BREAKING THE SILENCE: A PHENOMENOLOGICAL STUDY OF INTROVERTED UNDERGRADUATE STUDENTS' EXPERIENCES IN THE ACTIVE LEARNING ENGLISH CLASSROOM

by

Richard Lee Green

Liberty University

A Dissertation Presented in Partial Fulfillment

Of the Requirements for the Degree

Doctor of Education

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ABSTRACT

The purpose of this transcendental phenomenological study was to describe the experiences of introverted undergraduate students in the active learning English classroom in a community college setting in Florida. Eysenck's Personality Theory, which provides knowledge about introverts' preferred method of learning; and Experiential Learning Theory, which presents pertinent information concerning how individuals learn by experience, guided this study. The research questions were as follows: How do introverted undergraduate students describe their experience in an English course structured as an active learning classroom environment (ALC)? How do participants describe the academic atmosphere of the ALC? How do participants describe the effect they perceive the ALC has on their academic performance? How do participants describe the social atmosphere of the ALC? What benefits do participants describe from taking part in the ALC? The Myers-Briggs Type Indicator (MBTI) identified introverted students, and the Active-Learning Inventory Tool (ALIT) identified which classes showed consistent use of active learning techniques. Data collection methods included semi-structured interviewing, cognitive representations, and online non-synchronous focus groups. Utilizing Moustakas' (1994) modified Van Kemp method, data analysis consisted of a series of operations: horizonalization, reduction, elimination, clustering, theme development, validation, and description to report the essence of participants' experiences. Two major themes emerged through data analysis: (a) the ALC does not match introverts' personality traits, but (b) introverts employ coping mechanisms to perform at their typical academic level. Data analysis identified four subthemes of the first major theme – the desire to observe prior to participation, pressure to perform, desire for time to think, and expenditure of energy.

Keywords: introvert, personality, active learning, student-centered

Dedication

To Carolyn, who never came right out and asked, “When are you going to be done?”

Acknowledgments

All glory and honor go to God and His Son Jesus Christ who have led me through this process and brought others into my path to help me. Years ago, He placed the book of Philippians on my heart, and its words have provided inspiration throughout the development of this manuscript. "I am certain that God, who began the good work within you, will continue his work until it is finally finished on the day when Jesus Christ returns" (Philippians 1:6, New Living Translation). He is still working on me, but He has helped me to finish *this* good work.

I must also acknowledge my wife, Carolyn, who kept the faith that I would never completely lose my motivation to make it to the end. "So it is right that I should feel as I do about … you, for you have a special place in my heart" (Philippians 1:7). You always had more faith in me than I had in myself.

I would be remiss if I failed to acknowledge my committee. Dr. Fred Milacci, who honored me by asking to chair my committee, stuck with me through the entire process. He showed mercy, "but not too much," because he understood my situation from beginning to end. His attitude reminded me of Philippians 3:1, "Whatever happens, my dear brother …, rejoice in the Lord." Thank you, too, Dr. Janet Richards, whose encouragement always helped to ease my nerves about the work I submitted, and whose suggestions pointed me in the right direction. Her helpfulness reminded me, "Don't worry about anything; instead, pray about everything" (Philippians 4:6).

Finally, I must return to my Creator and Savior, who continually reminds me "I can do everything through Christ, who gives me strength" (Philippians 4:13). He supplied my need throughout (Philippians 4:19), and He causes me to finish where I began. "Now all glory to God our Father forever and ever! Amen" (Philippians 4:20).

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Active Learning Classroom (ALC)

Active Learning Inventory Tool (ALIT)

Advanced Placement (AP)

Behavioral Activation System (BAS)

Behavioral Inhibition System (BIS)

Experiential Learning Theory (ELT)

International Personality Item Pool – Honesty / Emotional / Extroversion / Agreeableness / Conscientiousness / Open to Experience (IPIP-HEXACO)

Myers-Briggs Type Indicator (MBTI)

Student-centered Instruction (SCI)

Subject Matter Expert (SME)

Visual-Auditory-Kinesthetic (VAK)

CHAPTER ONE: INTRODUCTION

Overview

This chapter begins with a comprehensive yet concise background on personality studies and active learning strategies. There is a brief history of the study of temperament and the use of active or collaborative learning strategies in the classroom. This study and Chapter One places particular emphasis on introversion and the use of active learning strategies in higher education. Chapter One also briefly describes the study's situation to the researcher, and addresses the problem and purpose statements. The chapter concludes with a presentation of the significance of the study, an introduction to the research questions, and the definition of specific terms.

