TEACHER PERSPECTIVES OF CONTEXTUAL TEACHING AND LEARNING WITH RESPECT TO STUDENT ENGAGEMENT

by

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(Under the Direction of John W. Schell)

ABSTRACT

This qualitative dissertation was a phenomenological study of four Georgia high school teachers that examined their perceptions of contextual teaching and learning (CTL) and the influences CTL has on student engagement. Using a purposeful selection sampling, the inquiry included four 1-hour interviews and four 1-hour classroom observations. The researcher utilized a semi-structured interview guide for each of the interviews. The data from the 4 participants were first individually analyzed and then written into a narrative capturing the participant's perception. Secondly, the data was compared across the four participants to look for emerging commonalities and themes.

The findings were first categorized individually and then compiled across the four participants. The four interviews and four classroom observations generated results from which participant data were categorized according to the following commonalities and themes: (a) teaching practice; (b) authentic situated learning activities; (c) communities of practice; and (d) student engagement.

INDEX WORDS: Authentic learning task, Communities of practice, Constructivism, Contextual teaching and learning, Situated learning, Student engagement

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"For by the grace given to me I say to every one of you: do not think of yourself more highly that you ought, but rather think of yourself with sober judgment, in accordance with the measure of faith God has given you" (Romans 12:3).

I entered this program with high regard and esteem for myself. The six years of hard work, frustrations, and validation has brought me full circle. I am left humble in my words and thoughts, for I know this is the will of the Lord Jesus Christ. "Do not conform any longer to the pattern of this world, but be transformed by the renewing of your mind. Then you will be able to test and approve what God's will is – his good, pleasing and perfect will" (Romans 12:2).

My educational journey has truly been life long. Student adventures had always left me soaring with approvals and rewards. In the education profession and having grown up with parents that were educators, I realized learning was never-ending. With a desire to surpass my father's educational accomplishments and a natural willingness to learn, I pursued a doctorate program. Completion of this dream, goal, and admiration brings satisfaction to many, as the journey has been long and I have had many to help me prosper.

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I would also like to thank many of my friends and family; there are certainly too many to name them all. However, I feel the need to thank my parents, Leslie's parents, and my

grandmother for their constant encouragement during this process. I would also like to thank my father specifically because he does not know that his life has been my admiration to follow. I would also like to thank Dr. Bryan Long, who completed his doctorate program about the time I started and served as one of my mentors. Keith O'Carroll, who has not only been a mentor to me, but also one of the greatest encouragers I have known. Shawn Patrick Tobin, whom I have worked with for the past four years, and has sung my praises when nobody else would. Last but certainly not least, Dr. Keith Leatham, who introduced me to this process by having me as a participant in his study, as well as reviewing my manuscripts and providing me with suggestions and editorial remarks. I do not believe I would have completed this doctorate without my family and friends.

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CHAPTER 1

INTRODUCTION

Rationale

Theories of education emerge from inquiries of how a person develops knowledge. As the human race has progressed, the complexities and numbers of learning theories have also increased. For example, situated learning theory has developed since Dewey (1938) wrote in the early 20th century to Lave and Wenger (1990) to others in the 21st century. The focus of Lave and Wenger's research was on how learners develop knowledge while becoming a competent member of a community of practice. In a similar vein, Phillips (2000) wrote that knowledge is created not acquired. The key to this realization is that knowledge develops within and among individuals.

The foundations of teaching and learning are based on philosophical beliefs. From a behavioral perspective, the role of the teacher is one of lecture or enforcer, while the role of the student is to absorb knowledge through the audio stimulation and observation of the teacher. Using reinforcement and feedback, the teacher determines correct or incorrect. The teacher's responsibility is to pass along a discrete, well-established skill set (Doolittle & Camp, 1999).

For much of the 20th century, traditional education was the process of giving and receiving facts through lecture and memorization. Classrooms were organized for the teacher to disseminate knowledge while students absorbed information. Some would argue that these deep-rooted ideas are still in practice today. In fact, studies show objective teaching methods are successful in transmitting information to some students (Carlson & Francis, 2002).

After numerous efforts to reform education, many long-standing traditions of the classroom are still implemented. Many classrooms remain teacher centered (Cuban, 2007). The teachers give lectures, notes, and information packets, while the student takes notes, reads information, and listens to large amounts of factual data. The teacher is responsible for being the expert and a fountain of knowledge, while the student is responsible for receiving the knowledge. The teacher keeps a checklist of concepts covered for accountability purposes to be sure all relevant information was passed along to the students. The students' grades are a reflection of how much of the information was received and returned back to the teacher on a paper and pencil test. Learning is independent to the student, with little effort given towards collaboration. Academic success has become synonymous with success on high stakes objective tests (Popham, 2001).

The No Child Left Behind (NCLB) legislations have increased the use of behavioral philosophies for reasons of teacher and school accountability (Kymes, 2004). One alarming impact is the idea that secondary education decision makers may become reluctant to recommend students with special needs to career and technical education programs so that more instruction might take place in the traditional secondary environment to guarantee students' passing state-administered assessments (Gaona, 2004). All these initiatives for educational accountability are putting pressure on schools and educators to increase academic rigor and to increase student achievement (Kymes). Too often schoolchildren are taught subjects in abstract contexts to assure coverage, accountability, and performance on standardized testing. In the tradition of Dewey (1938) and many others, many researchers believe this leads to isolated knowledge and reduced ability to engage in problem solving and higher-order thinking. This

study seeks to examine techniques used by teachers to situate students in more authentic contexts while promoting a higher level of student engagement.

School improvement is an idealistic but important goal that provides continuous progression and development of new ideas to solve societal issues (Tyler, 1949). For many years, Dewey (1938) argued that education was the primary method of social progress. While the traditional behavioral models of teaching focus on essential content, students are not required to demonstrate or value the education they have acquired. Students may have achieved basic competencies, but the high-stakes testing in its present form does not always allow them to demonstrate these competencies (Kymes, 2004).

This approach appears to leave out key components of the educational process. For example, a more student-oriented approach may allow the learner to be educated and molded for societal gain and personal ambitions (Tyler, 1949). Traditional methods of lecturing, quietly sitting in rows taking notes, and then looking at the lack of retention on a multiple-choice assessment does not allow the student to become engaged into their own education. Bruner (1960) argued that an instructor must set the stage for learning by striking a chord of interest in the subject matter.

Bruner (1960) explained that the structure of learning should not be the teaching and learning of facts but rather the structure should be found in relationships among things and ideas. This resulting structure allows students to develop constructs that will later help them as they discover even newer ideas and knowledge.

Many suggestions of educational reform are focused on the students' role in the learning experience. Developing situations that encourage student participation, student exploration, and student decision-making increase the opportunity for students to take ownership in their

education. Teaching someone is a matter of getting them to participate in the process that makes possible the establishment of knowledge. Establishing knowledge is an active process not an artifact (Bruner, 1966). Ownership develops responsibility in the learner to take part in the education process. Having students engaged in the educational process for their own desire will help in the discovery of new ideas and in the retention of previously learned concepts. Discovery learning is an approach to education, where students interact with their environment by exploring and manipulating objects and testing new ideas against the structures of previously held knowledge (Ormrod, 1995).

Many research studies have suggested the importance of context in how the learner will ultimately utilize the information acquired. Going into this current study it was assumed that learners in a public school setting could become more deeply engaged with the content of their lessons when teachers take specific steps to contextualize each lesson (Berns & Erickson, 2001). Schell (2007) postulated that when students view their lessons as authentically contextualized, they may become engaged at a deeper level, provided the teacher is able to be an effective facilitator.

Education reform has set its sights on improving a system many perceive to be failing. Publications, such as *A Nation at Risk* and *Goals 2000*, and the NCLB acts place emphasis on higher-level thinking, deeper learning, and reaching all students. NCLB actually has set the notion that all students will be performing at grade level and will all meet the same standards in the same time frame by 2014. To reach these utopias, educational systems need to find strategies to reduce student apathy and empower students to take ownership in their own learning. Through my own teaching experiences, I witnessed and implemented contextual teaching and learning (CTL) strategies. These strategies seem to empower students to take part in their education,

which provides them with a purpose and drive to learn beyond the forceful nature of the traditional strategies. The intentions of this study are to (a) gain descriptive knowledge of teacher perceptions of CTL and the influences CTL has on student engagement, and (b) gain insight into CTL strategies within the classroom.

To fulfill the intentions of this study, a qualitative research design was implemented. Capturing knowledge, in-depth insight, and lived experiences is a difficult challenge. Although it might be possible to fulfill any one of these intentions partially through a quantitative study, a qualitative design provided a voice to lived experiences and deep rich information detailing the classroom strategies and influences the strategy has through the eyes, mind, and perceptions of the teacher. Chapter 3 discusses the details of the study design.

Purpose of Study

The purpose of this qualitative study was to investigate teacher perceptions of CTL as a strategy to achieve high school student engagement. For the purposes of this study, student engagement was defined by the level of student-initiated involvement, enthusiasm, and curiosity (Skinner & Belmont, 1993). This research was conducted within a contextualized classroom, where students were required to apply academic content to real-life problems (Schell & Schell, 2007).

Research Questions

1. In what ways do teachers implement CTL concepts in classroom practice?
2. In what ways do teachers view the influence of CTL on student engagement?

Theoretical Framework

The framework driving this study was CTL. CTL has its roots in constructivism (Berns & Erickson, 2001). The emphasis of this theory is placed on the context in which concepts are

learned. Schell and Schell (2007) wrote that all learning is completed in a context. The influence is in the authenticity of the context. In Chapter 2, a discussion of authenticity will be exhausted. The following is a summary of the CTL theoretical frame.

Contextual Teaching and Learning (CTL)

CTL is based in constructivist practice (Brown, 1998). In contextual learning theory, learning happens when the learner processes information through a lens that focuses the information to a recognizable frame of reference (Berns & Erickson, 2001). CTL developed from theories not new to the scene of education. It relates matters of theory to the content in which it is used for real applications. It motivates students to make connections and internalize the knowledge (Blanchard, 2002).

CTL strategies set the stage to solve problems with multiple perspectives and contexts, for students to work together through a community of practice. Students rely on experiences and diverse interests to build new and restructure previously held knowledge, thus allowing students to respond to and reflect on new information, environments, and situations that incorporate challenging authentic assessments in which students grow and continue to learn through the assessment process. CTL encourages educators to design learning environments that integrate many different types of experience to reach educational goals (Hull & Souders, 1996).

CTL provides a path for students to connect academic content to real life situations and environments. Students are able to find meaning and value in the content and the processes of acquiring knowledge. Connecting concepts to life situations helps to teach learners to apply previous knowledge with new concepts in order to construct new cognitive schemes. Understanding and applying knowledge to life situations leads to decision-making skills, creative thinking skills, and problem solving (Berns & Erickson, 2001). The focus of learning is placed

on the application of knowledge to context natural to real world problems. The focus of teaching is to facilitate a context for high-order thinking and applications from many different sources (Brown, 1998).

Sears and Hersh (1999) organized CTL on the principles and assumptions that learning (a) is problem based; (b) is situated in multiple contexts; (c) fosters self-regulated learning; (d) anchors teaching and learning in students' diverse lives; (e) uses interdependent learning groups; and (f) employs authentic assessment. In education, the level of authenticity is important for students to make connections and to have the opportunities to transfer knowledge (Sutton, 2003). Schell and Schell (2007) depicted a continuum that places abstract activities to the far left and authentic activities to the far right in light of constructivist and situated cognition theories. For the purposes of this study, CTL is placed on the right side of this continuum toward blended constructivism and situated cognition, as Figure 1 shows.

Figure 1.1 Context continuum Schell & Schell (2007), used with permission

CTL is a strategy of placing students in specific contexts so that learning and connections can take place (Johnson, 2002). Decisions have to be made, and some are successful and some are failures, but the process of making the decision and resolving cognitive conflict helps the student to build stronger constructs and meanings (Jonassen, Peck, &Wilson, 1998). This follows

the principle of constructivism that advocated learning to be an active process (Doolittle & Camp, 1999).

The significance of this study is providing insight into the lived experiences of classroom teachers who are successfully implementing the CTL strategy. As a teacher it is important to gain insight from other teachers in the trenches of the classroom. Increasing pressures from legislation and society to improve education has placed most of the accountability on the classroom teacher. Testimonials of classroom phenomenon using CTL strategies and the influences it has on student engagement will aid teachers in their own classrooms, as well as furthering the development of CTL strategies through the examination of the lived experiences.

Summary

Chapter 1 described the need for CTL educational practices to meet the demands of today's society. The CTL framework has been offered as a theoretical viewpoint for this study. In this study, the perspective of teachers who implement CTL strategies was analyzed to understand the impacts these strategies have on student engagement. The following chapter provides a review of relevant literature that informs this study.

CHAPTER 2

REVIEW OF THE LITERATURE

Introduction

The characteristics of acquiring knowledge can be seen from three different perspectives: objectivism, constructivism, and subjectivism (Crotty, 1998). There appears to be vast agreement that knowledge is constructed (Phillips, 2000). Through life experiences, observations, and the senses, lasting imprints are developed that allow students to construct ideas in order to describe, compare, and relate (Marlow & Page, 1998). Gardner (1991) pointed out that each learner must meticulously construct knowledge to make sense of the world. In this chapter, CTL was analyzed as the theoretical framework for this study.

Contextual Teaching and Learning

Contextual learning theory is based in constructivist practice (Brown, 1998). Constructivism will be discussed in detail later in this chapter. In contextual learning theory, learning happens when the learner processes information through a lens that focuses the information to a recognizable frame of reference (Berns & Erickson, 2001). CTL developed from theories that are not new to the scene of education. CTL relates matters of theory to the content in which it is used for real applications. It motivates students to make connections and internalize the knowledge (Blanchard, 2002).

CTL strategies set the stage to solve problems with multiple perspectives and contexts; for students to work together in communities of practice, relying on experiences and diverse interest; for students to respond to and reflect on new information, environments, and situations; and to incorporate challenging authentic assessments that allow students to grow and continue to

learn during and after the assessments. CTL encourages educators to design learning environments that integrate different types of experiences to reach educational goals (Hull & Souders, 1996).

CTL provides a path for students to connect academic content to real life situations and environments. Students are able to find meaning and value in the content and the processes of acquiring knowledge. Connecting concepts to life situations helps to teach learners to apply previous knowledge with new concepts in order to construct new cognitive schemes. Understanding and applying knowledge to life situations leads to decision-making skills, creative thinking skills, and problem solvers (Berns & Erickson, 2001). The focus of learning is placed on the application of knowledge to context natural to real world problems. The focus of teaching is to facilitate a context for high-order thinking and application from many different sources (Brown, 1998). Sears and Hersh (1999) organized CTL on the principles and assumptions that learning: (a) is problem based; (b) is situated in multiple contexts; (c) fosters self-regulated learning; (d) anchors teaching and learning in students' diverse lives; (e) uses interdependent learning groups; and (f) employs authentic assessment.

To foster problem-based learning, students work together in collaborative groups to solve problems and to activate cognitive activities. Sometimes the groups are made of an entire class, while others are divided into pairs. The learning group or community is developed by the necessity to work through situations and to achieve a goal. The community is made of members that may add to the learning environment. Wenger (1998) called this a community of practice due to the social nature of the group, and they have common practices and goals. Later in this chapter, I will take a detailed look at Wenger's communities of practice. In these communities,

members must participate and engage in the context for the community to be functional. CTL requires students to work together and to participate in problem-based activities.

Participation in a group or community is more than just a physical act. Participation in an activity requires others to recognize the engagement as necessary and worthy of acceptance by the other members of the group. This is called legitimate peripheral participation (Lave & Wenger, 1990). There are two separate issues of legitimacy and peripherality to gain access in the learning community.

Legitimacy is the right to be a part of the community (Lave & Wenger, 1990). This right is given to the learner for a multitude of reasons. A learner might be granted legitimacy for being a classmate, a recognizable face, for a possessed talent, or simply as a means to an end (Wenger, 1998). The important issue is that legitimacy is granted. The teacher, as a facilitator of a community of practice, can grant this legitimacy in the beginning but the member must then earn the peripherality of the rest of the community or class.

Peripherality is preference and value given to a member's level of participation as rewarded by the community (Lave & Wenger, 1990). This value and preference is earned through engagement and the production of shared goals and practices of the community or class. Peripherality is gained similar to how respect is gained over time and in increments (Wenger, 1998). Roles are carried out to solve problems and to construct meanings. These roles in a community require participation to achieve common goals. CTL provides structures for these communities to practice and construct new meanings in education (Brown, 1998).

All learning is completed within some learning structures or context. The point of interest is in the authenticity of the structures. Teaching and learning is most effective when given a genuine context and experience (Schell & Schell, 2007). Part of the rational for this study is that

traditional methods of teaching do not produce a good retention of knowledge. In order to teach for retention and expertise, learning must be tied to a specific context. Expert practice is the flexible use of knowledge to solve complex problems. Learners achieve expert practice through rich knowledge and experiences (Schell & Schell).

Learning experiences need to be set up as authentically as possible with all practical considerations. There are some practical restraints in classrooms that prevent full authenticity. Schell and Schell (2007) depict a continuum of learning context and settings from abstract to authentic.

Figure 2.1 Authenticity continuum Schell & Schell (2007), used with permission

Teachers will teach from one end of this continuum to the other. Some basic knowledge and skills might be taught in abstract terms while more complex concepts need to be taught closer to the left hand side of the continuum (Schell & Schell, 2007).

Schell and Schell (2007) described seven attributes of instructional practices of CTL: (a) authentic learning contexts promote engagement using higher-order thinking and problem-solving skills; (b) learners increase levels of expertise relevant knowledge; (c) learning in multiple contexts allows for transfer; (d) learners learn in communities of practice, enhancing self-reflection; (e) learners learn how they learn; (f) the learners' prior knowledge and cognitive frameworks are used as a guide for instruction; and (g) instructors are facilitators of contextualized instruction methods. Schell and Schell continued to give emphasis to the authenticity by writing,

> The key to this teaching approach is to use of authentic contexts to promote relevance to the learners and to extend that recognition to the creation of instructional opportunities that promote reflection and meaning making (p. 262).

CTL emphasizes relevant experiences that promote problem solving and higher order thinking activities as an instructional strategy (Berns & Erickson, 2001).

CTL is a strategy of placing students in specific contexts so that learning and connections can take place (Johnson, 2002). Decisions have to be made and some are successful and fail, but the process of making the decision and resolving cognitive conflict helps the student to build stronger constructs and meanings (Jonassen, et al., 1998). Within a cycle of learning, the teacher and students share authentic experiences and construct knowledge together. Students articulate the constructed concepts, and the community then collectively reflects for meaning and practice. With this cycle, engagement in the process is continuous progression or regression in the process. These doctrines of CTL follow constructivist principles (Schell & Schell, 2007).

Constructivism

Theories of education develop from inquiries of how a person develops knowledge. These theories can be traced throughout the history of man. As man has progressed, the complexity of learning theory has also progressed. Constructivist theory has evolved from Dewey in 1938 to Lave and Wenger (1990) in the late 20th century. The focus of their research and theories was on how a student develops knowledge. According to Phillips (2000), knowledge is created not acquired. The key to this realization is that knowledge is constructed, thus impacting classroom practices.

History of Constructivism

In the early 20th century, traditional education was the process of giving and receiving facts through lecture and memorization. John Dewey (1938) argued that learning is accomplished through doing. Dewey explained that knowledge develops through experiences and activities. A teacher should assess experiences and activities to challenge students to develop and create new ideas. Dewey's work helped advanced the progressive movement. The progressive movement was considered to be 'student centered' because it encouraged individual creative thinking and reflection on their feelings and beliefs.

Dewey (1938) further argued that education was the primary method of social progress. Through the culmination of learning experiences, knowledge is gradually gained and shifted through interactions and reflection on experiences. Dewey's work focused on the experiences that children learned in, while others focused their work on the cognitive technicalities of why children learn in these activities.

Piaget (1990) focused his work on the cognitive development of children. Piaget's theories explained that humans are constantly revising their knowledge and skills to adjust to the environment that surrounds them. He explained this using two terms "assimilation" and "accommodation." Assimilation is the process of changing the environment around one to satisfy the cognitive knowledge currently held. Accommodation is the process of changing the cognitive knowledge currently held to match an environment (Piaget). In both cases, the experience in the environment creates disequilibria, which has cognitive consequences for an individual's development of their knowledge. Piaget is well known for his stages of development of children (Woolfolk, 1997). The four stages of development are: (a) sensorimotor; (b) preoperational; (c) concrete operations; and (d) formal operations.

