important for me to learn the course material in this class.	1	2	3	4	5	6	7
11.	The most important thing for me right now is improving my overall grade point average, so my main concern in this class is getting a good grade.	1	2	3	4	5	6	7
12.	I'm confident I can learn the basic concepts taught in this course.	1	2	3	4	5	6	7
13.	If I can, I want to get better grades in this class than most of the other students.	1	2	3	4	5	6	7
14.	When I take tests I think of the consequences of failing.	1	2	3	4	5	6	7

Please continue to the next page.

	not at all true of me						very true of me
15. I'm confident I can understand the most complex material presented by the instructor in this course.	1	2	3	4	5	6	7
16. In a class like this, I prefer course material that arouses my curiosity, even if it is difficult to learn.	1	2	3	4	5	6	7
17. I am very interested in the content area of this course.	1	2	3	4	5	6	7
18. If I try hard enough, then I will understand the course material.	1	2	3	4	5	6	7
19. I have an uneasy, upset feeling when I take an exam.	1	2	3	4	5	6	7
20. I'm confident I can do an excellent job on the assignments and test in this course.	1	2	3	4	5	6	7
21. I expect to do well in this class.	1	2	3	4	5	6	7
22. The most satisfying thing for me in this course is trying to understand the content as thoroughly as possible.	1	2	3	4	5	6	7
23. I think the course material in this class is useful for me to learn.	1	2	3	4	5	6	7
24. When I have the opportunity in this class, I choose course assignments that I can learn from even if they don't guarantee a good grade.	1	2	3	4	5	6	7
25. If I don't understand the course material, it is because I didn't try hard enough.	1	2	3	4	5	6	7
26. I like the subject matter of this course.	1	2	3	4	5	6	7
27. Understanding the subject matter of this course is very important to me.	1	2	3	4	5	6	7
28. I feel my heart beating fast when I take an exam.	1	2	3	4	5	6	7
29. I'm certain I can master the skills being taught in this class.	1	2	3	4	5	6	7
30. I want to do well in this class because it is important to show my ability to my family, friends, employer, or others.	1	2	3	4	5	6	7
31. Considering the difficulty of this course, the teacher, and my skills, I think I will do well in this class.	1	2	3	4	5	6	7

Please continue to the next page.

Please take a minute to consider why you took this course and if you learned what you expected to learn from it. Include any thoughts about your expectations to learn the material.

Thank You for Participating in This Study

APPENDIX D - INFORMED CONSENT TO PARTICIPATE IN A RESEARCH PROJECT

COLORADO STATE UNIVERSITY
INFORMED CONSENT TO PARTICIPATE IN A RESEARCH PROJECT

TITLE OF PROJECT: A Study of Motivation in an American History Course

NAME OF PRINCIPAL INVESTIGATOR: William Timpson

NAME OF CO-INVESTIGATOR: Don Quick

CONTACT NAME AND PHONE NUMBER FOR QUESTIONS/PROBLEMS:
Don Quick (970) 491-4683

PURPOSE OF THE RESEARCH:
This research is to study the effects of teaching methods on a student's motivation to learn.

PROCEDURES/METHODS TO BE USED:
You will be given a questionnaire during the first two weeks of class that will ask you to answer questions concerning your classroom motivation. It should take approximately 30 minutes to complete. It will be anonymous, thus the instructor will have no knowledge of how you answered the questions. There is no right or wrong answer, just answer as accurately as possible. There will be another similar questionnaire given during the last two weeks of class. Participation (or lack of participation) will not affect your class grade.

RISKS INHERENT IN THE PROCEDURES:
There are no known risks. However, it is not possible to identify all potential risks in research procedures, but the researchers have taken reasonable safeguards to minimize any known and potential, but unknown, risks.

BENEFITS:
Participating in this study should help the researchers improve the teaching methods used in the college classroom to help improve learning. There are no known direct benefits for participants.

CONFIDENTIALITY:
Your name will not be on the questionnaire. Because a connection will be made between the first and second questionnaires, you will be asked to make up a unique code by listing your birth month, the last 2 digits of your current phone number and your mother's first initial. The researchers will not know your code; they will just match the codes from the first and second questionnaires together.

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 1 of 2 Participant's 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. Participation (or lack of participation) will not effect your class grade.

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