Background

The study of personality is as old as civilization itself, tracing its roots to ancient cultures such as India, China, Greece, and Rome (Millon, 2012). Many of these ancient peoples viewed personality characteristics as manifestations of external forces such as animistic spirits (Millon, 2012). Hippocrates regarded these characteristics as natural, rather than spiritual (Millon, 2012) and developed perhaps the first typological personality theory (von Davier, Naemi, & Roberts, 2012).

Pedagogical Emphases Changes

With the change in emphasis in education from memorizing facts and knowledge to critical thinking and other higher order competencies (Park & Choi, 2014), pedagogical emphases have also changed. Additionally, the idealization of teamwork and collaboration over individual creativity has been growing in the workplace since the 1990s, and today nearly all U.S. companies place a high priority on a collaborative work environment (Cain, 2012). In response to these changes, and the shift in educational focus from the teacher being the center of

attention in the classroom to students as autonomous educators in their own right, educators have altered the classroom environment to that of cooperative student team learning (Baugher, 2013).

Active Learning

Active learning is the name that arose from the resulting shift in educational focus due to workplace expectations. Educators often refer to active learning as student-centered learning through which, according to Lumpkin, Achen, and Dodd (2015) "students exert real control over their educational experiences, [and] they make important choices about what and how they will learn" (p. 122). Rather than sitting passively while the instructor lectures on a particular topic, students participate in various activities designed to engage them in the learning process. A simple example might be driver's education instructors allowing their students to take the wheel of the vehicle and attempt to drive instead of the instructors driving the car while explaining what the students should do in each situation. In practice, however, active learning is often less about student choice and more about instructor-chosen activities that place students in a more active role during the instructional period (Condon & Ruth-Sahd, 2013). Returning to the driver's education example, active learning in practice could be compared to the student driver behind the wheel of the vehicle but the instructor has duplicate controls – steering wheel, gas pedal, brake pedal – on the passenger side of the vehicle, and the instructor controls the motion and steering of the automobile.

Potential Benefits of Active Learning

Much research has been conducted related to the benefits of the active learning classroom, even to an introverted student (Blackford, 2010; Davidson, Gillies, & Pelletier, 2015; Jackson, Hickman, Power, Disler, Potgieter, Deek, & Davidson, 2014; Jackson, 2014; Linvill, 2014). According to Bacon, Stewart, and Silver (1999), the teacher can create a more enjoyable

learning environment by clearly defining expectations, creating long-term teams, and allowing student input in their assignments. Whetten (2007) states that "explicit, high-level learning objectives" (p. 343) are crucial to student success. Having clearly defined expectations, or learning objectives, is the most important aspect of course design (Whetten, 2007).

Additionally, teachers should encourage frequent peer feedback while working rather than utilizing anonymous post hoc peer evaluation, carefully set team size based on assignment requirements, and engage continuous improvement methods in the classroom (Bacon, Stewart, & Silver, 1999). Besides avoiding the typical secret peer evaluation, other means of assessing students in the classroom should focus on learning (Whetten, 2007). Preferred assessments engage the student with the relevant knowledge (Whetten, 2007).

Personality and Active Learning

In the active learning classroom environment, students' personalities – extroversion or introversion – may also play an important role. According to Renner, Gaball, and Ramalingam (2014), "extroverts are guided by the outer world, introverts are [instead] directed by the impressions left by the outer world on the psyche" (p. 177). Carl Jung laid the foundation for modern research on personality types, and his work is the basis for the creation of the Myers-Briggs Type Indicator (MBTI) (Harrington & Loffredo, 2010). The MBTI identifies a person's natural preferences, but outside influences can also affect preferences individuals may utilize (Renner, Gall, & Ramalingam, 2014). In addition to social interaction, research shows that there are other differences between introverts and extroverts such as cognitive and language processing (Beukeboom, Tanis, & Vermeulen, 2012; Blackford, 2010; Golaghaei & Sadighi, 2013).