In the sensorimotor stage, intelligence consists of motor actions. Intelligence in the preoperational stage is instinctive. In the concrete operational stage, intelligence is logical in positions with previous knowledge. In the formal operation stage, abstract thought is prevalent. Each stage is generally chronological although some individuals may experience development at different times (Woolfolk, 1997). Piaget was intrigued with the evolving mind in the realm of intelligence. His work continued to show that knowledge is constantly being analyzed and adjusted in the mind. Understanding this negotiation of knowledge is critical to educators as they develop lessons for students to improve their knowledge base. Dewey (1938) and Piaget's works on cognitive development closely align with endogenous constructivism.

Bruner (1960) looked at education and cognitive development from a motivational point of view. Bruner argued that an instructor must set the stage for learning by striking a chord of interest in the subject matter. The best incentive for learning is internal motivation or interest in the subject matter. Bruner explained that the structure of learning should not be the teaching and learning of facts rather that the structure is found in the relationship of things and ideas. This structure allows students to develop constructs that will later help them to discover new ideas and knowledge (Bruner, 1960). Teaching someone is a matter of getting them to participate in the process in order to create opportunities for the establishment of knowledge. Establishing knowledge is an active process not an artifact (Bruner, 1966). This process consists of constructing new ideas from past and present knowledge. The student negotiates knowledge by converting information, accumulating possible outcomes, and drawing conclusions based on previously held cognitive structures. Cognitive structures provide understanding to experiences that allow the individual to explore new discoveries. Discovery learning is an approach to education, which students interact with their environment by exploring and manipulating objects,

and testing new ideas against the structures of previously held knowledge (Ormrod, 1995). In this environment, relationships are discovered between abstract ideas and practical applications useful in the real world. Bruner's argument implies that the learning context is related to the construction of knowledge through student engagement.

Student engagement is defined by the level of student-initiated involvement, enthusiasm, and curiosity (Skinner & Belmont, 1993). Studies have shown that increased student engagement is associated with increased student achievement. It also may be more important to realize that student disengagement, defined by the lack of student-initiated involvement, enthusiasm, and curiosity, is associated with low achievement, withdrawal from social environments, and high tendencies to drop out of school all together (Skinner & Belmont). Student engagement in its infancy was investigated as time-on-task. As student engagement has received more and more influence and consideration in respects to achievement, research has shifted to student involvement in the learning process. This shift moved the research from procedural task check off list to measures of student initiation, enthusiasm, and curiosity.

Student-initiated involvement is a measure of how active a student is in pursuing knowledge and new constructs. Phillips (2000) stated that constructivist learning is an active process that students actively build new meanings through interpretations of the surrounding environment. Phillips also stated that learning is not passive. Therefore, for a student to be successful, one must be actively involved in the education process. Student-initiated involvement is an avenue to explore the willingness of a student to discover and reflect on the surrounding environments and experiences. Exploration and reflection are two key elements to constructivism. The exploration of new ideas and constructs are how meanings are created and discovered (Ornstein & Hunkins, 1998). The reflection of these ideas is how construct conflicts

are resolved and accuracy is refined (Jonassen, et al., 1998). The negotiation element encourages student engagement, exploration, and reflection, all components to maximize learning in the constructivist theory.

Enthusiasm is a term used to categorize interest in the subject matter. Levels of interest help predict the amount of involvement. Problem-solving settings are used to increase student interest levels in subject matter. The problem situation must be selected carefully to cover theoretical concepts and to spur student interest (Lewis, Petrina, & Hill, 1998). These problems should be as authentic as possible to real world situations to construct meanings that will apply to real world settings. The problems may have several different solution possibilities. This allows students to explore and experiment to gain deeper understandings. Curiosity is also created in this exploration process. Problem solving promotes student involvement, enthusiasm, and curiosity by placing students at the center of the educational experience.

Curiosity is a term to categorization of inquiry. In a constructivism-based classroom, to make new meanings, students are to be active learners involved in exploration, experimentation, and reflection. Exploration of new ideas and possible solutions to problem settings starts with an inquiry. The desire to know how things work or function is a form of curiosity. The level of this desire influences how enthused and active the student will be. In the reflective process, students are thinking back on the environment and resolutions to problem settings to gain deeper understandings. This process also involves resolving cognitive conflict, which will aid in conceptual meaning (Doolittle & Camp, 1999). In the resolution of conflicts and problems, new questions or inquiry may develop. The new curiosity will lead to the exploration process and the spiral begins again (Ornstein & Hunkins, 1998). Curiosity is the force behind life long learning. In behaviorism, an objective nature to knowledge leads to a set truth outside the human element.

In that respect, one bucket of knowledge would be obtained. In the constructivist theory, truth is subjective to the learner's interpretation of the environment and cognitive process. In this light, truth is subjective in nature to the learner's interpretation; therefore, knowledge is built and adapted to new situations and new problems that arise.

Student engagement in the constructivist classroom is a vital part of the learning process. Without it, the environment becomes stale and passive, leading to a lack of exploration, discovery, and reflection, keys to the constructivist-learning environment. To challenge students to learn, explore, and achieve more, student engagement needs to be increased (Lumsden, 1994).

Vygotsky (1978) takes a different look at learning from Dewey (1938), Bruner (1966), and Piaget (1990). His work focused on social interaction as the most important component in cognitive development. Vygotsky used the term "zone of proximal development" to describe levels of development as children interact in social environments. Vygotsky theorized that complete cognitive development was dependent on total social interaction. This component of social interaction gives strength to the argument that relationships must be formed to increase learning. Using Vygotsky's theory, a teacher needs to build on experiences by implementing challenging collaborative assignments to link logical gaps, as this aids in student learning.

Bandura's (1986) work showed that an affiliation between personal, behavioral, and environmental factors contributes to human cognition. Bandura's work also explains that humans are self-organizing, self-regulatory, self-reflecting, proactive beings that are not just reactionary. Humans reflect on their past and present situations to adapt to alteration in their lives (Bandura, 1986). A human's thoughts, influences, and behaviors can be influenced through observations and experiences, and can advance evolving personal and social intelligence (Bandura, 1977). A person's constructs their intelligence through thoughtful reflection of experiences and social

interactions. The social interaction and setting is the vital instrument in the learning process, which is closely related to exogenous constructivism.

Constructivism is a theory of learning that has emerged from the works of cognitive, motivational, and social psychologists. Cognitive psychologists aimed their work at how a person internally processes knowledge, while social psychologists aim their work at how collaboration and interactions within a group impact a person. Cognitive psychologists have contributed to the constructivism theory by exploring how a person constructs meanings and processes new concepts. Cognitive psychologists have made progress in understanding how students learn more effectively (Baron, 1998).

Cognitive Psychologists

Cognitive psychologists say that a person actively thinks and has a knowledge set, a belief set, and a disposition of interests that allow people to learn best when they are actively engaged (Baron, 1998). Cognitive psychologists recognize three principles by which students learn best when they are implemented: (a) students actively construct their own meaning; (b) students use metacognition and self-assessment; and (c) students have experience in applying and transferring their knowledge (Baron).

Students learn best when they actively construct their own meaning gives the notion that the student must take ownership in their knowledge construction (Baron, 1998). In this capacity, students are not sponges to soak up knowledge but rather they are participants engaged in a process of learning (Fosnot, 1996). Students use their prior knowledge set to process new information. The learning process is developing as a cycle of processing new information with previously held truths (Brown, 1998). The cycle allows students to resolve differences continuously in the thought process. The process involves formulating questions about information, making hypothesis, and investigating to prove or disprove beliefs about the

concepts. This allows students to tie concepts together to develop a wide view of knowledge rather than focusing on fragmented pieces of concepts. In turn, this places a great emphasis on curriculum development and design (Baron).

The second principle is that students learn best when they use metacognition and self-assessment. To think about one's own thinking and to assess the qualities of one's work, a standard must first be made clear with examples to follow. Once models are in place for students to compare and contrast their own work, a process of reflection, self-regulation, and self-assessment can take place. For these self-indulging actions to occur, a discussion of standards, examples, and expectations needs to be developed (Baron, 1998).

The third principle cognitive psychologists have added to constructivism is that students learn best when they have experiences in applying and transferring their knowledge. For transfer to be possible, students must relate to the relevance of how the concept will effect and pertain to their lives (Baron, 1998). Students need to be given many opportunities to apply their knowledge and given different conditions in which to transfer their knowledge (Sutton, 2003). This can be done by scaffolding situations for students and then gradually removing the scaffolds for them to explore and define their own meanings and knowledge in different scenarios (Baron).

Cognitive psychologists have added to the constructivism theory through the development of how a student best processes information. There are many points to be considered by educators. Herschbach (1998) states the most important use of content is not in the accumulation of information but in the ways of thinking and intellectual processes reflected through its subsequent use as it is acquired and applied. For constructivists, the focus of how content is acquired and applied are of great value.

Motivational Psychologists

The learner's needs are of great importance to the motivational psychologist. These psychologists are concerned with the factors that motivate the person to engage in learning activities and have presented four factors to which learners learn best that have impacted the development of constructivism. Students learn best when they: (a) are presented problems that are interesting, meaningful, challenging, and engaging; (b) exercise choice, control, and personal responsibility; (c) have a sense of efficacy; and (d) work in groups (Baron, 1998).

Students learn best when they are presented problems that are interesting, meaningful, challenging, and engaging (Baron, 1998). These factors are motivating to the learner because the learner can see the relevance for learning the concept. Concepts are interesting and meaningful because they are tied to real world contexts. The concepts are challenging and engaging, as authentic problems are complex. These factors help link school activities to the world of work and business that is seen as future endeavors for the learner. The key component for the constructivist is the factor of relevance and authentic context to the learning environment (Brown, 1998).

The second factor is that students learn best when they exercise choice, control, and personal responsibility in learning activities (Baron, 1998). The important idea here is that the learner takes ownership in their learning process and knowledge development. In doing so, learners choose problem-solving strategies; design their own experiments; and regulate their own responsibilities to complete the activity. The key component for the constructivist is the factor of self-regulation to the learning environment (Brown, 1998).

The third component is that learners learn best when they have a sense of efficacy (Baron, 1998). Students believe they can learn and have the necessary skills to learn. This provides a sense of hope and a positive attitude toward developing knowledge. The key

component for the constructivist is the factor of learner confidence in their own knowledge and abilities to construct new meanings (Jenkins, 1996).

The final component is that learners learn best when they work in groups (Baron, 1998). Collaboration with others helps students to negotiate ideas and theories. This collaboration is functional in schools as it is functional in the world of work. This is also relevant to Vygotsky's (1978) zone of proximal development. Students develop cognitive knowledge in social collaboration of ideas. The key component for the constructivist is the role social collaboration plays in the learning environment (Delgarno, 2002).

Through these four components, motivational psychologists have added to the development of constructivism. Each component has provided a link for cognitive and social constructivists. The motivational psychologist is concerned with engaging the student through relevance, ownership, confidence, and collaboration.

Social Psychologists

Social psychologists have added to the constructivist thought though the social development of knowledge. Although it is agreed that knowledge and meaning is constructed, social psychologists suggest that meaning is negotiated through social collaboration and the environment the experience occurred in. Ideas and meaning are bounced back and forth through activities placed in a context for students to debate and discern knowledge (Von Glasserfeld 1995). Meanings are constantly being challenged and reconstructed to represent the view of the external reality, whatever that may be. These lines of thought suggest that the external reality or truth is negotiated based on the social mediation (Marshall, 1998). Social constructivists believe that this negotiation of knowledge drives the cognitive development of society. Vygotsky (1978) added to the social constructivism literature.

Constructivism offers a different perspective on teaching and learning. Constructivism recognizes that human behavior is not limited to what can be seen. Just as individuals have unique physical attributes, they also have unique interpretations of information, and thus, reality (Jenkins, 1996). Humans formulate mental pictures that aid in understanding by arranging their experiences (Müller, Sokol, & Overton, 1998). There is extensive discussions in the constructivist line of thought as to how understanding in accomplished.

Knowledge is built through cognitive processes that incorporate the context of the culture, past experiences, and nuances of the present experience. Creating understandings from past and present knowledge based on personal experiences leads to the acknowledgement that reality is relative to one's experience. Opposed to the belief that reality is objective, constructivists think reality constructs are subjective to the experiences of the learner (Doolittle & Camp, 1999). Thus, reality and truth exist within the confines of the learner's experiences and constructs of knowledge.

Constructivism is discussed using a continuum. Cognitive constructivism is at one extreme and radical constructivism on the other, leaving social constructivism somewhere in the middle. Psychological constructivism refers to a set of ideas about how individuals learn. There are three basic beliefs of conservative psychological constructivism: (a) the learner actively constructs meanings; (b) knowledge is not a replication of the observed world; and (c) knowledge is not acquired passively (Phillips, 2000). The literature refers to this set of beliefs as cognitive constructivism. Cognitive constructivism is focused on the mental processes of the individual learner and how information is internalized to become new constructs or meanings.

Radical constructivism begins with the belief that knowledge is created by an innate curiosity of how the world works and individuals construct what they know based on personal

experience (Von Glasserfeld, 1995). The conscience reality is made of the constructed knowledge acquired through experiences; therefore, the accuracy of reality is subjective in nature.

Social constructivism believes that open bodies of knowledge have been collecting and expanding over time. Influences, such as politics and power, have shaped or distorted these bodies of knowledge (Phillips, 2000). Social constructivism blends the individual internalization of cognitive constructivism with the recognition that social interaction allows the senses to develop and adapt constructs based on external experiences.

Some theorists, including Dewey (1938) and Piaget (1990), argue that understanding is an internal cognitive process of resolving conflicts in order to interpret world, while other theorists, such as Vygotsky (1978) and Bandura argue that understanding is an external process of making sense of the world based on observation. Still yet, others think there is a blend of the internal cognitive schemes with the external observed surroundings that constructs understanding. These three lines of thought, known as endogenous, exogenous, and dialectical constructivism, have been developed over the history of constructivism.

Endogenous Constructivism

Endogenous constructivism depicts the construction of knowledge, beginning with the learner's cognitive schemes. The learner develops an understanding of the outside environment through internal constructs. Students come to classrooms with thoughts, values, and attitudes that can be altered though activities and situations that create controversy for students. Knowledge construction occurs by working through these conflicts (Abdal-Haqq, 1998). As an individual, the learner interprets the external environment based on the internal cognitive structures previously developed. Endogenous constructivism is a mental battle between cognitive structures

of the mind. This perspective of constructivist learning has many impacts for teaching and assessment of learning (Schell, 2001).

An endogenous constructivist's spotlight is on the learner as an individual. Endogenous constructivism emphasizes the individual nature of each learner's construction of knowledge and promotes the educator's purpose as a facilitator of experiences that will challenge the learner's existing knowledge of the world that surrounds him or her (Dalgarno, 2002). To challenge the existing knowledge, the teacher must be aware of the previously constructed knowledge of the learner. Instruction is flexible to the learner's needs and awareness. Reflection of the constructs is continual to verify the understandings. Endogenous constructivism gives power to the notion that every learner learns differently and at different paces, therefore, classrooms have to be flexible to each learner's needs.

Exogenous Constructivism

Exogenous constructivism describes knowledge to be constructed actively by the mind, and the environment in which the mind interacts mainly influences its development. This suggests that the observed external environment develops the cognitive structures of the mind. Delgarno (2002) described exogenous constructivism as formal instruction, along with activities that allow the learner actively to build cognitive paths that help form an account of their own knowledge. Early disciplines of cognitive science render learning as passive (Phillips & Soltis, 1998), but exogenous constructivism focuses on the active expansion of mental structures as a response to the world that surrounds the learner (Schell, 2001).

Exogenous constructivism spotlights the environment in which the learner is situated. The learner's role is to observe, collect, and understand the actions disseminated by the teacher. The teacher's role is to organize lessons that are generally teacher oriented and linearly sequenced. The teacher is the expert in the room in which lectures are generally the method of

disseminating information. Exogenous constructivism emphasizes direct instruction to assist the learner in forming their own mental schemes, supported by activities that allow the learner to verify and further construct their knowledge (Dalgarno, 2002).

Dialectical Constructivism

A blended view of both endogenous and exogenous constructivism, dialectical constructivism takes into account an internal cognition of individuals, as well as an external social collaboration of knowledge constructed by individuals providing another direction for cognitive development (Overton, 1990). Individuals construct knowledge through interactions with the environment, and in the process, both the individual and the environment are changed (Abdal-Haqq, 1998). Schell (2001) called this an interaction between the learner and the environment. The learner's thoughts and experiences are interlaced to build an understanding of the external world. Learning is collaboration between the learner's mental schema and the social influences involved in the learning experience. Associated with contextualism, this perspective inseparably links thinking and experience with the settings or contexts in which learning occurs. Delgarno (2002) concluded that dialectical constructivism depicts learning through practical experience, but the learner needs collaboration and teacher feedback to polish the knowledge.

To expand and further the learning experience, dialectical constructivist classrooms ask students to use their knowledge, skills, and experiences to solve problems situations that are meaningful and challenging. The context for the students to apply their knowledge and regulate their own personal learning is important to stimulate the exploration and reflection necessary for the construction of knowledge. Situations should challenge students, create interest and curiosity, and provide opportunities to work collaboratively (Brooks & Brooks, 1993). The teacher's role is to facilitate. There is flexibility and some level of authenticity in the context in which the learner

is participating in to construct new meanings. CTL is a strategy that portrays the dialectical constructivist view.

Constructivism is a theoretical framework that allows scholars to classify and synthesize understandings and beliefs within set boundaries to describe, compare, and predict behaviors and experiences (Doolittle & Camp, 1999). The primary principle behind constructivism is that learners actively create their own understandings through personal experiences (Fosnot, 1996). Fosnot (1989) identified constructivism as having four principles: (a) knowledge consists of previous constructs; (b) new constructs are formed through interaction with the surrounding environment; (c) learning is a process of invention; and (d) knowledge is built through reflection and conflict resolution. Fosnot (1996) expanded his principles to describe these major points in the light of education: (a) learning is active; (b) conflict helps learners conceptualize; (c) reflection of experiences helps meaning making; (d) communication helps further thinking; and (e) a student's struggle or conflict helps further development.

Situated Learning

The focus of Lave and Wenger's (1990) research and development was situated learning. Situated learning is contextual in nature and has a physical and social setting. In educational settings, the activities designed for learning need to be authentic to their occurrence in the real world. Brown, Collins, and Duguid (1989) argued that activities in which knowledge is constructed and used cannot be separated from the situation.

In the situated learning approach, knowledge and skills are learned in the contexts. The context is a representation of how the knowledge is present in everyday life. Situated learning is a stance looking at inquiries into learning and cognition that accounts for social interaction and physical activity (Brown, et al., 1989). The idea is that learning is achieved through the sharing

of determined and specific activities. Knowledge is a practical means for performing tasks. Meaning is a construction of a social element that contributes to a common situation. Therefore, learning is a means for increased participation in equally experienced situations. So there are two actions of constructing identity and constructing understanding occurring with the experience (Lave & Wenger, 1990).

Situated learning emphasizes the idea of learning in a realm by enabling students to acquire, develop, and use cognitive tools in authentic fields of activity (Brown, et al., 1989). Learning, both outside and inside school, advances through collaborative social interaction and the social construction of knowledge. Lave and Wenger (1990) highlighted that situated learning is usually unintentional rather than deliberate.

Communities of Practice

By shifting their research to focus on the socialization processes that occur in organizations, Lave and Wenger (1990) continued their inquiry of social learning. Organizations often become a community. A community is a group of individuals pursuing a common goal or purpose (Wenger, 1998). The community can work and grow together or they can become dysfunctional, but they are still a community because they are pursuing a common purpose (Wenger). The students in a classroom or collaborative group or a gang of teachers can form a community.

Learning theories in communities is based on the premise that social interaction is an essential process by which we learn and grow (Wenger, 1998). Social participation is the form by which we learn, grow, and identify concepts. Individuals must be accepted into the community through the socialization process, which is identified through conflicts and resolutions. As the individual and the community grow together, preferences and legitimacies are

established. Wenger (1998) calls this legitimate peripheral participation and is the point at which the individual is fully participating in the community and the community recognizes the participation.

The construction of knowledge occurs through the practices of the community. The community becomes a context by which members negotiate the construction of knowledge through interpretation and utilization of information for the purposes of the organization. Wenger (1998) describes social learning theory by the components of social participation in the learning process. These components consist of meaning, practice, community, and identity.

Meaning

Making meaning of the world that surrounds us is not a simple routine or action but an ongoing process. Whether we are engaged in routines we have done for years or whether we are participating in a new event, we are concerned with the meanings behind each context or situation (Wenger, 1998). Meanings are negotiated with each situation, whether new or old. Negotiation is intended to describe the process of continuous interaction, gradual achievement, and of give and take. Making meaning involves interpretations and actions. Therefore, the meaningfulness of our participation in the world is a continuous process of negotiation (Wenger). Wenger refers to a duality of participation and reification to describe the meaning negotiation process.

Participation is our social engagement in the world that surrounds us. Participation leads to the experiences of our life. Reification is the process of making the abstract into a concrete form. It is how we describe and form the realities of our experiences. Each time we participate in an activity, we continuously reify the experience. In a continuous process, participation in the world helps to clarify our meanings through reification. Thus, the negotiation of meanings is

ongoing. “Our experiences and our world shape each other through a reciprocal relation that goes to the very essence of who we are” (Wenger, 1998, p. 71).

Practice

Practice is our engagement in the world. As people, we interact within the world, adjusting our practices through reflections of the situation and context. Practice is not just participating in some action, but rather it is participation through the scope of a social environment. This gives the practice structure and meaning (Wenger, 1998). “Things have to be done, relationships worked out, process invented, situations interpreted, artifacts produced, conflicts resolved” (Wenger, p. 49). Regardless of the reasons, we pursue these products and the resulting characteristics of an intricate social process of engagement takes place.

Community

Wenger (1998) illustrated a relationship between practice and community. The relationship is depicted through (a) mutual engagement, (b) a joint enterprise, and (c) a shared repertoire. Mutual engagement happens in efforts to practice the negotiated meanings of the community and makes practice a reality within a community. Joint enterprise is the negotiation process in response to the mutual engagement. Joint enterprise provides accountability within the community by instituting a reflective process. Shared repertoire of a community of practice is created through the processes of mutual engagement and joint enterprise. It includes ways of doing things, words, stories, tools, routines, gestures, actions or concepts produced by the community or adopted in the course of its existence (Wenger). The shared repertoire has become the accepted and negotiated policies of the community in terms of practice. The shared repertoire is the artifacts of actions taken by the community. Wenger continued to associate practice and community by saying two things:

l) It yields a more tractable characterization of the concept of practice – in particular, by distinguishing it from less tractable terms like culture, activity, or structure.

2) It defines a special type of community – a community of practice (p.72).

Identity

An identity is determined by negotiating the meanings of experiences within the picture of society. The issue of identity brings together society and the individual without denying the existence of either, in actuality the discussion shows them as mutually inclusive. Identity in communities of practice is of vital importance to the previously discussed areas of meaning, practice, and community in Wenger's (1998) social learning theory. Wenger explored identity through five important concepts: (a) identity in practice; (b) identities of participation and nonparticipation; (c) modes of belonging; (d) identification and negotiability; and (e) learning communities.

Identity in practice is the negotiation of a person's behavior within a situation or context. Identities of participation and nonparticipation are the identities developed through actions and non-actions. Who we are in the midst of a community can be seen through what we do and as important, what we do not do. Modes of belonging are the negotiations of participation and competence. This is a process of discerning our individual negotiations of the world with the negotiations developed by the community. Imagination is our individualistic negotiation of experiences within the context of our surroundings. Alignment is our focus to connect with the larger group or community so that we can contribute to the community. Identification and negotiability involve the resolution of meaning and identity through the balance of associations, providing a reinforcement for the agreement or lack there of within the community. Negotiability is the method by which we manage and show power over the constructed meanings. Learning

communities are concerned with acquiring and creating knowledge, therefore, a balance is needed between competence and experience.

Similarities and Differences between CTL and Constructivism

CTL and constructivism are similar as constructivism is the foundation for CTL. The difference is in the application in reality. Using Figure 1.1, the main difference is in the authenticity of the context and the setting. Situated learning theories might be related to on-the-job training, in which actual authentic tasks are being carried out as the learner is constructing knowledge (Schell & Schell, 2007). Constructivism may have a range of activities from lecture-driven classrooms to experimental laboratory activities to simulating authentic activities (Brown, 1998). In both cases, the principles are congruent in that knowledge is actively constructed and meanings are negotiated.

The negotiation of meanings for the constructivist depends on the stance of endogenous, exogenous, or dialectical. The endogenous constructivist negotiates new meanings based on previously held knowledge and the results of new experiments through cognitive conflict (Brown, 1998). The exogenous constructivist negotiates new meanings based on previously held knowledge and the external environmental factors, such as social collaboration (Schell, 2001). Dialectical constructivist blends the endogenous and exogenous view in using both cognitive results with environmental factors to resolve new meanings (Overton, 1990). Negotiation of meaning in a CTL strategy is resolved through the production or satisfying results for the situation (Brown). Whether that means to solve a problem or define new directions for an activity, the idea is to produce the product or satisfy the common goal using cognitive and social means.

Situated learning brings another element to the learning process: the presence of a goal. Constructivism is a theory of learning regardless of standards and goals. Situated learning brings the notion of reaching a goal. The end is in mind although it might not be predictable. Having the end in mind adds to the purpose of learning or task completion and to a more authentic and less abstract setting for learning (Schell 2007). In most constructivist classrooms, problem solving is a link to situated learning.

In a constructivist classroom, students are asked to use their knowledge, skills, and experiences to solve problems that are meaningful and challenging to expand and further the learning experience. Problem solving provides the context for situated learning so students can apply their knowledge and regulate their own personal learning. Problem solving stimulates exploration and reflection necessary for the construction of knowledge. Problem situations should challenge students, create interest and curiosity, and provide opportunities to work collaboratively (Brooks & Brooks, 1993).

Problem solving is a process of dividing known information from unknown information to explore and investigate unknown information based on constructs already constructed. The problem-solving process requires meaning making, and making cognitive connections between what is known about the situation to the constructs already created through previous experience (Sutton, 2003). The process involves organizing and synthesizing information and constructs previously learned to build new constructs based on the new context or problem. Allowing students to process concepts in an authentic environment helps give importance and value to the concept being learned. In turn, this helps to develop intrinsic motivation, a key component of constructivism.

In a contextualized learning environment, the learner is asked to experiment in order to find new meanings. Failed conjectures are not a failure in the eyes of learning; the failure gives direction to the student and community for a new direction and a new conjecture to be tested. Conflict resolution is a mainstay in constructivism. Decisions have to be made, some are successful and some fail, but the process of making the decision and resolving cognitive conflict helps the student to build stronger constructs and meanings (Jonassen, et al., 1998). In problem-solving situations, collaboration is used to filter ideas and conjectures through communication with peers and instructors. Verbalization of concepts helps develop old and new constructs and further examines old constructs for accuracy (Wenger, 1998).

To make a distinction between a CTL strategy and constructivism, one must first realize the similarities in the two theories. CTL follows many of the same principles of constructivism in that learners actively construct meanings; cognitive conflict helps learners to conceptualize new ideas; reflection of experiences is important to polish new meanings; and communication among learners is a vital part of the learning process (Berns & Erickson, 2001). The distinction is in the authenticity of the learning environment. Contextualized learning environments place the learner in a context as authentic as possible, giving the student an actual event experience whereas the constructivist classroom may only be able to simulate the event.

CTL and situated learning are closely related in organization of the context of the classroom. Both are focused on purposeful activation of the learner. In the context of this study, it is important to discuss the level of authenticity desired for the application of CTL. In the literature, the discussion of abstract to authentic activities is set forth on a continuum. The continuum places abstract activities to the far left and authentic activities to the far right (Schell

& Schell, 2007). It is also to show where the types of constructivism lie on the continuum for theoretical perspective. Figure 1.1 in Chapter 1 illustrates these perspectives.

In this study, the level of authenticity is important to understanding the participants' perspective of CTL, as well as clarifying the classroom setting. This study used a blended or dialectical constructivist perspective, which led to a semi-authentic context. This position is taken with understanding that the classroom has restrictions that may not allow it to be fully authentic in nature. Therefore, the context is somewhat situated and instruction is usually a simulation or an activity.

Connection of Study to the Literature

The plethora of information in the literature provides a broad perspective of constructivism and the impacts on student learning and development. The literature connects learning with engagement; an example is Dewey's (1938) "learn by doing" slogan. The literature also connects engagement with the environment of the classroom through the work of Bruner and others. However, there seems to be a gap in the literature as to whether the strategies improve engagement. Teachers are constantly bombarded with new ideas and strategies that will impact their classroom, but they lack any data that shows how teachers perceive the ideas to work once implemented. The point of this study was to generate some data from the teachers that are implementing CTL strategies with respect to how it impacts student engagement.

Summary

In this chapter, CTL, constructivism, situated cognition, and communities of practice were discussed as theoretical frameworks for this study. It is important to distinguish that a dialectical constructivist view was employed for this study. CTL is a pedagogy aligned with dialectical constructivism as emphasis is placed on the learner and the context for which the

learning occurs. The culmination of life experiences allows the learner to expand their thinking processes and in turn construct further knowledge (Doolittle, 2002). The framework allowed me to enhance the understanding of student learning with respects to student engagement.

CHAPTER 3

METHOD

Introduction

This chapter describes in detail the research mythology employed in this study. The major sections include a discussion of: (a) the nature of qualitative research; (b) the design of this study; (c) the population and selection of participants; (d) data collection procedures; (e) data analysis procedures; (f) representativeness, creditability, and trustworthiness; and (g) researcher subjectivity.

Nature of Qualitative Research

I am curious about how teachers percieve the effect of the strategies implemented in the classroom to engage students actively in their own learning. Qualitative methodologies are employed to answer questions of lived experiences (Creswell, 2003). Qualitative methodologies provide a voice to the lived experience to gain breadth of knowledge and insight. In this view, the traditional process of prediction and generalization may take away from understanding the nuances of the human experience (Bogdan & Bilken, 1992). From a qualitative paradigm, researchers believe that human experiences reside within the context of the lived life. Information for this study was sought by extending this concept into the context of the classroom.

> Research is always carried out by an individual with a life and a life world, a personality, a social context, and various personal and practical challenges and conflicts, all of which affect the research, from the choice of the research question

> or topic, through the method used, to the reporting of the project's outcome
>
> (Bentz & Shapiro, 1998, p. 4)

There are many challenges to converting these complexities into trustworthy research results. For example, conclusions drawn by researchers that are accurate and consistent with the participant's perception are difficult (Creswell, 2003).

For this study, I employed a procedure drawn from phenomenological traditions. A phenomenon is a person, process, event, or item of interest to the researcher (Gall, Gall, & Borg, 2007). This approach tries to answer questions with regard to structures and experiences of a specific phenomenon. Defining the structure of the phenomenon is critical to analyzing the experiences associated with the lived experience. The structure is the essence of the phenomenon. The essence may include the physical setting of event, the feelings that surround the event, or the characteristics that make the situation a phenomenon (Merriam, 2001). In a phenomenological study, the researcher tries to understand the meaning, perspectives, and relations of common people in meticulous situations (Bogdan & Biklen, 1992). Phenomenological studies are grounded in the field, allowing the researcher a greater understanding of the phenomenon. In the case of this study, as well as to gain an understanding of the phenomenon, fieldwork consisted of: (a) observations; (b) interviews; (c) document collection; and (d) other inquiries (Patton, 2002).

Phenomenology is based on a philosophy that stresses the description of consciousness and the world perceived in that consciousness. A study of the conscious might help us to comprehend things about reality or the natural standpoint, which is used to define reality and knowledge in the everyday social life. Husserl constructed phenomenology with the fundamentals of Descartes and Kant (as cited in Bentz & Shapiro, 1998). Husserl formulated

several processes to record and analyze human experience in the light that knowledge begins with the lived experience (Gall, et al., 2007).

Phenomenological research is defined as the attempt to understand the actions and conduct of people in specific situations (Bogdan & Biklen, 1992). Gall, et al. (2007) defined phenomenology as the study of the world as perceived by people without predetermined conclusions. Creswell (2003) identified phenomenology as understanding the essence of the meanings behind the lived experience. Each of these definitions is similar, with the focus on the individual's perception of the lived experience. A phenomenological perspective was chosen for the purpose of this study to understand the perceptions of teachers with a specific situation.

Qualitative inquiries are the depth and distinction of a phenomenon, sampling in light of the phenomenon of interest, and the pursuit of information-rich data for study (Patton, 2002). Patton indicated that inquiry into information-rich cases results in in-depth understanding rather than sensible generalizations, since these purposeful sampling cases allow us to focus on issues of central importance for the purpose of the research.

Design

The purpose of this qualitative study was to investigate teachers' experiences and perceptions of student engagement within a CTL environment. A phenomenological study approach was employed with two stages of analysis from multiple sources: (a) interviews, (b) observations, and (c) archival data (Bogdan & Biklen, 1992).

A phenomenological study is implemented to investigate complex social entities for in depth accounts of a phenomenon. In educational settings, phenomenological studies offer insight and understanding that may affect or even change educational practices. Phenomenological

studies have limitations in terms of generalization, researcher subjectivity, and descriptive overload (Merriam, 2001). Each of which will be considered later in this chapter.

This study included multiple participants to draw patterns across the participants. A comparative analysis examines multiple participants that have the same criterion set by the purpose of the research. The purpose is to gather comprehensive, systematic, and in-depth information about each participant within the study (Patton, 2002). Using multiple participants allows for further description and understanding through common or different findings (Bogdan &Biklen, 1992). The researcher must make sure the criterion for the participants are carefully defined to compare and contrast for patterns and themes.

This study utilized two stages of analysis to gain an understanding of both the participant and commonalities among the participants (Patton, 2002). The first stage was internal to the participant. The interviews examined the participants' experiences related to student engagement in CTL classrooms. These experiences are reported in a narrative form from the data collected in the observations, interviews, and field notes in Chapter 4. Each narrative gave a detailed description of the participant's experiences with student engagement within a CTL environment. The narrative was constructed in the form of a story, depicting the experiences and perceptions of the participant. The participants' account of their own experiences forms data or text for the research (Merriam, 2001). This account of the lived experience is vital to understanding the perceptions of student engagement in the CTL environment.

The second phase was comprehensive across all participants studied. A comparison of each participant highlighted reoccurring patterns and themes throughout the boundaries of this research. The focus of analysis was on understanding the uniqueness of each participant, followed by a comparison of the participants as a group (Patton, 2002). This phase of analysis

helped determine commonalities and differences among the participants in efforts to gain a more refined and powerful explanation (Merriam, 2001). Both the commonalities and differences are again vital to understanding the perplexities of participant perceptions of student engagement in the CTL environment. These forms of analysis are discussed in detail later in this chapter.

To gain insight into each participant, interviews were employed in a semi-structured format (Merriam, 2001). Semi-structured interviews are guided by generalized interview questions that allow the interviewer to gather information from the informant that can be probed further. This allows deeper knowledge in the pursuit of the purpose driving the study. Semi-structured interviews allow the interview to be conducted in an orderly matter, while permitting probes to describe or explain participant experiences further. Structured interviews may be too rigid to gain rich data of a participant's experiences, and unstructured interviews may be too flexible to meet the research goals (Patton, 2002). A good interview generates rich data explaining the participant's perspectives and experiences (Bogdan &Biklen, 1992). This approach allows researchers to organize responses to interview questions into themes for later analysis. In addition, use of a semi-structured interview allows flexibility to change the order of questions or to add questions to follow-up on interesting or incomplete responses (Kvale, 1996).

The interviews were reported using a narrative analysis of data (Patton, 2002). The narratives were analyzed by a cross case thematic analysis that identified common themes. A narrative analysis is a story of the lived experiences described through the interview process and field notes. Narrative analysis allows participant's experiences and perceptions to be expressed (Patton).

A comparative thematic analysis is discovering themes that emerge in multiple participants or that emerge in some participants but not in others (Gall et al., 2007). This

involves a detailed categorization of all major points of each participant, then comparing the focal points throughout all participants. Themes are prominent characteristics of a participant (Gall, et al.). The meanings found through content analysis are often called patterns or themes (Patton, 2002). Reoccurring themes that encapsulate the data from all participants (Merriam, 2001) clarified lived experiences described by the participants.

Selection

According to Patton (2002), qualitative inquiries are the depth and distinction of a phenomenon. Samples are selected to highlight the phenomenon of interest and the pursuit of information-rich cases for study. Patton indicated that inquiry into information-rich cases results in in-depth understanding rather than sensible generalizations, since these purposeful sampling cases allow us to focus on issues of central importance for the purpose of the research.

To fulfill the purpose of the study, qualitative studies typically use specific criteria when selecting participants (Creswell, 2003). The following characteristics were used to determine the participants of this study: (a) currently employed in a Georgia high school; (b) utilized CTL strategies within a classroom environment; and (c) systematically provided student with opportunities to discover new knowledge through reflection of authentic or semi-authentic experiences.

Seven teachers were purposefully selected and invited to participate in the study. The criteria for selecting these teachers focused on the CTL strategies and environment implemented. These teachers may have a variety of teaching experience in terms of number of years or their age, but the key is that they adopted and implemented CTL instructional strategies. Selected teachers were those who offered authentic and semi-authentic learning experiences in student

centered classrooms that allow for mutual discovery and reflection on the learning experience (Schell & Schell, 2007).

Once the participants were selected, I conducted semi-structured interviews and observations of all participants to understand the CTL strategy and perceived effects of this strategy on student engagement. Sample size is difficult to determine in qualitative research, but the aim is to find the point of saturation. Saturation is the point of receiving redundant data from participants. Patton (2002) says that saturation is difficult to determine but that the purpose of the study can answer the issue. Three to five participants reached the point of saturation for understanding student engagement in the contextualized classroom. If saturation was not reached then further data collection could have been necessary.

Data Collection

Data collection consisted of information collected from several sources. I utilized the procedures as suggested by Patton (2002): (a) observation of participants in the authentic or semi-authentic environment for approximately 45 minutes each; (b) documentation in the form of field notes; (c) expanded field notes into written narrative descriptions of the observation experiences; and (d) conducting individual semi-structured interviews.

Observations

Observations are meant to provide a firsthand descriptive account of the environment and the actions within the classroom setting. This account corroborated that the CTL environment desired for this study matched with the classroom setting of each participant. The observations provided information that may not be possible to gain through the interviews and provided a more holistic understanding of the participant (Merriam, 2001). To gain a complete understanding of complex situations, observations were the best method. One draw back to observations is that people can behave differently if they know they are being observed (Patton,

2002). I conducted overt observations for consideration of the participants. Patton suggested that the observations should last at least 45 minutes long to allow the researcher to gain knowledge of the environment and the participant's reactions to the environment that can then be documented and considered in the analysis of data.

Field Notes

Field notes provide a descriptive narrative of the setting. These include aspects of time, space, goals, body language, activities of the participants, and physical objects present at the observation site (Patton, 2002). In this study, field notes were used to describe the experience of the activities observed. A draw back to the descriptive nature of field notes is that the researcher's feelings and beliefs influence the description. Part of the observation is the experience of the observer (Patton). Merriam (2001) suggested that the observer should be trained, provide precise descriptive field notes, and use the observations as a method to triangulate data in efforts to remain objective (2001).

Interviews

In an effort to gain insight into the participants' perspectives, the interviewer sat down with individual informants to conduct oral and semi-structured interviews that lasted approximately 45–60 minutes. These interviews varied in length so that rich data was obtained (Patton, 2002). The way in which an interview is conducted can have great effect upon the depth and accuracy of its results (Patton).

The interviews were conducted in each participant's classroom. I followed a pre-developed semi-structured interview guide (a copy of the interview guide is provided in Appendix A). I asked probing questions to gain a deeper understanding of the information as it emerged from the interview. Probing questions are asked when clarification is needed on aspects of the CTL strategy, perceptions of experiences, or other answers that may provide information

pertinent to the purpose of the study. Each interview was recorded on audiotape to make sure all answers were collected for analysis (Merriam, 2001) while at the same time, I tried not to be too intrusive as to make the participant uncomfortable. Each interview was also transcribed into a written narrative using a transcription machine. This was to make sure all data from the interview was analyzed (Patton). A copy was forwarded to the participants for member checking. Participants were asked to verify that the narrative was free of mistakes and misunderstandings. Realizing that interview data cannot be substituted with other forms of data, I ensured that interviews were properly recorded with audiotape, using fresh batteries in the recording device at each interview. The micro recorder was small enough as to be unobtrusive.

Transcriptions

The tapes were then transcribed using a transcription machine. Audio recording permitted me to concentrate on the interview itself, allowing me to make notes during the interview to formulate follow-up or probing questions that clarified or amplified remarks made earlier. Performing the transcription by typing the interviews allowed me to be immersed into the data, as well as deriving insight (Patton, 2002). The transcripts were verbatim in line format aligned according to the questions from the interview to help match or contradict corresponding responses from the different cases (Merriam, 2001). Microsoft word was used as the software for dictating the transcripts.