Less considered in previous research is the potential harm to students' academic

performance, based on personality differences, when participating in the active learning classroom environment. Introverts are typically more inwardly focused, expend a great deal of energy in social situations (Oishi, Talhelm, & Lee, 2015), and tend to be more reflective prior to responding to questions or giving suggestions (Ashraf, Fendler, & Shrikhande, 2014; Blau & Barak, 2012; Condon & Ruth-Sahd, 2013). Introverts' tendency toward more reflective thought prior to action means that they will generally take time to process information in any given classroom situation (Kuofie, Stephens-Craig, & Dool, 2015). The team-oriented, collaborative, and spontaneous environment found in the active learning classroom may favor more extroverted students (Pawlowska, Westerman, Bergman, & Huelsman, 2014).

Review

The literature highlights benefits for students, in general, from active learning techniques including, among others, student engagement (Khan & Madden, 2016; Mennella, 2016), social interaction (Detlor, Booker, Serenko, & Julien, 2012; Falconer, 2016; Hajhosseini, Zandi, Hossein Shabanan, & Madani, 2016; Handy & Polimeni, 2015), and self-regulation (Cavanagh, Aragón, Chen, Couch, Durham, Bobrownicki, . . . Graham, 2016; Chan, Graham-Day, Ressa, Peters, & Konrad, 2014; Falconer, 2016; Hajhosseini, Zandi, Hossein Shabanan, Madani, 2016; Handy & Polimeni, 2015). Additionally, critical thinking gains (Hajhosseini, Zandi, Hossein Shabanan, Madani, 2016; Handy & Polimeni, 2015) and memory improvements (Markant, Ruggeri, Gereckis, & Xu, 2016; Stevenson & Gordon, 2014) were suggested.

Also considered in the literature are the numerous differences between introverts and extroverts. These differences include physical and physiological differences, particularly in their brain structures (Eysenck, 1967; Forsman, de Manzano, Karabanov, Madison, & Ullén, 2012; Smillie, Cooper, Wilt, & Revelle, 2012), and contrasts in preferences for ways to participate in

the classroom (Blau & Barak, 2012; Condon & Ruth-Sahd, 2013; Obenland, Munson, & Huthinson, 2012). Researchers also identified differences in preferred types of learning activities (Akiba & Alkins, 2010; Parsons, Dodman, & Burrowbridge, 2013), ways they process information (Harrington & Lofredo, 2010) and language (Golagei & Sadghi, 2013), and the ways they acquire knowledge (Akhavan, Dehghani, Rajabpour, Pezeshkan, 2016).

The literature even seeks to gain general insight from students' perspectives concerning active learning (Detlor, Booker, Serenko, & Julien, 2012; Jackson, Hickman, Power, Disler, Potgeiter, Deek, & Davidson, 2014). However, researchers did not consider personality type when exploring the benefits or challenges of the active learning classroom environment. The review of the literature revealed a gap wherein researchers have not revealed the stories of these individuals from their own perspective. This study sought to fill the void in the literature concerning the effects from the active learning classroom environment on introverted students' academic performance by allowing introverted students to tell their own stories.

Situation to Self

My motivation for conducting this study was to tell the story of "silenced voices" (Creswell, 2013, p. 48) that rarely speak publicly on their own – introverts. As an introvert, I have lived the experience that is of interest in this study. It is a part of the experience Cain (2012) calls "the Extrovert Ideal – the omnipresent belief that the ideal self is gregarious, alpha, and comfortable in the spotlight" (p. 4). Western society in general and the United States in particular, place a high value on the extroverted personality and its outwardly focused behaviors. Many view individuals who do not fit into the extroverted mold as backward, less intelligent, and less desirable to have as friends.