Data Analysis

Data analysis started with the first interactions with participants. Analysis consisted of choices about field notes and expanding those notes through reflection (Silverman, 2000). Two phases of analysis were implemented: narrative analysis and comparative thematic analysis. Narrative analysis is used to gain understanding of each participant. This provides a story of rich data describing the perceptions of the participant in the context of the individual participant

(Merriam, 2001). A comparative thematic analysis provides further explanation and understanding of widespread and distinctive patterns that occur across the participants. This provides for deeper understanding and a more influential result of the research (Merriam).

Narrative Analysis

A narrative analysis is an organized representation revealing social interactions through individual experiences (Gall, et al., 2007). The narrative emphasizes the participant's explanation of personal experiences (Patton, 2002). A narrative was constructed for each participant. The narrative described the experiences of each participant as explained by them. The observations and explanations given by each teacher were used to triangulate their experiences within the CTL strategy. Many qualitative researchers use the term 'crystallization' to describe the evolving nature of qualitative findings through varying data collection methods. The narratives were developed from stories to reports by taking the form of a one-by-one description of several major parts of the data (Stake, 1995). Each data set was dissected into major categories that emerged as the focal points of the research. These major points were focused around the behaviors associated with student engagement as developed through the CTL strategy. The advantage of a narrative approach is that readers are able to visualize each participant and the contexts that surround the participant. An analysis check was performed by allowing the participants to read the narrative and make changes to reflect their experiences. Participant editing provided for accuracy in the representation of participant experiences (Gall, et al., 2007).

Comparative Thematic Analysis

A comparative thematic analysis is discovering themes that emerge in multiple participants or that emerge in some participants but not in others. This involves a detailed categorization of all major points of each participant, then comparing the focal points throughout

all of the participants. Themes are prominent characteristics of a participant (Gall, et al., 2007). The meanings found through content analysis are often called patterns or themes.

Reoccurring themes that encapsulate the data from all participants (Merriam, 1998) clarified the lived experience described by the participants. An inductive analysis picking out reoccurring phrases, terms and practices was implemented. An inductive analysis is the development of immersing details of each participant into explanations of phenomenon. Phrases, terms, and practices were coded and tallied using an Excel table in order to find emerging themes throughout all participants (Patton, 2002). The Excel table was used to align categories, phrases, and terms for recognition of patterns and reoccurring experiences. The table was set up with the participants on the vertical axis and terms, phrases, and practices on the horizontal axis. The chart served as a frequency check across participants.

Representativeness, Credibility, and Trustworthiness

In qualitative research, validity and reliability are concerned with trustworthiness and credibility of the data and conclusions. Questions about data representation and truthful understandings are answered through data verification and rigorous planning (Merriam, 2001). Verification of participant data is usually done by member checking, data triangulation, and journaling. These methods were employed in this study.

Participants were asked to review the narrative of their case to check for misunderstandings and gaps in their perceptions with the intention to make sure the data and analysis was representative of case (Merriam, 2001). Triangulation is the process of varying data collection methods to substantiate findings within the phenomenon or case (Gall, et al., 2007). In this study, observations and interviews were analyzed to corroborate data. The researcher also kept a journal of actions taken in methods of inquiry to provide a form of accountability. Patton's

(2002) three elements for establishing qualitative credibility were implemented: (a) rigorous fieldwork methods that yield quality data that receive systematic analysis; (b) researcher credibility reflective of high levels of training, experience, and self-presentation; and (c) a philosophical belief in the significance of qualitative inquiry.

I recognized my personal experiences and perspectives could hold bias in my efforts to analyze and collect data. To minimize these biases, I implemented member checks and had the analysis scrutinized by expert readers.

Researcher Subjectivity

I am currently a high school assistant principal. Before becoming an assistant principal, I was a mathematics teacher who believes authentic problem solving teaches students to think and transfer knowledge to other situations. I hold certifications to teach secondary mathematics, construction, and technology education. I hold a Master's degree from the University of Georgia in the field of occupational studies. I implement the trade skills that I have acquired into my classroom as learning strategies, to show students the theory within the world of work. Allowing students to view the purpose of theories through applications allows me, as a teacher, to examine theories in detail and to solve diverse problems. These experiences gave me an insider label to the study I conducted. One advantage of being an insider to CTL was that I understand the language of the topic and the goals of behind CTL. The disadvantage was that I could overlook data because of my own leaking perspectives.

There are some general limitations to this study. Due to the small number of participants and nature of the qualitative study, these findings cannot be generalized to a larger population. The collection of cases is a peek of the CTL strategy and may or may not precisely reflect the

typical experience within the CTL strategy. My status as a novice qualitative researcher was also a limitation.

Summary

The purpose of this study was to learn about the perceptions and experiences of teachers who implement CTL strategies on student engagement. The perceptions and experiences were collected through means of observations, field notes, interviews, and transcriptions. Each phenomenon was reported as a narrative or story to describe the nuances of each participant. The transcripts and observation notes were then checked for common themes and patterns across all phenomenons. The insight gained into these perceptions and experiences helped to understand further that phenomena associated with CTL strategies and student engagement.

CHAPTER 4

PARTICIPANT NARRATIVES

Introduction

This chapter introduces each of the participants in this study. I describe each one and tell about their instructional practices. Before telling the stories of the participants, it is important to discuss how and why these informants were chosen.

Purposeful Sampling

Some authentically contextualized learning environments are phenomenal. Participants for this study were selected because they were known to achieve extraordinary results by their creation of a context for learning and careful facilitation. Specifically, I selected teachers who implemented CTL strategies and could discuss their perspectives in terms of purposeful contexts and appropriate instructional strategies resulting in high levels of student engagement. Patton (2002) indicated that inquiry into information-rich cases could result in-depth understanding rather than sensible generalizations. This is made possible by using a purposeful sample: Cases that allow us to focus on issues of central importance to the purpose of the research.

Criteria for Selection

Qualitative research typically uses specific criteria when selecting participants (Creswell, 2003). The following characteristics were used to determine the participants of this study: (a) currently employed in a Georgia high school; (b) utilized CTL strategies within a classroom environment; and (c) systematically provided students with opportunities to discover new knowledge through reflection of authentic or semi-authentic experiences. As an insider to the CTL strategy, I was aware of teachers' who used CTL strategies and had observed the strategies

in action from some teachers. I also called other school administrators to ask them of their knowledge of teachers utilizing CTL strategies. After finding several possible participants, I called each one of them to ask them to be part of the study. I called 7 teachers in total. One did not want to be a part of the study from the beginning. I sent the other 6 teachers an invitation letter, participant questionnaire, and a consent form. All of them returned the questionnaire and consent forms. I eliminated one teacher due to the fact he was in the same school as one of the other participants. Another participant decided her schedule was too full before the study started. Therefore, 4 participants met the criteria and participated in the study. Table 4.1 displays an overview of the four participants of the study.

Table 4.1 *Participant Demographics*

Name	Gender	Certification		Experience (years)	School Region
		Level	Path		
Jackie	Male	T-6	University	15	Suburban
Jamie	Male	T-5	University	10	Suburban
Jessie	Male	T-4	Alternative	3	Suburban
Jordan	Female	T-5	University	5	Rural

Each of these teachers is highly qualified through Georgia certification and teaches in a Georgia public high school. During interviews and subsequent classroom observations, it was evident that each implemented a CTL strategy and provided their students with opportunities to learn in authentic learning situations. The rest of this chapter describes the perspective of each of the four participants. Information comes from participant interview transcripts, participant questionnaires, and my observations from the classroom and the interview.

Descriptions of Individual Participants

Jackie

Coming from a family of educators, Jackie had been exposed to many educational philosophies and problem-solving sessions through many years at the family dinner table. Jackie's upbringing probably influenced him to become an educator. Yet, a successful span of 15 years in commercial business passed before he entered the teaching profession. Although earning a good salary, the stresses of working with an abusive supervisor prompted the exploration of career alternatives. Eventually, Jackie returned to university to prepare for a teaching career. He had been blessed with opportunities to work in schools closely aligned to the technology field that he teaches in today. Currently, he teaches engineering concepts in a suburban high school. Jackie is known among his colleagues to have an unmatched level of passion and enthusiasm to see students succeed and learn. His knowledge of the field and his zeal for education has resulted in many awards, such as Teacher of the Year. In spite of his many accolades, his success is proven by the achievements of his students. Jackie stated, "They were the robotics team last year and they are the defending state champions so they are in there kicking butt and getting ready to go"

Jackie is a fanatic about providing a learning environment conducive to student success. During the summer months, he spends many hours adjusting and preparing for students in the fall. He compares teaching to being a waiter.

> The day is really a constant psychological bombardment of student questions and you feel like you are a waiter. The way I teach my classes is… it's what's been called constructivism. I set the table, give them the theory, I talk about it for a few days, they understand the concepts, I show them the math connections, I show them the scientific connections, and hopefully all the table is set with all the supplies and everything they

> need. And they have to apply the creativity to come up with a solution to whatever it is we are studying and it's messy.

One of Jackie's strategies is to persuade students to take ownership of their education. One technique is to show a future that has real and exciting opportunities. He encourages students to act as a community of learners and to believe in themselves by completing complex projects that employ the engineering principles of the class. He believes that this is central to the achievement of great accomplishments.

> I want them to discover, that's the big thing, the discovery part is really awesome … how excited they are when they figured it out and it worked. They accomplished the challenge and they did it on their own.

Jackie's school is located in a suburban Georgia area located adjacent to a large metropolitan area. The school is part of the largest school system in the State of Georgia. The high school's population is around 3300 students with 27% being economically disadvantaged and 12% with special needs. The ethnic breakdown of the school was 53% white, 34% black, 7% Hispanic, 4% Asian, and 3% others. This district was widely thought to be a leader in academic performance and educational development. His particular school made adequate yearly progress (AYP), a state measure of a school success. They invested heavily in technology and programs to help students. Jackie attributed the success of his students to the contextualized community created in his program that is student focused, and the discovery of knowledge is held to the highest measure.

Jackie's classroom was typical. It consisted of a computer laboratory with 28 computers and a work area about the size of three conventional classrooms. The work area had tables and project locations with assorted testing equipment arrayed for student use. There were work

samples and projects strategically placed throughout the entire area as models and learning tools for the students to use. Motivational posters provided a comforting and inspirational element to the classroom. During the day, the work area was cluttered with students working on projects and conducting experiments hoping to solve assigned problems.

> It's messy; it lends itself to be a mess because they are experimenting. They are trying different things, if something doesn't work, they're scrapping it. It's experimentation so…

His students range from 9 to 12th graders, with approximately 25–30 students in each class. Jackie pointed out that most of his students are male. In one class, there were only two females. To him, the single gender classroom created an interesting dynamic because of males' outwardly competitive nature. Jackie explained that the testosterone levels may be high but egos are kept in check by the competition developed in the community of the classroom.

During his day, Jackie teaches six classes, each about 50 minutes long with an advisement class around lunchtime. His classes were broken into segments starting with basic engineering principles. Later in the course, full application of more advanced content was required on projects and activities. He stated, "It takes a lot of nurturing in the beginning with students to become accustom to the community and by the end of the 4 years, the students have made it their home."

Jackie recognized that creating the community of learners in authentic contexts is a very sophisticated process. He understood that his role was to facilitate the building of relationships, the constructing of knowledge, and arranging for student success. The joggling act consisted of giving students just the right balance between theory and application. This aided in the student's ability to construct knowledge. At times, Jackie actually withheld information as a way to

promote creativity. “I don’t give them too much because they will just reproduce what I show them, I want them to accomplish something on their own.” Later, full disclosure of material was provided as a way to enhance student understanding of the full application of engineering principles.

Jackie thought of teaching in two interactive instructional dynamics. First, there was teacher-centered time devoted to the provision of required information for students to solve a problem or to test an hypothesis. Next, students were challenged to apply their information in the development of a project. This became known as student-centered time. Using these strategies, Jackie arranged for students to use the knowledge they learnt while cognitively going beyond factual recall. To make this possible, Jackie created an environment in which students are free to make mistakes and experiment without worrying about grades. “I hopefully am providing them an environment where they feel okay to make a mistake and it’s not going to, well I’m not going to grade just whether it fails or not.”

In this setting, the community of learners was operating in very complex social and physical environments that could be described by some as chaotic. Jackie encouraged students to get completely involved in creative problems solving and that can contribute to the chaos. For example, he gave students a project requiring them to separate the yoke from the white of an egg. More than one student decided to try this with hydrochloric acid. Not sure himself if this would work, he allowed the students to experiment, resulting in the discovery that it would not work. In cleaning up the mess, they had to determine how to neutralize the acid. In this way, the students acted in a similar way to workers dealing with complex chemical processes. Students’ knowledge was valued and used to solve problems. Students in Jackie’s class felt comfortable enough to question each other. This also brought about a natural competitiveness. Jackie said, “It

brings bragging rights too you know." He also said, "They feel a little bit more special; that they're in a tight nit group… at the school."

I felt completely comfortable during the observation of Jackie's class in spite of several students asking why I was there. During the observation, I witnessed them working together, asking each other challenging questions, taking initiative to help each other solve problems, and even correcting each other as to ensure they had produced the best product. There was a jovial feeling among the classmates as they pushed each other to experiment and succeed.

Jackie believed engagement is a by-product of their participation in the community. The authentically contextualized setting promotes problem solving and collaborative work. The students are deeply involved in authentic activities with real materials. For example, Jackie said, "when they're building a rocket, it's not a kit; they've got to bring in crap from home." He further explained that the students have to design and build the rocket from these materials using the test equipment in the classroom. During these situated learning activities, Jackie's students developed relationships with the concepts and with other students in the class. These scenarios promoted language development, a fundamental component of any community. "They speak their own language and we contextualize all the learning."

Jackie described students' excitement and a sense of accomplishment in these situations. The sense of accomplishment promoted a sense of ownership, which in turn, continued to build community identity. Wenger (1998) described the process of developing the community identity in terms of participation and reification. The excitement and accomplishments are components of the reification of accepted community practices from which the identity is developed. With a resulting confident sense of legitimacy, curiosity is enriched by a culture of experimentation. Further, when the context is perceived as authentic, students work together passing information

back and forth to solve problems. During these conversations, students are motivated to generate the next idea, creating even more enthusiasm and excitement. Jackie believed that this becomes a cycle of events made possible through participation in a community.

In Jackie's classroom, the students were prepared to solve problems and experiment with new ideas. Students developed their own roles in the classroom/community with the aid of the facilitating teacher. This promoted collaboration and honors contributions made by members of the community. Discovery of knowledge was an important goal of his classes. Failures were seen as opportunities to learn without pressures of grading. The class was home to the students. It was their sanctuary within the school. Jackie was zealous about working with students and guiding them to success. He acted as a facilitator and enabled students to become thinkers. Jackie provided a messy environment with authentic problem scenarios that immersed students in preparation for the real world outside of school.

Jamie

Great teachers who guided him to success in school sculpted Jamie's own education. Jamie admired his teachers for their passion and enthusiasm to promote learning. Jamie's intelligence provided him with many career options that may have resulted in lucrative salaries. However, Jamie's interest in a noble career led him to the education profession. Education was a career, "he could believe in." (272)[1] Jamie enjoyed working with students to promote their success. Jamie found that guiding students to success was honorable. Earning this honor brought Jamie pride and a sense of accomplishment. This inner joy continued to motivate him to work with students. As he put it, "I enjoy it; it's still what I want to do when I grow up." (284)

[1] Denotes transcript line number from the participants interview.

Jamie was passionate about working with students. His life ambition was to help others succeed. Jamie had an exceptional work ethic. Jamie focused his time on preparing students for the real world, a world that is outside of school and beyond mathematics. Jamie emphasized life beyond the classroom. Jamie utilized the details of his students' lives to gain a purpose of learning, which was often beyond the scope of mathematics. Jamie was clever in his attempts to persuade students to take ownership into their own education. Jamie provided a learning situation that showed the future as bright and full of opportunities, and he believed the educational process was stimulated by developing relationships. Jamie stated, "We are people first." (269) He encouraged his students to believe in themselves by first believing in them. Jamie thought this legitimized their purpose in his class.

Jamie's school was located in a rural Georgia area next to a moderately populated city. The high school's population was around 1100 students, with one-third of them being economically disadvantaged with 7% classified as having special needs. The ethnic breakdown of the school was 54% white, 35% black, 6% Hispanic, and 5% others. Jamie school system was focused on accountability. Educators were expected to be professionals. Jamie's school was constantly trying to improve and find the new ideas. They have invested greatly in technology and programs to support students. Despite these investments, the teacher was a vital contributor to the classroom and educational success.

Jamie's classroom was typical. It consisted of 30 tightly arranged desks, 2 outside windows, and motivational posters. Jamie's room was equipped with a LCD projector and other technologies. Jamie taught trigonometry and Advanced Placement Statistics. His students were normally juniors and seniors with approximately 25–30 students in each class. His classes were approximately 50 minutes in length.

Jamie thought of teaching in two interactive dynamics. First, teacher-centered time dedicated to skill development. Students were then challenged to utilize these skills in authentic problem situations. These situations became student-centered time. Jamie believed students were ready to work with real applications. He stated, "There are no more drill and kill assignments." (203) Understanding why the skill is applicable to the real world through an authentic assessment fueled the student's need and desire to learn. The authentic piece was, "what makes it stick." (66) Students learn to think and make decisions based on the knowledge they develop in the class. Developing decision makers is critical to solving problems in authentic situations.

Jamie believes some may view an authentic contextualized environment with teenagers as chaotic. Jamie allowed students to investigate concepts in authentic situations; working together through authentic situations created opportunities for the discovery of knowledge. Jamie facilitated student collaboration and provided students with opportunities to make successful decisions. Knowledge is valued and needed in the collaboration of problem solving and decision-making. Collaborative groups are constantly changing in order to encourage and promote continuous learning. Students validated their knowledge by working together and probing partners for further understanding in authentic situations. The class utilized real data from newspapers and other current sources. Each member of the group was expected to perform tasks to help solve problems. The groups dissected problems and divided tasks according to strengths and weakness. Students utilized content vocabulary to defend their decisions and to report their results. Students practiced concepts of statistics in an authentic context.

An interesting event occurred during the observation of Jamie's class. Students were collaborating and several times, students committed the same concept or skill error. Jamie recognized this error continually occurring so he called the class back together to re-teach the

skill. Students moved their desks from their groups back into rows of the traditional setting and focused their attention to Jamie's lecture. The students became very quiet and attentively waited for Jamie to direct the conversation and lesson. During the traditional context, students reverted to not talking until being called on by the teacher. Jamie had to ask for information and participation instead of getting in voluntarily as in the authentic contextual setting. The students seemed to be aware of the difference between the traditional setting and the authentic contextualized setting. The students seemed to understand that their roles and behaviors were different. Jamie's class was flexible with moving groups, desk, and other class equipment as needed to perform any task necessary.

Jamie believed engagement was driven from a variety of variables. The authentic context addressed many of these variables with engagement. Jamie thought utilizing real data with real people and real events sparked enthusiasm in students. The enthusiasm promoted student curiosity for some. Students seemed to be willing to volunteer information in authentic contextual settings. Students were free to converse about the problem situation and make decisions without recourse. Open communication created a murmur across the classroom of student conversations immersed in developing ideas. This environment contrasted the stillness of the traditional classroom. Therefore, it was sometimes viewed as chaotic. A controlled noise of thinking was present in the classroom.

In Jamie's classroom, the students were prepared to solve problems and make real decisions. Students understood that their role was different in the authentic context versus the traditional context. Students worked collaboratively in groups and understood their strengths and weaknesses as groups constantly change. There was flexibility in both the class and the classroom. Learning was a total effort of all in the room, as each student's perception and

knowledge was valued and desired. Jamie was passionate about working with students and guiding them to success. He acted as a facilitator, empowering his students to think. Jamie created an environment with real authentic data and problem situations to prepare them for the world outside of school and mathematics.

Jessie

Jessie left high school pondering career choices. After a short time, he became a successful automotive repair mechanic. As a shop foreman at a local dealership, he was making a good living, bringing in approximately $80,000 a year. After 15 years as a shop foreman, Jessie entered the education arena. The education profession interested Jessie after training several shop workers and discussing career options with a local technical college professor. Jessie found that a career in education provided stability, work that had meaning, and had lasting results. As he stated, “I like seeing the results of what I have taught them.” (286) Jessie received pleasure in working with students to help them become successful in the auto mechanical field, and this field may lead to lucrative business opportunities for some of his students.

Jessie was passionate about working with students. He said, “I love teaching people.” (273) Jessie’s dedication drove him to prepare students for the real world. He attempted to replicate the real world inside his classroom. Jessie recognized the importance that his class may have on some students. Ultimately, his class may be the one thread keeping his students in school. Jessie hoped that his class would help these students to become successful members of society. Jessie guided students to success by balancing and scaffolding theory and authentic application. He employed problem-solving scenarios to provide purpose and focus to learning. Jessie believed students equipped with skills and talents are students with bright futures and opportunities. Jessie provided a systematic way for students to increase and develop their skills through a collaborative process of problem solving by working on cars in the shop. In some

ways, Jessie's classroom experience replicated the reality he came from at the dealership. Stronger students were used as mentors and leaders to teach and work with novice students. Jessie believed the collaborative working environment provided an exciting learning environment. Through the authentic problem solving strategy, students took ownership and pride in their work. They became excited with their accomplishments. As Jessie stated, "When they figure it out and fix the car, it is as if they won the super bowl." (321).

Jessie's school was located in a rural Georgia area and was a technical school from which five high schools send their students to attend. The student population was very diverse in ethnicity, socioeconomic, and general intelligence. The ethnic breakdown for the school system was 71% White, 19% Black, 5% Hispanic, 4% Multiracial, and 1% Asian. Also 12% of the population was students with disabilities and 56% were economically disadvantaged. Jessie's school provided students with the opportunities to work in specific fields and learn specific trades so that they may be ready to enter the workforce. Other classes at Jessie's school included courses, such as horticulture, construction, welding, cosmetology, and drafting. The instructors were specialized in their respective fields.

Jessie's classroom was not typical. His teaching area included a computer laboratory/classroom and a shop area the equivalent to a 3-car garage with storage areas. There were motivational posters that provided a warm environment. Car parts were displayed for models and learning tools. Jessie's room was setup with many technologies for students to utilize in their learning experience. Jessie taught automotive courses on electricity and engine performance. His students were normally 10–12th graders with approximately 20–30 students in each class. These classes were approximately 90 minutes in length.

Jessie's classes were divided in two interactive instructional strategies: the first was for background and theory knowledge, which was normally completed in the classroom. The second was for application, which was normally completed in the shop working with real cars and car parts. The classroom time provided background knowledge and a foundation for the concept for students to utilize the knowledge in the shop setting. Jessie believed students wanted to work on cars from the moment they came into the class, however, they were not equipped with the knowledge to solve mechanical problems. Students were given the opportunity to understand why and what they are doing in the classroom through an authentic task that sparked their desire to learn.

> Well it's kind of like money I guess. You don't ever really think about where all your money comes from but when you see them making it, it's amazing to you, and I think that's what it is. It really get their curiosity going just seeing what is all involved with it.

The authenticity and relevancy of the class increased their motivation to learn. Students connected the pieces from the classroom to solve problems in the shop. Problem solving is a vital part to the context of learning.

In Jessie's class, students explored cars in authentic shop situations. Jessie employed a scaffolding process between the classroom, part models, modular activities, and working on cars with real problems to facilitate learning. Jessie believed an authentic contextualized environment with teenagers was difficult to manage. It was important to have student leaders to help work collaboratively with all students. Jessie created problem situations in all phases of learning. Students were the focus of the experience. Jessie prepared them to enter the field with knowledge and experience. Every student's ideas were respected and required, as students worked collaboratively to master concepts. Mastering a concept was ultimately determined by fixing the

car. Students in Jessie's class felt comfortable working with each other and questioning each other to gain a complete understanding of the task. Jessie stated, "The students figure out what the problem is… I put bugs in the vehicle, and they will test certain points in the vehicle to figure out what the problem is in order to fix the problem." (14-17) Students performed and practiced task in the classroom and in the shop. Students were required to practice concepts and transfer their knowledge to an authentic context.

Jessie gave students responsibilities in the learning process. These responsibilities helped students to feel part of the program and to take ownership in their learning. The students treated the learning environment and tools as if they were their own. Jessie facilitated among different ability levels and students with higher abilities were given freedom to work on more complex task. Again, the idea is similar to a real world job.

> I bring back my past experiences with everything. I was a certified EMT for a long time, and when you get your EMT certification, you can work on live people or dead people for that matter, but then you go out in the field and suddenly all of that book knowledge is inadequate. Sometimes you know it is very different in real life. There is a different atmosphere out here in the real world. (74-76)

Students in Jessie's class generally chose to be in his class. They came with prior interest in the field and some knowledge from outside sources. The prior knowledge varied in levels and validity. Jessie believed engagement was driven from the need to know, which was increased in the authentic context. Jessie thought students knew they have to learn it in the classroom in order to use it in the shop. Students saw the need for understanding concepts when they put them to use in a problem situation. Jessie described students to be more enthusiastic and excited with real cars to fix. Students sometimes brought their own cars to work on. When students fixed their

own car, they felt a sense of accomplishment. Students tended to talk about their vehicles and the problems with them. In these discussions, classmates collaborated about ideas and solidified their understandings.

In the observation, it was apparent that students felt comfortable conversing and working collaboratively to solve problems and to make decisions in the authentic contextual setting. Although Jessie set the tone for the class, the students were involved and maintained an eagerness for solving problems in the shop. Students voluntarily gave responses and provided ideas. Jessie said, "I think people look for knowledge sometimes and if they think somebody's got more knowledge, they will seek it out." (140-141) In this environment, students were proactive and anticipated in proceedings to engage further in the authentic learning environment.

In Jessie's classroom, the students were prepared to enter the world of the auto mechanic. Students understood their roles in the class and authentic context of the shop area. Students worked collaboratively in groups and understood their strengths and weaknesses as group members were constantly providing feedback. Learning was a total effort of all in the room as each student's perception and information was respected and required for success. The class functioned as units, which were similar to teams in an automotive shop. Jessie was dedicated to working with students, providing them with a path to success. Jessie provided a structured environment that simulates real problem situations in vehicles and in the classroom, thus preparing them for a job in the workforce.

Jordan

Jordan's success as a student and love for literature shifted her career ambitions toward education. Jordan worked at a building supply company as she was completing college. The company provided her with the opportunity to make $80,000 a year once she graduated from

college. For a person only 20 years of age, this was great money. Despite this opportunity, Jordan chose to become a teacher. Teaching offered her a career of satisfaction. It was a career, "she always wanted to do since she could remember." (470) She finds happiness in working and developing relationships with students. These relationships are vital to the student's motivations to learn and ultimately to choose success.

Jordan was fanatical about working with students. Excitement was gained as students transformed in her classroom. Jordan dedicated many hours in preparation of the learning environment. Learning goals were set from mastery levels of application, not just rote memorization and the regurgitation of facts. Students were expected to relate, apply, and verbalize the concepts learned into products useful to them and in their lives. Students were encouraged to find relevancy in the material and concepts according to their present or future ambitions. Training students to work together and to take ownership is slow. Students perpetuate trust and ownership in such a way that learning becomes a by-product to application and community building. Strategically, the shift from the traditional methods to contextual methods is difficult. Obtaining buy in from the students develops with designed venues for success.

Jordan believed all students can learn under the right conditions. Differentiation of instruction, projects, and learning activities were implemented to work on student strengths and weaknesses. All aspects of the classroom were devoted to developing an environment that is student centered. Jordan said her classroom was very different in the school in that it was student oriented and driven.

Jordan's school was located in rural Georgia. The high school's population was around 475 students with over half of them (56%) being economically disadvantaged and 11.1% of them had special needs. The ethnic breakdown of the school was 75% white, 18% black, 1% Hispanic,

and 6% others. Jordan's focus on her school and classroom leaves little time to think about the school system as a body. Jordan described her school as a small family. The school administration is supportive and encourages Her classroom strategies, although the school administration is constantly changing. There have been three principals and two different assistant principals in the 5 years she has been teaching at the school.

Jordan's classroom had a typical physical setting. However, she emphasized that her room was anything but typical. There were tables instead of desks so that students could look at each other and spread out for working conditions. There was an exercise ball for students to sit on and move with for the more kinesthetic learners. Jordan's classroom had a promethean board that allowed her to assess quickly on basic skills, which provided more time for students to explore, discover, and master concepts. The classroom had outside windows and motivational posters that warmed the environment. Jordan taught literature to mostly juniors with one freshman class. Her students covered a variety of different ability levels. These classes normally had between 25–30 students and were approximately 50 minutes in length.

Jordan utilized two interactive but distinct instructional strategies in her classroom. The most important of these strategies was the student-centered time. Time was set aside to cover basic and surface level knowledge as needed to review for exploring, discovery, and mastery. The teacher-centered time provided skills or the basics of a concept for students to use the information to succeed in an authentic setting. Jordan believed students need the exploring and discovery time to master concepts. During the first year, Jordan taught she implemented traditional methods but these left her feeling bored and void. She felt as though she was only reaching the five students that naturally desired to learn. When students are given the opportunity to apply their knowledge in authentic differentiated settings, they are more likely to succeed and

be engaged in their own learning. Students work collaboratively with partners and in groups to relate concepts to their understanding and to apply them to multiple scenarios. Students have to learn to think and make decisions based on the knowledge they develop in the class. Students take ownership and develop relationships through the learning process, which is essential to the contextual learning environment.

Authentic contextualized environments with teenagers may be viewed as chaotic. Jordan allowed student choice in the contexts from which to explore, discover, apply, and master concepts in authentic situations. Jordan and the students worked collaboratively in efforts to learn together. Jordan explained to her students that she learnt from them and needed their input for the class to be successful. Constant communication among the students and teacher is essential to the learning environment. The teacher's role is to facilitate learning. The student's role is to explore, discover, and draw conclusions in efforts to solve a problem. Their knowledge is valued and expected as a part of the functions of the community. The entire process is constantly being reviewed and reflected upon for improvements.

All parties in the class were comfortable asking questions and working together to extend and refine their knowledge of the concepts. Both the teacher and the student brought in authenticity. Jordan brought authenticity by providing projects that ensured students to write for a specific audience, such as a newspaper or magazine. Students brought authenticity by using current events, songs, and writings of their generation. In observing the classroom, students had to transcribe a Shakespeare play into their own words and describe the meaning with a partner. The focus of the lesson was on the analysis process not just the reading of the Shakespeare play.

During the observation of Jordan's class, it was apparent that the class was student centered. Group collaboration was a reoccurring theme in the questioning from both the teacher

and the students. The questioning was centered on two questions: What do you think? and What does it mean to you? Constructing meanings of the concepts was a common goal among the participants in the room. Students determined the meaning for themselves and explored how it applied to their lives. Students were armed with the freedoms to learn at their pace and in areas relevant to their lives.

Jordan believed engagement was driven from the differentiated contextual setting. Jordan described students to be more enthusiastic about learning concepts that they knew would be used in authentic context. The enthusiasm provided a platform for curiosity to thrive. In the authentic contextual setting, students were free to converse and volunteer information. A noise of learning and collaboration was stimulated through constant communication. In traditional methodology, students normally are forced into stillness and silence. The noise of the authentic contextual strategy may lead some to view it as messy. Exploring, discovering, and analyzing concepts in authentic manners invites students to think outside the box of the teacher-centered classroom. This was also observed in the classroom. The students possessed an ownership of the learning that created an eagerness to learn and to be involved in the process.

> I do not have students sleep in her class anymore, I do not have students trying to escape the classroom anymore, and I have a classroom that all students are engaged in their own mode of learning within an authentic context situated for them to master concepts. (448-460)

In Jordan's classroom, the students were prepared to own their learning. Students were empowered by the authentic context to explore, discover, apply, and master concepts with methods they wanted to engage in. Students worked collaboratively in groups and had an understanding that working together would provide different points of view, which maximized

their learning opportunity. The class and the classroom were flexible and the class was a community of learners. The transformation into the community was slow and tiresome but worth the time as students became enthused and involved in their education. Jordan was fanatical about working with students in the differentiated contextual process. She was a facilitator, and to empower her students as thinkers, delegated to them. Jordan prepared an environment that encouraged students to take ownership, explore, discover, apply, and master concepts in real authentic circumstances. Jordan expected students to reach outside the box to make their learning both engaging and relevant to their future lives.

Summary

The participant's narrative provided a snap shot picture into their classroom and the strategies they implement. All of them were Georgia public high school teachers. Two of them taught in a medium size schools located in a city surrounded by rural areas. One taught in the largest school system in the state and in one of the most populated areas. The other participant taught in very rural sparsely populated area. All of the participants taught in different content areas. The content areas included technology/engineering, mathematics, automotive, and literature. The participants teaching experience ranged from 3 to 15 years. Some of the participants entered the field of education directly out of college while others tried other careers first. Three of the participants were males and one was female. It is also important to note that one participant was well versed in the terminology of this study while the other three used similar but different language to explain very similar concepts. The diversity in the participants studied added value to the study through the different and common perceptions. Each participant was well qualified for the study and provided vital insight. I appreciated their efforts and admired their hard work.

CHAPTER 5

RESULTS AND DISCUSSION

Introduction

I used purposeful selection sampling (Patton, 2002) in a phenomenological study through interviews and observations. This allowed me to examine individual teachers' perceptions and the influences that CTL has on student engagement. The data generated from the four participants were first individually analyzed and then compared with each other through a comparative analysis to look for commonalities and emerging themes. I have included the individual analysis of each participant and a combined frequency table to show visually the commonalities and emerging themes (see tables 5.1 & 5.2). I present a concise participant summary and the commonalities and themes that emerged from the data analysis. Before presenting this information, a procedural example of the analysis process is provided to explain the data that was obtained and examined.

Procedural Example

I wanted participants to feel comfortable by interviewing them in their surroundings. Three of the interviews took place in the participant's classroom. One of the participants wanted to interview at my school due to the fact it was on her way home and convenient. The interviews generally started with small talk about education in general or current events. The participant then explained their current lessons and activities of their classroom. After several minutes of this conversation and getting used to the surroundings, I began the interview. I followed the interview guide (see Appendix A), beginning with, "Tell be about a typical day in your teaching

practice." Each interview was unique in its own way. Participant answers and my probing questions revealed the individuality of each participant. At the end of each interview, I scheduled a time and date to conduct a classroom observation. Each interview was digitally recorded and transcribed into a word processing document.

I wanted participants to feel comfortable with my presence in their classroom and learning environment. I allowed them to choose the date and time of the classroom observation. Before arriving, I asked where they would like me to sit during the observation to create the least amount of distractions. During the observations, I observed teaching practices, classroom interactions, and participation rituals of learning. I took field notes of these observations. These observations were then typed into a word processing document for further analysis.

Transcripts of both the interview and observation were then analyzed line-by-line to gain participants' perceptions. Transcripts were reviewed for the participant's lived experiences, as well as terminology to describe the CTL strategy and influences it has on student engagement. The participant narratives in Chapter 4 aimed to replicate the participant's perceptions and lived experiences. The written narratives were then sent to individual participant for a member check. Each participant was given the opportunity to correct, add, or delete information from the narratives.

The line by line analysis was further analyzed through the use of a frequency table. After initially reviewing the transcripts line by line several categories emerged as common topics for all participants. The categories were the basis for the frequency table to generate possible themes. A tally for the frequency table was marked each time the participant discussed a categorized topic or as it was observed in the classroom. The line numbers are the locations on the transcript from each tally. Table 5.1 is a sample of the line item analysis frequency table that

was completed for each participant, to view the culmination of the line item analysis of the interviews and the observations (see Appendix G).

Table 5.1 *Analysis of Participant Responses to CTL Strategies*

Participa-nts	Authenticity		Student Engagement					
			Student Initiated Involvement		Student Enthusiasm		Student Curiosity	
	n	Line Number	n	Line Number	n	Line Number	n	Line Number
Jackie Interview	8	175-176, 176-187, 389-392, 393-401, 402-407, 446-456, 503-510, 512-516	5	75-78, 141-142, 149, 204-206, 428	6	69-70, 89-91, 95, 104, 368-378, 493	2	141-142, 157-160
Jackie Observation	2	61, 97	6	11-12, 18, 34, 48, 56-58, 92-93	5	34, 35-36, 46-47, 56-58, 84	1	92-93

After analyzing the individual interview and observation transcripts, I began looking at commonalities and emerging themes using a combined frequency table. I discovered that through the individual analysis process, I was able to become familiar with each participant's data to the point that in the comparative analysis portion, I would recall data from the transcripts not included in the individual analysis. At the conclusion of my comparative analysis, I reviewed my individual analysis to ensure I was not excluding valuable data. Table 5.2 is the frequency table used in the comparative analysis. The frequency is the number of times the terminology was discussed during the interviews and the number of times witnessed in the observations. The comparative analysis frequency table raises many questions and points out some common themes. For example, these teachers discuss the utilization of the full continuum of constructivism although dialectical and situated learning were more commonly discussed. A detailed discussion of constructivism, situated learning, communities of practice, and CTL can

be found in chapter 2. For this study student engagement is defined by student initiated involvement, student enthusiasm, and student curiosity.

Table 5.2 *Comparative Analysis Frequency table*

	Constructivism		Situated Learning
Endogenous	Exogenous	Dialectical	
6	10	28	49
	Communities of Practice		
Meaning	Practice	Community	Identity
34	85	63	25
Authenticity	Student Engagement		
	Student Initiated Involvement	Student Enthusiasm	Student Curiosity
55	42	25	16

From table 5.2 it is important to highlight the frequent discussion or observation of situated learning, authenticity, student involvement, and the communities of practice components. Each of these topics will be discussed further in efforts to answer the research questions and to fulfill the purpose of this study.

Using Tables 5.1, 5.2, and the narratives from each participant, I reviewed the research questions to focus my study. The questions are stated again before I present results.

Research Questions

1. In what ways do teachers implement CTL concepts in classroom practice?
2. In what ways do teachers view the influence of CTL on student engagement?

Participant Summaries

Four teachers participated in this study. Although a more detailed description of the participants was given in Chapter 4, it maybe helpful to briefly summarize them here. The summary information comes from the questionnaire each filled out before becoming a participant and the information gained through the interview process.

Jackie was an engineering teacher in the largest school system in the state. His school had nearly 3300 students. He had been teaching for 15 years, and entered the field of education after a successful business career. Jackie taught all levels of students from 9 to 12th grade. Jackie was zealous about teaching and believed that "teaching is like being a waiter." (52) The teacher sets the table for students to solve problems and become thinkers through situated learning. Jackie believed that the context of CTL helps to set up a community of learners that must be developed and nurtured for best results in terms of student engagement.

Jamie was a mathematics teacher in a small suburban city school system. His school had nearly 1100 students. Jamie had been teaching for 10 years. He entered the field of education because he wanted a noble career. Jamie taught mostly 11th and 12th graders in advanced algebra and trigonometry and advanced placement statistics. Jamie was passionate about teaching and believed the key to teaching is finding authentic activities to make the learning real to the student. He said, "You've taken that skill and turned it into something applicable to the real world because that is when it is going to stick." (65-66) Jamie also believed that authentic application is where we are falling short in many cases.

Jessie was an auto mechanics teacher at a technical high school that received students from five local high schools within the county system. This was Jessie's fourth year teaching and he was recently voted Teacher of the Year. He entered the field of education after a 15-year

career as a shop foreman for a local dealership. Jessie taught all levels of students from 9 to 12th grade. Jessie was dedicated to developing students for the real world with real world skills ready for the job market. Jessie believed students do not truly master a skill or concept until they can perform the skill in an authentic task. He believed situating students in problem situations and allowing them to find and fix the problem gives them a sense of accomplishment and drives their curiosity and desire to learn. He said when they fix a car and it actually runs, "you would think they won the Super Bowl." (321)

Jordan was a literature teacher at a small rural high school. Her school had nearly 450 students. Jordan had been teaching for 5 years and entered the field of education because she loved to teach and had always wanted to teach. She taught mostly 11th graders. Jordan was known for her great test scores and her ability to reach all levels of students. Jordan taught all of the 11th graders at her school. Jordan explained that she tried teaching with traditional methods the first year she taught, and that it was boring and unsuccessful. She believed building relationships with students and finding ways to make learning relevant to the student is vital to their engagement and success. She said, "For one reason or another either they were not comfortable or they were just bored or whatever, now they are all participating and engaged." (450-452)

Each of the participants is unique in their own ways. All of them play important roles as facilitators of the phenomenon that occurs in their classrooms. Each participant has a lived experience with CTL in a Georgia public high school. Although each of them has different experiences and teach in different fields, common themes developed throughout the study.