Even penning this narrative was difficult because, as an introvert, I value my privacy,

struggle against feelings of inadequacy in a society that values extroversion over introversion, and want to project an image of control. Vulnerability is an uncomfortable, even painful, feeling that few are likely to relish. Growing up in a small, Southern city, many school experiences were painful. I chose to miss school on several occasions rather than go through the pain of the spotlight. I still have a vivid memory of finally taking a stand to risk failing high school biology class rather than giving a presentation of my completed anatomy project. Even as a long-time teacher of adults and public speaker, I still experience feelings of dread prior to speaking and exhaustion afterward.

Introverts do not just fear the vulnerability of public display. We are different from extroverts in many ways. Introverts process information differently (Condon & Ruth-Sahd, 2013), have a lower stimulus threshold level (Cassidy & MacDonald, 2007; Park & Choi, 2014), draw energy internally rather than externally (Oishi, Talhelm, & Lee, 2015), and possess a reflective rather than reactive thinking style (Blau & Barak, 2012; Condon &Ruth-Sahd, 2013). These facts suggest that active learning classrooms may favor extroverts over introverts. Introverts are more likely to withdraw from such situations than to endure them, and it is for these reasons that I was motivated to share their stories.

Ontologically, my philosophical assumption embraces post-positivism, which holds that there is only one reality, but perception of reality distorts the subjectivity of those who view reality (Racher & Robinson, 2002). Post-positivism also means that there is a cause and effect nature to reality, even if the effects are only likely (not predestined) to happen (Creswell, 2013). The techniques employed in the active learning classroom have the high potential to affect the academic performance of introverted students in a negative manner.

The approach was epistemological in nature due to the need to determine the individual

views and explore the subjective experiences of the introverted students (Creswell, 2013). My biblical worldview also contributed to the philosophical assumptions underpinning the research. Proverbs 22:6 states, "Train up a child in the way that he should go: and when he is old, he will not depart from it" (King James Version). This verse applies directly to godly living but one can also apply it to other forms of learning – teaching minors (and adults) in the way they best learn will positively affect their academic performance.

Problem Statement

The problem is a dearth of qualitative research concerning introverted students' academic experiences in an active learning classroom environment. Many correlational studies have been conducted concerning introverts' academic performance, including in the active learning classroom environment (Alavinia, & Hassanlou, 2014; Gorla, Chiravuri, & Meso, 2013; Lakhal, Sévigny, & Frenette, 2015; Pawlowska, Westerman, Bergman, & Huelsman, 2014). In addition, extensive research has been conducted to correlate introversion with learning styles and the ways introverts process and share information (Ashraf, Fendler, & Shrikhande, 2014; Beukeboom, Tanis, & Vermeulen, 2012; Blau, & Barak, 2012; Dietrich, & Abbott, 2012; Linvill, 2014). Research has even been conducted to correlate personality and environment-fit (Grice, 2006; Oishi, Talhelm, & Lee, 2015; Pawlowska, Westerman, Bergman, & Huelsman, 2014). However, researchers seem to have paid little attention to introverts' voices concerning their experiences in the active learning classroom environment. Alavinia and Hassanlou (2014) recommend that researchers conduct a study such as this one.

Purpose Statement

The purpose of this transcendental phenomenological study was to describe the experiences of introverted undergraduate students in the active learning English classroom in a

community college setting in Florida. At this stage in the research, an introvert was generally defined as an individual who minimizes social contact, has a reflective thinking style, and seeks less stimulation from the external world (Davidson, Gillies & Pelletier, 2015; Gorla, Chiravuri, & Meso, 2013). The active learning classroom was generally defined as one in which classroom assignments, activities, and furniture arrangement are designed to maximize student-to-student and faculty-to-student interaction to foster a cooperative learning environment (Park & Choi, 2014). The theories guiding this study were (a) Eysenck's Personality Theory, which claims that extroverts prefer discovery learning, but introverts prefer reception learning (Eysenck, 1996); and (b) Experiential Learning Theory, which states that learning takes place from the individual's involvement in the learning process (Kolb, 1984; Kolb, 2014).

Significance of the Study

Multiple recent studies have been conducted concerning personality and active learning. Rothgeb (2013) found that long-term learning teams helped with lower level learning such as recalling facts, but they did not improve higher order thinking skills such as applying theories to real world events. One shortcoming of the Rothgeb (2013) study was that it did not account for personality differences within the team. According to Rodríguez-Montequín, Mesa-Fernández, Balsera, and García Nieto (2013), personality type is an important contributing factor for successful project-based learning.