Emerging Themes and Commonalities

Each interview was different in many ways, although I used the same semi-structured interview guide (see Appendix A). The participants' lived experiences and individual perceptions added uniqueness to each interview. Probing questions differed in each interview to reveal details of each participant's experiences. Often the participant would add tangent stories to the questions asked to portray their own thoughts accurately.

It was my intention to select and accurately report the lived experiences of Georgia public high school teachers that implemented a CTL strategy and their perception of CTL's influences on student engagement. In the analysis and review of participant responses and observed classroom actions, I found several commonalities and themes emerged. It is important to note that these commonalities that emerged were consistent with the expected results from the interview questions with the purpose to extract the ideas and perceptions from the teachers view point of the phenomenon. Without regard to priority, the commonalities were: (a) teaching practice; (b) authentic situated learning activities; (c) communities of practice; and (d) student engagement. The following is the data that emerged in each of these areas.

Teaching Practice

At the beginning of each interview, I gave participants an opportunity to describe his or her teaching practice. Although each participant's answer varied in description of activities, each of them focused their efforts on thematic units with authentic activities that would help students to relate concepts to the world students resided in. Each participant discussed a flow and teaching operations from theory to application. The participants discussed facilitating learning through the development of theories through authentic learning situations. This is consistent with Schell and Schell (2007) discussion of the importance of applying academic content to real life applications.

Jackie described his teaching practice as a waiter. He explained that he gave students small pieces of the big picture at designated times in the learning of the concepts to set the table for students to use their creative minds to solve problems. Jackie discussed a desire for students to discover knowledge through these organized and strategically situated activities. "I want them to discover … that is the big thing, the discovery part is awesome." (89) Jackie also believed students needed to be free from grading pressures to have the freedoms to explore ideas. "Hopefully, I am providing them an environment where they feel like, okay I can make a mistake, it's not going to, well I'm not going to grade just whether it fails or not." (169-170) In Jackie's classroom, students were given freedoms to experiment, discover, and construct knowledge in authentic context situations. Jackie described learning in his classroom as a social collaborative process or working together to find new ideas and to solve problems. With students experimenting, discovering, and constructing knowledge, it was messy.

Jamie described his teaching practice by explaining that teaching is taking a skill or concept and placing it into a context that students believe is real and relevant to them. Jamie emphasized that he is a facilitator of learning. This sometimes meant that he delivered a concept through discussion or lecture before providing students with an opportunity for application. Jamie explained that the big challenge is showing students where the concept is applied. (53) He said, "I want it to be as they would approach it in life." (55) Jamie believed that giving students real applications is what gets them to buy into their education and this is when they begin to think and build knowledge. Jamie also described the learning process in his room to be social and that there is power in students teaching other students. With social collaboration and negotiation of meanings in authentic context, Jamie said the class could be noisy and messy.

Jessie described his teaching practice as the precursor to on-the-job training. He described a process of developing knowledge from theory to real world application. Jessie's content area leads all learning to the ultimate goal of working on vehicles. Classroom and shop activities focused on solving problems on real cars. Jessie explained that activities are staged from the classroom to simulated problems to working on actual cars. Jessie stated, "I start them out with baby steps … and then we start working on engines." (54-55) Jessie explained that the shop work is where the students get their hands dirty in learning. As in the real mechanical shop, Jessie had students work in teams to collaborate in different learning scenarios. Jessie said students know that concepts learned in the classroom are going to be applied in the shop; therefore, it adds value to the material covered in class.

Jordan described her teaching practice as focused on relevancy. She believed that providing students with a context they could relate to will empower them to learn meanings in their own world. Jordan described the need to build relationships with her students to be able to provide the context that will relate to her students. She said that her room is sometimes viewed as messy because several students may be working on the same concept in several different contexts. Jordan stated, "It is organized chaos." (84) She said the difficulty is in the planning of the thematic units and then her job was to facilitate learning. During the observation of her classroom, she had students in groups translating *Romeo and Juliet* into their own words, and then they were going to pick a scene and find a song to describe the scene. There was a controlled noise of translations and lyrics to modern music. Jordan empowered students to take ownership in their learning by placing them in a context such that they can authentically relate to their own world.

Each participant had distinctively different classroom and content area; however, some common themes emerged in their teaching practices through the interviews and observations. The preceding paragraphs about their teaching practices revealed that each of them view their teaching: (a) as a facilitator to student learning; (b) where content is placed in authentic contexts for students to relate to; (c) where students are allowed to collaborate; (d) as the freedoms of collaboration and experimentation can be seen as messy; (e) as a desire for students to take ownership in their learning; and (f) as valued mastery of concepts through applications. Embedded in the participants' teaching practices are two key components to CTL. The following commonalities discuss these components.

Authentic Situated Learning Activities

Situated learning is contextual in nature and has a physical and social setting (Lave & Wenger, 1990). In educational settings, the activities designed for learning need to be authentic to their occurrence in the real world. It was argued that activities in which knowledge is constructed and used cannot be separated from the situation (Brown et al., 1989).

After the examination of data, it was apparent that each of the participants purposefully designed activities and scenarios around authentic learning situations. Jackie set the table for students to build a cardboard chair that could hold him up. Jamie posed questions to collaborative groups using real world data out of newspapers for the groups to make real decisions about. Jamie said, "It's taking it to the next level … if this isn't something that can help them out somewhere, they're not going to buy in." (75-76) Jessie placed "bugs in the system" (12) of a car for students to solve the car's problems. Jordan asked students to find themes in short stories and then find songs with the same theme and to explain the connections to the class. There are several more examples of authentic situated learning throughout the data. These

teachers took time to plan and design situations that provided an authentic context for students to discover and build knowledge. These teachers also used these methods to ensure mastery of knowledge. As Jordan said, "It's not my job to just spoon feed you knowledge into your brain and for you to regurgitate it to me." (48-49) Jackie said, "How excited are you when you figured it out and it worked and you accomplished the challenge and you did it on your own." (90-91) Fixed into the participant's teaching practices is the development and implementation of authentic situated learning activities to elicit the discovery and mastery of concepts.

Communities of Practice

Part of the teaching practices of each of the participants was the developing and nurturing of a community of practice. The construction of knowledge occurs through the practices of the community. The community becomes a context by which members negotiate the construction of knowledge through interpretation and utilization of information for the purposes of the group. Jordan said, "They become very protective over the process… just in relationships that I see them building with each other and it is really encouraging." (194-197) Jamie said, "There's just something powerful about you know, kids working together." (207) In the process, the students become like a family. Jackie said, "They feel a little bit more special that their in a tight nit group with them at school." (295) The community becomes a home within the school. Jackie explained, "these kids actually have their own language… this room is like their stomping ground, you look around you probably will see kids books, their coats, their bags, and instead of going to a locker in the morning they come here and they pick up their crap." (309-312)

In these communities, students negotiate meanings in the process of solving problems, relating new and old concepts, and discovering concepts. Making meaning of the world that surrounds us is not a simple routine or action it is an ongoing process. Whether we are engaged

in routines we have done for years, or participating in a new event, we are concerned with the meanings behind each context or situation (Wenger, 1998). Jessie explained that with the community working together it provided "a different perspective." (32) Jackie said, "…let them work in groups… on a project that uses everything that we've talked about" (461-462) to discover and construct their understandings. The goal for the community in each of the participant's classes was to master concepts or standards.

Each of these communities functioned differently. In Jackie's classes, the community was competitive and friendly. In Jamie's classes, there was a common notion for the development of knowledge that would help them to become decision makers and problem solvers within each scenario. In Jessie's classes, the community was working together to fix a car, therefore, they were focused on a goal in mind. In Jordan's classes, the community was driven by relevancy. Regardless of the reasons, the resulting characteristics are an intricate social process of engagement in the learning process. These learning communities are concerned with acquiring and constructing knowledge. In the discussions of the previous commonalities, there has been an emphasis on student-centered learning. This leads to the final commonality from the data: student engagement.

Student Engagement

Student engagement can mean many things. Some view student engagement solely based on whether or not a student is turning in work or through the lens of time on task. For the purposes of this study, student engagement was defined by the level of student-initiated involvement, enthusiasm, and curiosity. Student-initiated involvement was the voluntary participation of the student in an activity. Student enthusiasm was the emotional excitement and

desire to participate in the activity. Curiosity is the inquisitive participation of students to explore, investigate, and to construct new meanings (Skinner & Belmont, 1993).

Through the discussions with the participants of this study, student-initiated involvement was a product of empowering students to take ownership of their learning. The participants explained that through the communities of practice and contextualizing learning, students take ownership of their learning and, therefore, the students willingly participate and initiate further exploration and investigations. Jordan explained that when she used traditional methods before, students were not engaged or participating in her activities, and since she has implemented a contextualized strategy, students are more involved.

> Ffor one reason or another either they were not comfortable or they just were bored… now they are all participating they are all engaged, I don't have kids sleeping anymore, I don't have kids trying to sleep anymore… they want to learn. (450-454)

Jackie discussed several examples of students exploring and discovering knowledge. He explained that students have ownership of their learning. He said, "They have ownership of it, total ownership." (95) One example of the initiative his students showed was during the robotics competition, his team asked another student from another school about a C++ program. Jackie explained, "I think the best example of that last year was our robotics team that won state, one kid actually went and had the initiative to learn how to program the robot." (130-131)

In the discussion with Jessie, he talked about students wanting to bring in their own cars to work on them, and they wanted to comb over other vehicles brought in to be worked on to try and find things to fix and problems to solve. He also explained that the students' accomplishments drive their desire to explore and learn more. Jessie said the great part is that, "they did it pretty much on their own." (324) Jamie was cautious about placing all the blame of

student-initiated involvement on contextualized learning or authentic applications, but he did think there a dynamic occurred when students got together in learning groups with authentic task. It played a role in getting students involved. He said, "They get together and they start bouncing ideas off each other." (258) Each participant had a similar perception of student-initiated involvement. Using a contextualized strategy, each participant witnessed students volunteering to participate in a wide variety of authentic activities.

Tied into the willingness to participate, participants also experienced a positive change in the desires and ambitions of the student willingness to explore, to investigate, and to construct knowledge. In Jessie's examples of how students want to work on vehicles, he talked about an old truck that had been sitting outside the shop for quite a while. The students decided they wanted to work on the truck to see if they could get it to run. Jessie said,

> We had a blue truck out there. I had a group of students working on it for probably three weeks. They could not figure out what was wrong with it, and finally one day they got everything working and you would not believe… it was like they had won the super bowl out there. I mean when it cranked up to run, they were out there hollering. They said they got the fun of it. (318-322)

Jessie explained that the students are caught up in the accomplishments of their learning and they become excited and ready to learn more. In his classroom, he had to slow them down at times to make sure students were not biting off more then they could handle with the equipment he had in the shop.

Jackie gave his students the freedoms to experiment and to solve problems and explore situations with few constraints. Jackie said, "It's experimental, the kids are experimenting. They get in there, they get completely absorb in what they are doing from head to toe and it becomes a

mess." (69-70) He also explained there is a feeling of anticipation trying to accomplish new task and explore new ideas. He said, "They get it to work and how excited are you when you figured it out and it worked and you accomplished the challenge and you did it on your own." (90-91)

In Jordan and Jamie's classrooms, students were spirited in their debates and discussion of ideas. Jamie's students were debating lurking variables in trying to make a decision about new laws, while Jordan's students were trying to translate *Romeo and Juliet* into modern day language. Jordan's students were turning lines in to rap lyrics and Jamie's students were passionately arguing about data in their statistics class. Emotions were flowing and the students possessed a desire to explore and investigate. After interviewing and observing each participant, there was an apparent emotion of learning. Students desired to participate and were excited with new ideas and strived for better accomplishments.

Students striving to accomplish new things lead to an inquisitive nature in the participants' classrooms. In the experiences of the participants, the contextual setting of the authentic tasks pushed students to investigate, explore, and ask questions about concepts not addressed in the facilitation of the activities. This curiosity helped to expand on authentic tasks further and to stretch students to construct meanings. In Jordan's class, students developed an attitude of questioning meanings of words and became accustomed to finding themes in many different situations and time periods. This allowed students to relate the modern day world to the past. In this process, I observed students asking questions about the origins of words, people, and lyrics. Jordan set up a practice for students to foster thoughts and to question meanings to construct their own personal meanings. So, students were constantly asking questions and bouncing ideas off everyone in the classroom.

Jamie said that there a power developed when students work together. He said, “There’s just something powerful about you know, kids working together.” (207-208) He explained that students are constantly questioning saying, “Hey wonder if you did this, I wonder if you did that.” (259)

Jackie explained that through the contextual setting, students were able to accomplish tasks they did not believe they had the ability to accomplish. He also explained that the community of practice fosters and develops the culture of learning. Jackie explained, “They have a little bit more, ambition, some are ambitious but more curious and they feel they can accomplish it.” (158-159) Jackie said students would research ideas and try new things just to see if they might work. He explained that sometimes it works and sometimes it does not but the exploration and the discovery process is the important part to learning. Jessie explained that accomplishments drive their curiosity. He also explained that finding out how things work and why they work in the real world creates curiosity. He said, “It really get their curiosity going just to see what all is involved with it.” (227) Although each participant had a different content area, their contextual authentic setting led their students to explore, investigate, and to construct knowledge.

Each participant was focused on student learning through a contextualized authentic setting. In their respective settings, each participant experienced student-initiated involvement, student enthusiasm, and student curiosity. Each participant agreed that student engagement is complex and many variables play into obtaining student engagement. The participants agreed that the contextualized authentic setting addressed many of these variables.

Response to Research Questions

Using the participant narratives, individual analysis, comparative analysis, and the themes and commonalities that emerged from the data, I will address each of my research questions. The following discussions are in response to my research questions.

Response to Research Question One

In what ways do teachers implement CTL concepts in classroom practice?

In contextual learning theory, learning happens when the learner processes information through a lens that focuses the information to a recognizable frame of reference (Berns & Erickson, 2001). CTL relates matters of theory to the content in which it is used for real applications. It motivates students to make connections and to internalize the knowledge (Blanchard, 2002). It allows students to respond to and reflect on new information, environments, and situations that incorporate challenging authentic assessments in which they grow and continue to learn through the assessment process. CTL encourages educators to design learning environments that integrate many different types of experience to reach educational goals (Hull & Souders, 1996).

The participants in this study implemented CTL strategies in a similar fashion. Jackie used engineering as a platform to allow students to solve authentic problems and to explore and investigate different scenarios. During this process, Jackie fostered and encouraged the development of a community of practice. The community helped to drive the learning and to encourage further exploration of concepts. Jackie believed the community of practice is where the contextualized learning gets the "wow" factor. (123)

Jamie used real world data from newspaper, the internet, and other sources in his math classes to give students authentic tasks to perform and to think about real world decisions. He believed is what education is missing and that this is where the "good stuff happens." (52)

Jessie contextualized learning through on-the-job training. He created problems in vehicles and allowed students to investigate, solve problems, and fix the vehicles. Students then began working on cars with real problems in an authentic environment to learn auto mechanics. Jessie believed this is where students get their hands dirty with learning.

Jordan developed thinking skills by preparing projects for students to choose from to relate literature materials into their frame of reference. These projects allowed students to view their learning as real and authentic. She believed this helps to develop relationships with students when they understand the purpose, meaning, and authenticity of learning, which encourages students to take ownership of their learning. (456)

The participants commonly discussed the following in reference to CTL: (a) relationship building for communities of learners; (b) real authentic tasks and scenarios for students to participate in; (c) authentic tasks must be relevant for students to buy into; (d) the teacher must be a facilitator of the environment; and (e) contextualized learning is messy with exploration and the construction of knowledge.

Response to Research Question Two

In what ways do teachers view the influence of CTL on student engagement?

Throughout the discussions and observations, it was apparent that many variables impact student engagement. There are variables with individual students, such as home life, past educational experiences, and so on. There are variables with classes, such as intelligence level, age level, and content area. There are also variables in teaching and learning styles. The common thread or theme among the participants was that the contextualized authentic strategy impacts most of these variables. According to the participants, the authentic context helped students to relate concepts to their individual lives. The authentic context helped students to relate to each other in exploration settings. Jackie believed the authentic contextual setting helped develop the

community of practice. (459-451) Jordan believed it helps to develop relationships among all in the class, including her. (464-465) Jamie believed students want something real. (83) The participants all agreed that CTL impacts on student-initiated involvement, student enthusiasm, and student curiosity. The participants sensed that there was a link between the authentic nature of the context and the excitement and desire students have to learn new concepts. The authentic scenario impels students to explore and discover knowledge. The participants also portrayed their classrooms as a home for student learning. Students were empowered by the strategy to investigate and construct meaning. The perceptions of the participants that CTL strategy creates a dynamic within the classroom to build communities of practice that actively engage in learning activities that investigate real world authentic situations.

Summary

Four participants were interviewed and observed in their teaching practices. These interviews and observations were conducted to gain valuable information pertaining to their experiences and perceptions of their implementation of CTL in the classroom and the perceived influences CTL has on student engagement. The data collected from the interviews and observations were analyzed individually and comparatively across each participant, producing the prior results and discussions. Participant data was categorized according to the following commonalities and themes: (a) teaching practice; (b) authentic situated learning activities; (c) communities of practice; and (d) student engagement. Each participant was phenomenal in their teaching practice and enlightened me in many ways, as I was trying to answer the above research questions. In Chapter 6, I will discuss the implications these enlightenments have for classroom practices.

CHAPTER 6

IMPLICATIONS FOR PRACTICE

Introduction

The purpose of this chapter is to construct meaning of the preceding study. I will first summarize the research study, the problem, the purpose, and research questions. Following this, I will explain how the results of this study address the research problem and purpose of this study. After this discussion, I will discuss possible implications the results of this study may have for classroom practices. I will finish the chapter with a discussion of possible future research studies that emerged from this study and some closing remarks.

Summary of Research Study

By means of a purposeful selection sampling (Patton, 2002), I carried out a phenomenological study, including four interviews and four observations to collect data on four Georgia public high school teachers who implement a CTL strategy in their classroom practice. This study was performed to understand the perceptions these teachers have about the CTL strategy and the influences it has on student engagement. These teachers were purposefully chosen for their expertise in implementing the CTL strategy and the positive results they attain in the public high school classroom.

Starting in July of 2009, I began calling teachers known to implement the CTL strategy to ask them to be apart of this study. These teachers came from a list compiled from personal knowledge, Dr. Schell's knowledge, or other school administrators' knowledge of their implementation of the CTL strategy and their success in the public high school classroom. I

contacted seven teachers to ask them if they would like to be part of this study. One participant declined during this phone call. I sent the other 6 possible participants a participant questionnaire, an invitation letter, and a consent form to be apart of this study. One of these I decided to remove from the study because he taught in the same school as one of the other participants. Another decided her schedule was too busy for her to be part of the study and she asked to be removed. This left me with 4 participants for the study.

The participants brought several forms of diversity into the study. Three of the four participants were males. The participants taught in schools ranging from 450 students to 3300 students. One taught in a school that receives students from five different high schools. The participants also taught in different population areas, from rural to suburban school districts and in different content areas. Two of the participants were academic core teachers, while the other two were career and technology education teachers. The participants taught a range of students from different grade levels, including 9 through 12th grade students. They also taught a wide range of students in different intellectual tracks from the lowest to the highest ability levels. The participants had varying amounts of technology available to them in their different classroom arrangements. The participants also had a wide range of teaching experience in the classroom, from 4 years to 15 years. Two of the participants entered the field of education straight out of college while the other two had successful business careers before entering the profession. It is also important to note that one of these teachers was well versed in the literature and terminology of this study while the other three discussed the topics in their own constructed meanings. Each participant had their own diverse set of circumstances within their classroom, but they were chosen to be apart of this study for their implementation of the CTL strategy and their success in their classroom practice.

After receiving the consent forms and questionnaires, I began to call and email them to schedule an interview date and time. Data collection began in August, with the first interview. Each participant was interviewed for approximately 45 minutes. I gave the teacher the freedom to choose the interview date and times, as well as the observation date and time as this allowed them to be comfortable in the data collection process. Each interview was transcribed using a word processing program. This was the beginning step of analysis.

I started analyzing the interview transcript by reading it line-by-line and taking notes in the margins. I also dictated notes of information that I did not understand to be able to ask the participant follow up questions after the classroom observation. I then conducted classroom observations for approximately 1 hour for each participant. These observations began in September. The observation notes were then transcribed into a word processing document for continual analysis. All interviews and observations were completed by the beginning of November.