Several recent studies also suggest a correlation between personality types and specific learning styles, as well as the way an individual's personality type determines modes of thinking and language use (Ashraf, Fendler, & Shrikhande, 2014; Beukeboom, Tanis, & Vermeulen, 2012; Blau, & Barak, 2012; Dietrich, & Abbott, 2012; Linvill, 2014). Without considering personality specifically, a 2012 study by Russ concluded that "reflective observation learning"

(p. 312) preference – a trait of introverted personalities (Eysenck, 1998) – suggested a strong correlation to communication anxiety and the assimilating learning style.

Other quantitative studies have been conducted to explore academic performance based on personality type and learning environment (Alavinia, & Hassanlou, 2014; Gorla, Chiravuri, & Meso, 2013; Lakhal, Sévigny, & Frenette, 2015; Oishi, Talhelm, & Lee, 2015; Pawlowska, Westerman, Bergman, & Huelsman, 2014). In addition, qualitative studies have explored the likes and dislikes adult students have for team and active learning (Jackson, Hickman, Power, Disler, Potgieter, Deek, & Davidson, 2014; Schmidt, 2015; Tse-Kian, Mai, & Wai-Jing, 2012).

This study is significant because it potentially adds to the literature by describing the experiences of introverted undergraduate students in the active learning classroom. The study is also meaningful because it extends the theories that make up the theoretical framework by connecting the participants' personalities to their learning experiences (Alavinia & Sameei, 2012; Alavinia & Hassanlou, 2014; Ashraf, Fendler, & Shrikhande, 2014; Blau & Barak, 2012; Eysenck, 1996; Gorla, Chiravuri, & Meso, 2013). This knowledge is beneficial for college and university admissions and administration officials to better match students with the learning environment that will optimize learning, retention, persistence, and graduation rates. It is also valuable to instructors who employ active learning techniques in their classrooms to better differentiate learning for all students in their classrooms. Finally, the study is significant because it potentially empowers introverted students by providing a voice concerning their experiences in the active learning classroom.

Research Questions

Qualitative research, generally, and phenomenology, specifically, seek to understand and describe humans' lived experiences (Van Manen, 1990) through telling the stories of those who

experience a phenomenon by the participants themselves. Therefore, the following research questions were chosen due to their importance in allowing introverted undergraduate students to describe their experiences in the active learning classroom environment:

1. How do introverted undergraduate students describe their experience in an English course structured with an active learning classroom environment?

   According to Moustakas (1994), who leaned upon the work of Descartes and Husserl, getting information from those who experience a phenomenon is the best way to understand the phenomenon itself. Van Manen (1990) suggests that it is important to gain this information without "pulveriz[ing] life into minute abstracted fragments and particles that are of little use to practitioners; … [it is instead important to have a] view of the experiential situation as the topos of real pedagogic acting" (p. 7). Since the purpose of this study was to describe the experiences of introverted undergraduate students in the active learning English classroom in a community college setting in Florida, asking them to describe that experience is essential to understand the phenomenon.

2. How do participants describe the academic atmosphere of the active learning classroom?

   Extroverts and introverts prefer to participate in classroom academic activities in different ways (Blau & Barak, 2012; Condon & Ruth-Sahd, 2013; Eysenck, 1965; Mall-Amiri & Nakhaie, 2013; Obenland, Munson, & Hutchinson, 2012). Extroverts are more reactive while introverts are more reflective (Blau & Barak, 2012; Condon & Ruth-Sahd, 2013). These tendencies mean that extroverts respond better to fast moving and spontaneous activities, but introverts need time

to reflect and focus on what is being taught (Persky, Henry, & Campbell, 2015). These predispositions also mean that the ways extroverts construct meaning – outwardly – and introverts construct meaning – inwardly – differ (Golaghaie & Sadghi, 2013). All of these differences and others suggest that extroverts and introverts would also perceive the academic atmosphere differently, so it was important for this study to learn introverts' perceptions.

3. How do participants describe the effect the active learning classroom environment has on their academic performance?

   Kolb's Experiential Learning Theory asserts that learning takes place when individuals interact with their environment (Kolb, 1984). When observed in combination with Eysenck's Personality Theory's postulation that personality is inborn rather than adaptable to one's environment (Eysenck (1947), it was important to determine if introverted students perceive the active learning classroom environment to be helpful, harmful, or neutral concerning their academic performance. Related to the environment in which students find themselves, this question is important considering the studies that suggest that personality-environment fit is vital for highest performance (Grice, 2006; Oishi, Talhelm, & Lee, 2015; Pawlowska, Westerman, Bergman, & Huelsman, 2014).

4. How do participants describe the social atmosphere of the active learning classroom?

   Extroverts and introverts gain energy in a social situation in different ways; extroverts gain energy from superficially interacting with many people and introverts can gain energy from genuinely engaging one or two trusted individuals

(Dembling, 2012). What extroverts find invigorating in a social situation, introverts find exhausting (Condon & Ruth-Sahd, 2013). In most active learning classroom situations, students of higher peer status, often because of higher social proficiency and social energy, tend to dominate activities (Asterhan & Eisenmann, 2011; Dow, 2013). Introverted students, on the other hand, rarely speak up in class and may tend to be ignored by the teacher and others (Condon & Ruth-Sahd, 2013; Dow, 2013). Introverted students often become those without a voice in a boisterous atmosphere. Since several researchers suggest that the active learning classroom environment benefits students' social interaction (Detlor, Booker, Serenko, & Julien, 2012; Falconer, 2016; Hajhosseini, Zandi, Hossein Shabanan, Madani, 2016; Handy & Polimeni, 2015), this question is important to understanding introverted students' perception of the social quality of their experience in the active learning classroom.

5. What benefits do participants describe from taking part in the active learning classroom?

   Recent studies, building on the work of earlier research, suggest several benefits of active learning, which include improved grades and other measures of course performance (Balch, 2014; Falconer, 2016; Khan & Madden, 2016; Lumpkin, Achen, & Dodd, 2015; Mennella, 2016; Stevenson & Gordon, 2014) and student engagement (Chan, Graham-Day, Ressa, Peters, & Konrad, 2014; Detlor, Booker, Serenko, & Julien, 2012; Hajhosseini, Zandi, Hossein Shabanan, Madani, 2016; Handy & Polimeni, 2015; Mennella, 2016). Additionally, social interaction (Detlor, Booker, Serenko, & Julien, 2012; Falconer, 2016; Hajhosseini, Zandi,

Hossein Shabanan, Madani, 2016; Handy & Polimeni, 2015), increased self-regulation (Cavanagh, Aragón, Chen, Couch, Durham, Bobrownicki, . . . Graham, 2016; Chan, Graham-Day, Ressa, Peters, & Konrad, 2014; Falconer, 2016; Hajhosseini, Zandi, Hossein Shabanan, Madani, 2016; Handy & Polimeni, 2015), critical thinking (Hajhosseini, Zandi, Hossein Shabanan, Madani, 2016; Handy & Polimeni, 2015), and memory improvement (Markant, Ruggeri, Gereckis, & Xu, 2016; Stevenson & Gordon, 2014) were reported benefits of an active academic environment. However, personality types were not considered in any of these studies, which made it doubly important to hear introverts' voices concerning academic gains or losses in the active academic atmosphere.

Definitions

There are several terms that were of interest related to this study, which are defined here. These terms may appear as constructs in the theories providing the framework for the study or they may be terms used in a unique way as a part of the study.