Analysis started with the first interview. Silverman (2000) discussed a continual process of mentally processing the data collected throughout the study. I conducted a more formal analysis by individually processing each interview and observation transcript, utilizing tables and spreadsheets to help me manage the data. After individually analyzing each participant, a narrative was written to capture the participant's perceptions of CTL and the influences it had on student engagement. These narratives were then sent to the participant for a member check. Participants were given the opportunity to make changes, additions, or deletions from the narrative to ensure their perception was correctly portrayed. These narratives were presented in Chapter 4. After each participant's data were individually analyzed, a comparative analysis

across all four participants was performed to search for emerging commonalities and themes. These commonalities and themes were presented in Chapter 5.

It is important to note here that these teachers are phenomenal. Each implemented a CTL strategy and attained great results in the classroom. Although other teachers are successful in the classroom, these teachers are exemplary. Their classrooms were phenomenon amongst the teaching field.

Summary of Problem, Purpose, and Research Questions

Before beginning the research process, I struggled with the challenge of focusing my study to ensure it was going to be achievable. I began with clarifying the problem that I sought to address. I then narrowed and shaped the purpose and the research questions that would ultimately guide this study.

Laws, such as NCLB, have mandated schools to close achievement gaps among all students. The laws have placed most of the accountability for the improvements in education on the individual schools with monitoring systems, such as Adequate Yearly Progress (AYP) and punitive sanctions that can be levied on schools who do not meet AYP mandates (Kymes, 2004). With strict utopia standards that ask schools and teachers to ensure that all students meet the same standards in the same time frame by 2014, schools and teachers must find strategies that will empower students to take ownership and engage in their own learning.

The purpose of this qualitative study was to investigate teacher perceptions of CTL as a strategy to achieve high school student engagement. Student engagement was defined by the level of student-initiated involvement, enthusiasm, and curiosity (Skinner & Belmont, 1993). The intentions of this study were to: (a) gain descriptive knowledge of teacher perceptions of

CTL and the influences CTL has on student engagement, and (b) to gain insight into CTL strategies within the classroom.

The research questions were:

1. In what ways do teachers implement CTL concepts in classroom practice?
2. In what ways do teachers view the influence of CTL on student engagement?

How Results Address the Problem and Purpose of the Study

As shown in Chapter 2, an immense amount of literature is dedicated to CTL but not a large body of literature dedicated to CTL influences on student engagement. This is probably due to the many complexities and variables that impact student engagement. Therefore, it was important to examine the lived experiences of the teachers that are implementing the CTL strategy to capture their perceptions of CTL and its influences on student engagement. The purposeful selection of teachers implementing CTL strategies to be part of this phenomenological study enabled me to fulfill the purpose of this study and to address the research questions. A more in-depth discussion of the research questions was presented in Chapter 5, however, this study taught me many issues that may have implications for classroom teachers in their efforts to improve their classrooms and close achievement gaps. The following list is not ordered by priority or preference. It is also important to note that these results are not generalizable to larger populations. These results are from a study of a small group of teachers that have phenomenal success in their classrooms. The following list shows what I learned from this study:

- The participants in this study systematically provided authentically situated learning scenarios for their students. During this process, the teacher blended theory with authentic application for students to discover and construct knowledge. These teachers

were not interested in the regurgitation of factual information. They were concerned with students being able to apply the concepts learned in authentic situations.

- The participants provided methods for students to make their learning relevant. The teachers gave students choices and empowered them to choose projects or activities that the student could view as real and relevant to their life. This differentiation of instruction allowed them to reach the greatest number of students and to empower students to take ownership of their learning.
- The participants developed and nurtured a community of learners within their classroom to facilitate learning and to build cohesiveness among the students. This allowed students the freedoms to explore, investigate, discover, and construct knowledge and relationships with other students as a part of a social network of learning opportunities. The participants believed students felt like they were part of a family in their classroom and that developed a trust and willingness to engage in learning activities.
- The participants believed that they were a part of the classroom and that it was their job to facilitate learning. They were not the dictator of the classroom. These teachers believed that students needed freedom in the classroom and control over their learning. The teacher had the responsibility of providing the necessary means for the students to learn. Sometimes this meant that the teacher gave small pieces of theory for students to organize and apply to situations. It also might mean that the teacher allows the student to try something they know will fail in order for the students to gain the learning experience. The purpose of the teacher is to provide whatever the student needs to foster their learning opportunities.

- Participants of this study believed that student engagement has many complexities, but the freedoms developed through a contextualized learning environment provided various avenues for students to become involved in their own learning. The teachers emphasized that the students need to see their learning as real and applicable to their future lives. They also perceived the social collaboration as a means to reinforce the need and value of every student's knowledge and skills. The participants also emphasized that real authentic scenarios lead students to accomplishments that in turn create an enthusiasm and curiosity to learn additional concepts, which helps students to become involved in their own learning.
- The participants of this study also expressed that these authentic learning situations are not just produced. Many hours are spent to align and practically plan these learning situations thematically. The teachers explained that the classroom is messy and complicated at times, but that learning is messy and complicated. The structure and cleanness of the traditional classroom does not allow all students the freedoms they need to discover and construct knowledge.
- The participants emphasized a need for positive relationships with students in the classroom. The community of learners foster and develop these relationships. These relationships allow the teacher to know what is important to the students and to know how best to reach the students needs and their perceptions of reality to develop authentic task.

How These Findings Impact on the Problem

After reviewing the commonalities and themes that emerged from the data, as well as the results of the research questions, several possible classroom implications became apparent.

These implications are for classroom teachers in their efforts to reach all students. There may be further implications for school administrators in the light of organizing instructional strategies for school improvement plans.

In light of the phenomenal results the participants attained in their classroom experience using CTL strategies, classroom teachers may want to explore careers in their content field to find and develop real authentic learning scenarios. Finding ways to tie theory to application may be difficult in the public high school classroom so having the experiences of a career in the content field could make these transitions easier. It will also allow teachers to provide real world examples to students. Jackie and Jessie both came from business careers before entering the field of education. Both of them utilized their business world experiences to provide students with real relevant experiences to connect to concepts. Schell (2007) expressed the key to CTL is using an authentic context to promote relevance for teachers to extend instructional opportunities and for students to make meanings.

In developing real authentic learning scenarios, it also may be helpful for teachers to align their standards to be learned thematically. The standards teachers are mandated to cover are sometimes linearly aligned into strands for textbooks. They may not be aligned for real world applications. Therefore, aligning standards into thematic conceptual units may help in developing relevant authentic learning scenarios. Jordan utilized culminating activities to cover multiple standards along thematic units. Jackie also created projects for students along with thematic ideas to cover a wide range of standards. Traditional strategies for teaching are disconnected and lack real world application (Brown et al., 1989). CTL provides connections between theories and applications through problem solving (Burns & Erickson, 2001). Jamie,

Jackie, and Jordan all expressed developing problem situations to cover a multitude of theories as vital to the students in terms of meaning making and making further connections.

The participants also placed an emphasis on nurturing communities of practice as a train to facilitate the learning environment and to develop relationships among students and teachers. Teachers may need to gain an understanding of communities of practice. Lave and Wenger (1990) describe communities of practice as developing gradually and in terms of practice and complexity. Learning about how to develop, foster, and facilitate a community of practice might be necessary to provide the freedoms necessary for student collaboration and construction of knowledge. Jackie discussed difficulties and challenges in developing the community of practice. Each group or class has their own set of practices and personalities that played a role in developing their identity.

The previous implications focused on teacher implementation of a CTL strategy. The next two implications are directed toward school administrators to help in developing instruction components of school improvement plans. These implications are meant to be components of a greater comprehensive school improvement plan.

School improvement plans are aimed at improving instruction and implementation of school wide goals. In light of the previous implications, it might be necessary for teachers to visit other teachers already implementing CTL strategies to generate ideas as to how the strategy is implemented and for the development of relevant authentic scenarios. Jordan expressed a desire to see other teachers using CTL strategies to help her further her practice. It also might be important to have training sessions in the development of thematic units and relevant authentic learning tasks for teachers. Jackie explained that it takes a lot of time to align units thematically, which he normally does during the summer.

Another possible implication for school administrators is to develop relationships with community business leaders to provide authentic work examples and possibly, to provide materials needed for students to complete these relevant authentic task. Along with the above implications, it will be important for school administrators to provide teachers with time to plan and organize these strategies.

These possible implications for classroom practices may not be a magic plan to reach the utopia goals set by NCLB, however, they might shift the focus of the classroom to one that is student focused and driven with CTL strategies. The participants believed these strategies impacted on student engagement and ownership into student learning. I have learned from the experience of this study and have discovered ideas for further or future studies.

Future Research

It is important to remember the results of this study are aimed at research questions directed to the participants of this study. They are not for generalization to larger populations. It is also important to note this phenomenological study had four purposefully selected participants from Georgia public high schools. It is important that the results be considered in this arena and with these constraints. Future researchers may want to expand upon this arena or these constraints. As I concluded this study, I reflected upon my findings and asked questions, such has, “What else and what if?” From this reflection and from the information provided by the participants, there are possibilities for further research.

During this study, one participant discussed a dynamic with male and female students. It was beyond the scope of this study, however, it may be worthy of future research to study the influences of CTL on male versus female students. The participant discussed the dynamic in terms of male students being more competitive and female students more passionate in his

perception. This difference may have impacts on classrooms that are gender separated or gender diverse.

The level of authenticity is another topic of discussion for further research. Participants in this study aimed to authenticate in their classrooms fully. Using the authenticity continuum in Chapter 2, it might be worthy to explore differences in authenticity levels and the influences it has on student engagement. Also embedded to this study may be a study of relevancy and authenticity. Schell (2007) stated the importance of relevancy to meaning making and the ideas of learning transfer. This is consistent with the data the participants in this study revealed, however, many questions are still to be explored. Is one more important than the other? Can you achieve relevancy without authenticity and vise versa?

Furthermore, there was a discussion of communities of practice from the participants. It seemed that the participants used the CTL strategy to develop, nurture, and foster a community of practice. It might be worth studying to find out if communities of practice and CTL strategies help to develop one or the other or if they mutually help each other.

This study has validated my actions as a classroom teacher. It may be worth replicating this study on a larger scale. It might be worth looking at teachers across the nation or globe to explore their perceptions of CTL and the influences it has on student engagement.

As with most research, there are more questions than answers. As educators strive to find teaching strategies to improve learning in the classroom, research of these ideas is necessary. The additional research ideas might shed light and further the construction of knowledge about CTL and the influences it has on student engagement.

Concluding Remarks

This study has been many things to me. It has been a challenge, a struggle, a reward, and an adventure. Most of my friends and colleagues think I never sleep with the irons I keep in the fire, and I tell them it is okay for I am young. Although this is true, my boys are growing up and they want their daddy to play more and more, which makes it difficult to find time to finish this dream but I continue to push for the completion of this doctorate program. This research study is the culmination of my efforts to satisfy a dream, a goal, and a desire to impact classroom instruction. I believe this research has fulfilled the purposes for which it sought to achieve and I elaborate on my beliefs about its implications for classroom teacher practices in the discussion that follows.

I think there are two major points for practical classroom practices. First, there seems to be a connection with CTL and student engagement. The participants of this study pointed out that student engagement has many complexities. The relevant authentic scenarios the teachers presented to their students to situate the construction of knowledge empowered students to take ownership and to buy into their education. The participants stressed the need for authentic and relevant activities to see student engagement. In looking for teaching strategies to close achievement gaps, teachers must look to strategies that empower students to take ownership of their learning so that they will become involved, enthused, and curious about learning and mastering concepts. One of the participants pointed out to me that she tried the traditional methods of teaching that left students bored and disengaged except for the few that were naturally engaged into everything. She also explained that the CTL strategy she presently implements has everybody engaged and focused on learning.

Secondly, there seems to be a connection between communities of practice and CTL. During this study, it became apparent that all participants were aware of the dynamic that existed in their classrooms in which all were working towards the common goal of learning. The authentic task often placed students in social learning settings in which students and teachers alike challenged each other to experiment, discover, and to connect meanings of concepts that allowed the students to become thinkers, decision makers, and manufactures of knowledge. This is consistent with Schell and Schell (2007) discussions of authenticity and relevancy. The communities of practice become an entity that challenges and comforts students to the point they are free to learn. The CTL strategy seems to feed or feed off this entity to engage students in relevant authentic learning task.

These finding are consistent with and add to the present literature for both CTL and communities of practice. I believe the results raise more questions than answers however, both previous connections can be practically implemented into a teacher's practices. Training might need to be arranged to help teachers to align and implement relevant authentic learning tasks thematically and to develop, nurture, and foster a community of practice. In the NCLB era of education, strategies must be sought after to engage students into learning and learning for mastery. Participants of this study perceived their students to be both engaged and mastering concepts under the CTL strategy. Further research is needed to strengthen these connections and to expand upon these initial findings.

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APPENDIX A

SEMISTRUCTURED INTERVIEW GUIDE

Contextual Teaching and Learning
Interview Guide

1. Tell me about a typical day in your teaching practice.

2. Tell me about your school system.

3. Tell me about your teaching environment.

4. Tell me about your administrative support as a teacher.

5. Describe what led you to become a teacher.

6. What does contextual teaching and learning look like in a classroom? And what does it look like in your classroom?

7. How does contextual teaching and learning impact student engagement in your room?

APPENDIX B

RESEARCH CONSENT FORM

Research Consent Form

I, _____, agree to participate in a research study titled "EXPLORING TEACHER PERSEPECTIVES OF CONTEXTUAL TEACHING AND LEARNING WITH RESPECT TO STUDENT ENGAGEMENT" conducted by Joseph T. "Jody" Goodroe from the Department of Workforce education at the University of Georgia (706-542-1682) under the direction of Dr. John Schell, Department of Workforce Education, University of Georgia (706-542-4206). I understand that my participation is voluntary. I can stop taking part at any time without giving any reason, and without penalty or loss of benefits to which I am otherwise entitled. I can ask to have all of the information about me returned to me, removed from the research record, or destroyed.

1. The purpose of this study is to learn how Georgia teachers apply Contextual teaching and learning strategies in their classroom practice and its impacts on student engagement. Researcher will observe one class period, taking notes for approximately 45 minutes.
   If I volunteer to take part in this study, I will be asked to do the following:

   - Complete and return the enclosed questionnaire to determine my eligibility for continued participation
   - Review a list of questions on an interview guide in preparation for an interview in my classroom/lab.
   - Participate in an interview lasting about one hour, with a possible follow-up interview of about thirty minutes approximately two weeks later. These interviews will be audio recorded.
   - Review transcripts of the interviews for accuracy.
   - Participate in an observation for approximately 45 minutes
   - Review the narrative for accuracy.
2. I will not benefit directly from this research. However, my participation in this research could lead to information that describes how Georgia teachers apply Contextual teaching and learning strategies in their classroom practice and its impacts on student engagement and identify links that may contribute to that application.
3. No discomforts or stress are expected, but I could experience some initial anxiety at the thought of having my classroom practice examined outside of the normal annual teacher evaluation. The anxiety should be alleviated by the informality of the interview process, my right to decline to respond to any question, and the offer of confidentiality.
4. No risk is expected.
5. All individually identifiable information concerning me will be kept confidential with the exception of the audiotapes as described below. If the participant gives permission to play the audio recording at a meeting of researchers it is possible that their identity may be identified by their voice. If information about me is published, my identity will be disguised by a fake name in all final research products. However, any information I provide may be obtained by court order. I also understand that copies of transcripts and observation notes will be kept indefinitely by the researcher for research and educational purposes. All participant identifiers will be removed during transcription of audio recordings and expanded field notes from observations to ensure confidentiality.
   - Audiotapes may be played at meeting of researchers. Yes_____ No_____
     (Please Initial)
6. The researcher will answer any further questions about this research, now or during the course of the project, and can be reached by telephone at (770) 328-3463.
7. I understand the procedures described above. My questions have been answered my satisfaction, and I agree to participate in this study. I have been given a copy of this form.

Joseph T. "Jody" Goodroe	_____	_____
(Name of Researcher)	(Signature)	(Date)

Telephone: (770) 328-3463

Email: jgoodroe@uga.edu

_____	_____	_____
(Printed Name of Participant)	(Signature)	(Date)

Please sign both copies, keep one, and return one to the researcher.

Additional questions or problems regarding your rights as a research participant should be addressed to The Chairperson, Institutional Review Board, University of Georgia, 612 Boyd Graduate Studies Research Center, Athens, Georgia 30602-7411; Telephone (706) 542-3199; E-mail Address IRB@uga.edu

APPENDIX C

ONLINE IRB APPLICATION

Check One
New Application: ☒
Resubmission*: ☐ **Revision** ☐ *(All changes must be highlighted)*

**NOTE: A new application is required every five years.*

Human Subjects Office
University of Georgia
612 Boyd GSRC
Athens, GA 30602-7411
(706) 542-3199

IRB APPLICATION

MAIL 2 COPIES OF APPLICATION TO ABOVE ADDRESS

(Check One) **Dr.** ☒ **Mr.** ☐ **Ms.** ☐	*(Check One)* **Dr.** ☐ **Mr.** ☒ **Ms.** ☐
(Check One) **Faculty** ☒ **Undergraduate** ☐ **Graduate** ☐	*(Check One)* **Faculty** ☐ **Undergraduate** ☐ **Graduate** ☒
John W. Schell — 810 051 3931	Joseph T. Goodroe —
Principal Investigator — **UGA ID – last 10 digits only**	**Co-Investigator** — **UGA ID – last 10 digits**
248- 2639 - 4809	248-2639-1809
Department, Building and + Four *(Include department even if living off campus or out of town)*	**Department, Building and + Four**
Mailing Address (if you prefer not to receive mail in dept.)	**Mailing Address (if you prefer not to receive mail in dept.)**
706-542-4206 — jschell@uga.edu	770--328-3463
Phone Number (s) — **E-Mail (REQUIRED)**	**Phone Number (s)** — **E-Mail**
****Signature of Principal Investigator**	**Signature of Co-Investigator** (*use additional cover sheets for more than one Co-Investigator*)

UGA Faculty Advisor:

Dr. John W. Schell	248- 2639 - 4809	Jschell@Uga.Edu	706-542-4206
Name	**Department, Bldg + Four**	**E-Mail (REQUIRED)**	**Phone No.**

****Signature:** _____ **Date:** April 27, 2009 **UGA ID – last 10 digits only** 810 051 3931

***Your signature indicates that you have read the human subjects guidelines and accept responsibility for the research described in this application.*

If funded: _____
*****Sponsored Programs Proposal#** — **Name of Funding Agency**

****By listing a proposal number, you agree that this application matches the grant application and that you have disclosed all financial conflicts of interest (see Q6a)*

TITLE OF RESEARCH: EXPLORING TEACHER PERSEPECTIVES OF CONTEXTUAL TEACHING AND LEARNING WITH RESPECT TO STUDENT ENGAGEMENT

NOTE: SUBMIT 4-6 WEEKS PRIOR TO YOUR START DATE

APPROVAL IS GRANTED ONLY FOR 1 YEAR AT A TIME

CHECK ALL THAT APPLY:

Investigational New Drug ☐ **Exceptions to/waivers of Federal regulations** ☐
If yes to the above, provide details:

Data Sets ☐ **Existing Bodily Fluids/Tissues** ☐ **RP Pool** ☐ **Deception** ☐
Illegal Activities ☐ **Minors** ☐ **Moderate Exercise** ☐ **Audio/ Video taping** ☐
MRI/EEG/ECG/NIRS/Ultrasound/ Blood Draw ☐ **X-RAY/DEXA** ☐ **Pregnant Women/Prisoners** ☐

HUMAN SUBJECTS RESEARCH APPLICATION

INSTRUCTIONS:

1. ***Type responses to all 11 questions (all parts) listed below (12 pt. font only).***
2. ***Do not answer any question with "see attachments" or "not applicable".***
3. ***Submit original plus one copy to the Human Subjects Office.***
4. ***We will contact you via email if changes are required. Allow 4-6 weeks.***

IMPORTANT: Before completing this application, please determine if the project is a research project. Check the federal definition of research at http://www.ovpr.uga.edu/faqs/hso.html#7 or call the Human Subjects office at 542-3199. The IRB only reviews research projects.

1. **PROBLEM ABSTRACT:** ***State rationale and research question or hypothesis (why is this study important and what do you expect to learn?).***

Laws such as No Child Left Behind place higher demands on high stakes tests to determine if students are achieving minimum goals. These demands increase the accountability on the educators to improve student learning. Student learning has a positive relationship with student engagement (Fredricks, Blumenfeld,& Paris, 2004). Therefore, finding ways to impact student engagement is important to improving student achievement. I want to interview and observe teachers in the state of Georgia who implement a contextual teaching and learning strategy in their classrooms seeking answers to the questions, "In what ways do teachers implement contextual teaching and learning concepts into classroom practice?" and "In what ways do teachers view the influence of contextual teaching and learning on student engagement?" I expect to find some variation of contextual teaching and learning strategies and a significant impact on student engagement. Additionally, I expect to document best practices as a resource for teachers.

2. **RESEARCH DESIGN:** ***Identify specific factors or variables, conditions or groups and any control conditions in your study. Indicate the number of research participants assigned to each condition or group, and describe plans for data analysis.***

Qualitative inquiries are the depth and distinction of a phenomenon, sampling is thought of in light of the phenomenon of interest, and the pursuit of rich information for study (Patton, 2002). Patton indicated that inquiry into rich information results in-depth understanding rather than sensible generalizations, purposeful sampling allow us to focus on issues of central importance for the purpose of the research. Using purposeful sampling, I will conduct a phenomenological study of Georgia teachers who implement contextual teaching and learning strategies soliciting answers to questions identified on the interview guide. Three to five participants representing male and female will be interviewed. These interviews will yield both an audio recording and a transcription of the interview. I will also observe these teachers in their classrooms. This observation will yield written field notes and a subsequent expanded written account of it. There will be two phases of analysis. The first is a narrative analysis that will be constructed in the formate of a story to depict the experiences of each participant. Each participant will be asked to review the narrative for an accuracy check. The second phase of analysis is a comparative analysis looking for themes across each of the participants.

3. **RESEARCH SUBJECTS:**

a. ***List maximum number of subjects 10, targeted age group 24-60years Old (this must be specified in years) and targeted gender*** Both Male & Female;

b. ***Method of selection and recruitment - list inclusion and exclusion criteria. Describe the recruitment procedures (including all follow-ups).***

Recruitment of participants will begin with knowledge of teachers implementation of contextual teaching and learning through contact from University of Georgia or from professional educator activities. Co-Investigator will call eligible participants to invite them to be apart of the study. Willing participants will receive a questionnaire and consent form by mail or fax. A purposeful selection process will be implemented. Selection of participants is based on 1. currently employed in a Georgia Public school, 2. utilizes contextual teaching and learning strategies within a classroom environment, and 3. systematically provides student with opportunities to discover new knowledge through reflection of authentic or semi-authentic experiences. Participants will be selected based on knowledge of the above criterion. Participant candidates that are not selected will be notified by phone and questionnaire/consent information will be destroyed right away. Upon receiving the consent form an interview date and time will be set up by phone in a location of the participants choice. At the interview a date and time for an observation of the class setting will be set up. Following data collection a narrative analysis will be conducted and the participant will review the narrative for accuracy as a member check.

Phone invitation script "I am conducting an educational study as a part of my doctorial program the title of my study is Exploring Teacher Perspectives of Contextual Teaching and Learning with Respect to Student Engagement. I am recruiting participants for this study based on the knowledge of the implementation of contextual teaching and learning through professional or academic contact. Would you be willing to participate in this study? If so, more details will be provided through the mail or fax."

Notification Phone script "Thank you for your time, and I wanted to let you know that you were not selected for this study. If you have any questions please call or email me."

"You have been selected to be apart of this study, I have received your consent form and would like to set up an interview time. Do you have any questions?"

c. ***The activity described in this application involves another institution (e.g. school, university, hospital, etc.) and/or another country.*** **Yes☐ No☒**

If yes, provide the following details:

1) Name of institution:

2) County and state:

3) Country:

4) *Written letter of authorization (<u>on official letterhead only</u>)/* IRB approval:

Attached: ☐

Pending: ☐

d. ***Is there any working relationship between the researcher and the subjects?***

Yes☒ No☐. *If yes, explain.*

I have been a teacher and administrator for 8 years in the state of Georgia. Although there is no supervisory relationship with any of the participants, there could be a collegial relationship from prior professional meetings.

e. ***Describe any incentives (payment, gifts, extra credit).***

<u>Extra credit cannot be offered unless there are equal non-research options available.</u>

There will not be an incentive offered to participants

4. **PROCEDURES:** ***State in chronological order what a subject is expected to do and what the researcher will do during the interaction. Indicate time commitment for each research activity. And detail any follow-up.***

1. Participants will receive a phone call asking to be apart of the study, 2. A consent form will be sent to those willing to participate in the study, 3. Upon return of the consent form an interview will be scheduled with the participant at a location of their choice, 4. A semi-structured interview lasting 45-60 minutes will be conducted (at which point the interview will be audio recorded and the interviewer will be taking notes), 5. audio recording will be transcribed into typed form by co-investigator, 6. a 45 minute observation of the participant will be conducted in the class setting (co-investigator will be taking fieldnotes of the actions and reactions of teacher and students (no individually identifiable data will be recorded about students), 7. a narrative of each participant will be constructed from the data collected and will be reviewed by the participant as a member check. The participant will be given the opportunity to correct or change the narrative report as needed for an accurate report.

Duration of participation in the study: 6 ***Months***
No. of testing/training sessions: ***Length of each session:***
Start Date: 7/1/09

Only if your procedures include work with blood, bodily fluids or tissues, complete below:
Submit a MUA from Biosafety: Attached ☐ ***Pending*** ☐
If you are exempted from obtaining a MUA by Biosafety, explain why?

Total amount of blood draw for study: ***ml*** ***Blood draw for each session:*** ***ml***

5. **MATERIALS:** ***Itemize all questionnaires/instruments/equipment and attach copies with the corresponding numbers written on them.***

1. Interview protocol, 2. Consent/Assent Form, 3. Cover letter, 4. Research Participant Questionaire, 5. Electronic recording device

Check all other materials that apply and are attached:
Interview protocol ☒ **Debriefing Statement** ☐ **Recruitment flyers or advertisements** ☐
Consent/Assent forms ☒
If no consent documents are attached, justify omission under Q. 8

6. **RISK:** ***Detail risks to a subject as a result of data collection and as a direct result of the research and your plans to minimize them and the availability and limits of treatment for sustained physical or emotional injuries.***

NOTE: REPORT INCIDENTS CAUSING DISCOMFORT, STRESS OR HARM TO THE IRB IMMEDIATELY!

a. **CURRENT RISK:** ***Describe any psychological, social, legal, economic or physical discomfort, stress or harm that might occur as a result of participation in research. How will these be held to the absolute minimum?***

Some participants may have some initial anxiety at the thought of having their classroom practice examined outside of their normal annual teacher evaluation. This anxiety will be alleviated by the informality of the interview process and the participant's right to decline to respond to any question. Offering confidentiality to the participant will also reduce their anxiety.

Is there a financial conflict of interest (see UGA COI policy)? **Yes** ☐ **No** ☒
If yes, does this pose any risk to the subjects?

b. **FUTURE RISK:** ***How are research participants to be protected from potentially harmful future use of the data collected in this project? Describe your plans to maintain confidentiality, including removing identifiers, and state who will have access to the data and in what role. Justify retention of identifying information on any data or forms.***

DO NOT ANSWER THIS QUESTION WITH "NOT APPLICABLE"!

Anonymous☐ Confidential☒ Public☐ ***Check one only and explain below.***

Any public dissemination of information will refer to participants by their pseudonyms to maintain their confidentiality. All participant identifiers will be removed during transcription and expanded field notes from observations to ensure confidentiality. Observations field notes and transcriptions will be maintained indefinitely by the researcher for research and educational purposes only. Audio tapes will be destroyed at the end of the project.

Audio-taping☒ Video-taping☐

If taping, how will tapes be securely stored, who will have access to the tapes, will they be publicly disseminated and when will they be erased or destroyed? Justify retention.

Interviews will be audio recorded with an electronic recorder. Recordings will be saved on CDs and secured in a safe at Joseph T. Goodroe's house. Dr. John W. Schell and Joseph T. Goodroe will have access to the audio recordings for analysis in dissertation work. Observations field notes and transcriptions will be maintained indefinitely by the researcher for research and educational purposes only.

7. **BENEFIT:** ***State the benefits to individuals and humankind. Potential benefits of the research should outweigh risks associated with research participation.***

a. ***Identify benefits of the research for participants, e.g. educational benefits:***

Participants will be given the opportunity to share their ideas, views, and opinions.

b. ***Identify any potential benefits of this research for humankind in general, e.g. advance our knowledge of some phenomenon or help solve a practical problem.***

This research will advance our knowledge of contextual teaching and learning with regards to student engagement. Student engagement is a key component of learning. With new laws and requirements on schools finding ways to increase student learning and improve student achievement is critical. Identifying teaching strategies that impact student engagement is important to improving schools and achievement.

8. **CONSENT PROCESS:**

a. ***Detail how legally effective informed consent will be obtained from all research participants and, when applicable, from parent(s) or guardian(s).***

Participants will be contacted to determine interest in the study. If interested a consent form will be presented and signed. Consent form is attached with materials from question 5.

Will subjects sign a consent form? Yes☒ No☐

If No, request for waiver of signed consent – Yes☐

Justify the request, including an assurance that risk to the participant will be minimal. Also submit the consent script or cover letter that will be used in lieu of a form.

b. **Deception Yes☐ No☒**

If yes, describe the deception, why it is necessary, and how you will debrief them. The consent form should include the following statement: "In order to make this study a valid one, some information about my participation will be withheld until completion of the study."

9. **VULNERABLE PARTICIPANTS: Yes☐ No☒**
Minors☐ Prisoners☐ Pregnant women/fetuses☐ Elderly☐
Immigrants/non-English speakers☐ Mentally/Physically incapacitated☐ Others☐ ***List below.***
Outline procedures to obtain their consent/assent to participate. Describe the procedures to be used to minimize risk to these vulnerable subjects.

10. **ILLEGAL ACTIVITIES: Yes☐ No☒**
If yes, explain how subjects will be protected.

NOTE: Some ILLEGAL ACTIVITIES must be reported, e.g. child abuse.

11. ***STUDENTS***

This application is being submitted for **:**
Undergraduate Honors Thesis☐
Masters Applied Project, Thesis or Exit Exam Research☐
Doctoral Dissertation Research☒

Has the student's thesis/dissertation committee approved this research? Yes☒ No☐
The IRB recommends submission for IRB review only after the appropriate committees have conducted the necessary scientific review and approved the research proposal.

APPENDIX D

IRB APPROVAL

The University of Georgia
Office of The Vice President for Research
DHHS Assurance ID No. : FWA00003901

Institutional Review Board
Human Subjects Office
612 Boyd GSRC
Athens, Georgia 30602-7411
(706) 542-3199
Fax: (706) 542-3360
www.ovpr.uga.edu/hso

APPROVAL FORM

Date Proposal Received: 2009-05-01 **Project Number:** 2009-10855-0

Name	Title	Dept/Phone	Address	Email
Dr. John W. Schell	PI	Workforce Education, Leadership and Social Foundations Rivers Crossing +4809 706-542-4206		jschell@uga.edu
Mr. Joseph T. Goodroe	CO	770-328-3463	129 Sweet Pine Path Dallas, GA 30157	jgoodroe@uga.edu

Title of Study: Exploring Teacher Perspectives of contextual teaching and learning with respect to student engagement

45 CFR 46 Category: Administrative 2,1
Parameters:
Approved for Institutions with Authorization Letters on File;

Change(s) Required for Approval:
Revised Recruitment Materials;
Revised Application;
Revised Consent Document(s);

Approved : 2009-06-11 **Begin date : 2009-06-11** **Expiration date : 2014-06-10**

NOTE: Any research conducted before the approval date or after the end data collection date shown above is not covered by IRB approval, and cannot be retroactively approved.

Number Assigned by Sponsored Programs:

Funding Agency:

Your human subjects study has been approved.

Please be aware that it is your responsibility to inform the IRB:
. . . of any adverse events or unanticipated risks to the subjects or others within 24 to 72 hours;
. . . of any significant changes or additions to your study and obtain approval of them before they are put into effect;
. . . that you need to extend the approval period beyond the expiration date shown above;
. . . that you have completed your data collection as approved, within the approval period shown above, so that your file may be closed.

For additional information regarding your responsibilities as an investigtor refer to the IRB Guidelines.
Use the attached Researcher Request Form for requesting renewals, changes, or closures.
Keep this original approval form for your records.

Chairperson or Designee,
Institutional Review Board

APPENDIX E

POSSIBLE PARTICIPANT QUESTIONNAIRE

Possible Research Participant Questionnaire

Please print your name: _____

Are you interested in participating in this research? ____ Yes ____ No

If you answered NO, stop at this point and return this form to me in the envelope provided.

If you answered YES, please provide the following helpful information:

Gender: M F Years teaching experience: _____

Your school location: Rural Suburban Urban

Teacher certification path: university alternative other

Teacher certificate level: Provisional T-4 T-5 T-6 T-7

How may I contact you?

School Name: _____

School System: _____

School Mailing Address: _____

_____, GA

Zip _____

School Phone: _____

e-mail: _____

Home Mailing Address: _____

_____

Zip _____

Home Phone: _____ Cell: _____

Preferred Contact: _____ School _____ Home _____ Cell

Best time for contact: _____

Please return this completed for in the envelope provided.

APPENDIX F

COVER LETTER

COVER LETTER

July 1, 2009

Dear Educator;

Congratulations! You are part of an elite group of educators in the state of Georgia. I feel that studying your contextual teaching and learning practices may offer helpful ideas in regards to student engagement for other educators. I am undertaking such a study as a part of my doctoral dissertation research through The University of Georgia and would like to consider you as a possible candidate for participation in my research. I obtained your contact information either through my direct contact with you as an educator or through contact with you through the University of Georgia. The purpose of this letter is to determine your interest in and availability for participation.

I will use a purposeful selection process. Selection of participants is based on:

1. Currently employed in a Georgia Public school,
2. Utilizes contextual teaching and learning strategies within a classroom environment,
3. Systematically provides student with opportunities to discover new knowledge through reflection of authentic or semi-authentic experiences.

I certainly understand that your time is very precious, and that professional and family pressures place enormous demands upon your time. If you choose to participate, I anticipate that I will spend some time with you in your classroom to conduct a 45 minute classroom observation of your practices and to conduct a 45-60 minute interview.

I have included a stamped, pre-addressed envelope in which you may indicate your interest and availability by returning the enclosed forms. Please sign and date the consent form and complete the brief questionnaire. This will inform me of the best method and address for further contact if you give your consent. I will provide further details upon receipt of the returned information. I will contact you to let you know whether or not you are selected to be apart of this study. If you are not selected to be apart of this study your information from the questionnaire and consent will be destroyed right away.

Thank you for your professional leadership and consideration to be a participant in this study. I look forward to hearing from you as quickly as possible.

Professionally,

Joseph T. “Jody” Goodroe
Researcher
Encl (2)

John W. Schell
Faculty Advisor

APPENDIX G

ANALYSIS OF PARTICIPANT RESPONSES TO CTL STRATEGIES

Analysis of Participant Responses to CTL Strategies

Parti-cipants	Endogenous		Exogenous		Dialectical		Situated Learning	
	n	Line Number	n	Line Number	n	Line Number	n	Line Number
Jackie Interview	2	61-62, 85-87	0		11	55-61, 64-66, 71-72, 80-82, 169-170, 196-199, 229-239, 393-401, 408-415, 444-445, 473-491	13	53-55, 55-61, 68-69, 175-176, 176-187, 196-199, 317-321, 389-392, 393-401, 402-407, 446-456, 512-516, 518-526
Jackie Observ-ation	0		0		1	70	3	61, 92-93, 106-107
Jamie Interview	3	27, 44-45, 80-84	5	28-30, 189, 207-208, 243-245, 252-254	3	52-53, 108-109, 192-195	5	32, 39-40, 58-59, 61-66, 93
Jamie Observat-ion	1	128-130	0		0		4	34, 42-45, 70, 153-157
Jessie Interview	0		4	25-27, 42, 53-56, 62-67	8	7-12, 18-19, 62-67, 71-72, 74-76, 121-122, 236-244, 317-322	6	11-12, 50-56, 62-67, 109-112, 153-161, 209-212
Jessie Observat-ion	0		0		1	128-131	7	9-10, 70-74, 83-87, 94-98, 101-106, 119-121, 153-154
Jordan Interview	1	22-23	1	29-30	3	72-76, 244-245, 272	9	13-15, 19-21, 29-30, 66-69, 198-205, 212-216, 339-343, 391-394, 410-419
Jordan Observat-ion	0		0		1	15-16	2	44, 49-50

* "n" stands for frequency

Analysis of Participant Responses to CTL Strategies

Participants	Meaning		Practice		Community		Identity	
	n	Line Number	n	Line Number	n	Line Number	n	Line Number
Jackie Interview	5	89, 133-137, 300-312, 446-456, 461-463	22	51-52, 55-61, 68-69, 71-72, 73-75, 80-82, 104, 118-119, 121-124, 130-132, 133-137, 169-170, 176-187, 188-193, 196-199, 259-263, 300-312, 461-463, 479491, 501-510, 512-516	18	75-78, 95, 133-137, 162-163, 175-176, 207-217, 222-227, 229-239, 241-244, 259-263, 295-298, 300-312, 314, 337-339, 349-356, 360-365, 367, 368-370, 471-474	7	97, 99, 222-227, 229-239, 241-244, 295-298, 367
Jackie Observation	2	27-29, 67-69	13	15, 21, 27-29, 37-38, 41-42, 49-50, 52, 67-69, 71, 78-79, 80, 98-99, 116	8	11-12, 21, 35-36, 39-40, 56-58, 74-75, 78-79, 98-99	1	45
Jamie Interview	4	3-6, 25-30, 102, 258-259	7	39-40, 204, 205-206, 210-212, 219-221, 235-236, 256-258	5	205-206, 210-212, 230-231, 251, 267	1	210-212
Jamie Observation	5	7-8, 42-48, 63, 73-75, 107-108	14	19-20, 36, 40, 42-48, 70, 78-79, 93, 98-99, 102-103, 112-116, 144-145, 148-150, 153-157,160	7	19-20, 36, 58-59, 102-103, 112-116, 148-150, 160	3	58-59, 112-116, 132
Jessie Interview	6	7-12, 53, 62-67, 109-112, 126-128, 214-218	8	26-27, 29-33, 37-39, 42, 115, 121-124, 134-135, 324	5	29-33, 35, 126-128, 137-141, 324	5	121-124, 126-128, 134-135, 137-141, 225-227
Jessie Observation	3	52-54, 136-138, 159	6	19-20, 23-25, 32-33, 67, 94-98, 119-121	4	8-9, 32-33, 111-116, 161-164	1	29
Jordan Interview	6	142-144, 282, 303-311, 326-328, 332-336, 339-343	17	10-12, 13-15, 18, 19-21, 29-30, 32-33, 37-40, 41-45, 77-78, 93-98, 108-112, 160-163, 263-264, 303-311, 356-360, 384-388, 408-409	13	40-41, 51-52, 54-59, 126-133, 180, 187, 194-195, 196-197, 212-216, 249-250, 257-260, 356-360, 464-465	6	47-49, 65, 116-124, 187, 191-194, 429-436
Jordan Observation	3	77-79, 92-93, 102-102	3	69-70, 88-89, 102-105	3	65, 127, 130	1	69-70

Analysis of Participant Responses to CTL Strategies

Participa-nts	Authenticity		Student Engagement					
			Student Initiated Involvement		Student Enthusiasm		Student Curiosity	
	n	Line Number	n	Line Number	n	Line Number	n	Line Number
Jackie Interview	8	175-176, 176-187, 389-392, 393-401, 402-407, 446-456, 503-510, 512-516	5	75-78, 141-142, 149, 204-206, 428	6	69-70, 89-91, 95, 104, 368-378, 493	2	141-142, 157-160
Jackie Observation	2	61, 97	6	11-12, 18, 34, 48, 56-58, 92-93	5	34, 35-36, 46-47, 56-58, 84	1	92-93
Jamie Interview	16	8, 15-16, 17-21, 30-33, 35-37, 52-53, 58-59, 61-66, 70, 75-76, 80-84, 93, 95-97, 99, 171-172, 192-195	2	75-76, 256-258	0		1	258-260
Jamie Observation	7	7-8, 34, 53, 70, 82, 96, 151-152	8	58-59, 63, 70, 88-89, 93, 107-107, 138, 170-172	5	36, 42-48, 107-108, 163-164, 170-172	4	88-89, 139-140, 163-164, 169
Jessie Interview	11	11-12, 14-17, 18-19, 53-56, 60, 62-67, 71-72, 109-112, 115, 153-162, 191	7	14, 34-35, 173-177, 183-186, 198-214, 225-227, 324	2	292-296, 317-322	4	173-177, 198-201, 214-218, 225-227
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