1. *Active Learning* – teaching method in which students play an active role in choosing educational activities, topics, and focus of educational inquiry; also known as student-centered learning (Lumpkin, Achen, & Dodd, 2015).
2. *Discovery learning* – teaching method in which students discover facts and theories for themselves (active learning, informal structure) (Eysenck, 1996)
3. *Extrovert* – individual whose brains are quick to inhibit them when aroused; therefore, they reach excitation saturation very slowly (Eysenck, 1996)
4. *Introvert* – individuals whose brains are slow to inhibit them when aroused, therefore, they reach excitation saturation very quickly (Eysenck, 1996)

5. *Learning* – assimilation of knowledge through concrete experience, reflection, abstract conceptualization, and active experimentation (Baker, Robinson, & Kolb, 2012; Kolb & Kolb, 2005)
6. *Learning space* – a mental space that a learner 'inhabits' that contains all of the psychological factors that influence the learner's behavior. The make-up of the space is primarily built from the learner's experiences (Kolb & Kolb, 2005)
7. *Reception learning* – teaching method in which students are provided with facts and theories (lecture, formal structure) (Eysenck, 1996)
8. *Self* – dynamic, continuous process of learning that is different for each person (Kolb, 2014)
9. *Traits* – observed patterns of individual tendencies (repeated responses to stimuli) (Eysenck, 1998)
10. *Type* – observed patterns of traits (define personality) (Eysenck, 1998)

Summary

Chapter One began with an introduction to the topic of personality study and active learning. In ancient times, personality traits and behaviors were believed to be controlled by spiritual forces until Hippocrates developed his theories about personality's natural source (Millon, 2012). Active learning has taken a primary and favored position in current pedagogy due to society's idealization of extroversion and priority going to collaborative teamwork (Cain, 2012), and because of the shift to student-centered autonomous learning (Baugher, 2013). The situation to self was presented. I am an introvert who has experienced the phenomenon presented in this study. The problem statement points out the lack of qualitative research from the introverted students' perspective concerning their experiences in the active learning

classroom. The purpose of this phenomenological study was to describe the experiences of introverted undergraduate students in the active learning English classroom. With these two facts in mind, the significance of the study is that it will potentially add to the literature concerning active learning and ideally close the gap in the literature concerning the experiences of introverted students as they have participated in the active learning classroom. Finally, research questions were discussed, which are designed to permit introverted undergraduate students in active learning English classrooms to describe their experiences.

CHAPTER TWO: LITERATURE REVIEW

Overview

This chapter begins with the theoretical framework that guides this study. Since the purpose of the study was to describe the experiences of introverted undergraduate students in the active learning English classroom in a community college setting in Florida, Eysenck's Personality Theory and Kolb's Experiential Learning Theory were chosen as the framework. The framework is followed by a focused review of the literature concerning introverted individuals participating in an active learning classroom environment. In addition to a detailed definition of active learning, an abridged explanation of general benefits to using active learning techniques, and a brief synopsis of personality characteristics for introverted individuals, several themes emerged from the literature. These themes include the Physical and Physiological Differences between introverts and extroverts, Psychological Costs paid by many introverts when in the active learning classroom environment, Preferred Methods of Participation for introverts, and Preferred Types of Learning Activities by introverts. Additionally, Information Processing differences between introverts and extroverts, as well as Knowledge Acquisition and Language Processing differences emerged as important factors when considering instructional techniques. The review of the literature brought to light a gap wherein researchers have not revealed the stories of these individuals from their own perspective.

Theoretical Framework

Eysenck's Personality Theory and Kolb's Experiential Learning Theory were used for the theoretical framework for this study. In brief, Eysenck's Personality Theory claims that one's personality (introversion or extroversion) traits are genetic, rather than environmental (Eysenck, 1947). Such a conclusion means that at times individuals can act like someone with the opposite

personality type but not change his or her natural personality tendencies. Kolb's Experiential Learning Theory suggests that individuals learn best from direct involvement in the learning process (Kolb, 1984). One can propose from combining these two theories that since personality is an innate characteristic of the individual, and the greatest amount of learning occurs when directly interacting with one's environment, then the learning environment must be adapted to those individuals for optimum learning to take place. The purpose of this transcendental phenomenological study was to describe the experiences of introverted undergraduate students in the active learning English classroom in a community college setting in Florida from their own perspective.

Eysenck's Personality Theory

Eysenck (1998) noted that Kraepelin's theory was the foundation for much of his work in developing his theory of personality. According to Eysenck (1998), Kraepelin posited a dichotomy of personality called manic depressive-dementia praecox, which helped Eysenck to develop his own theory of opposite pole-like personality types. Eysenck (1998) also noted that his two dichotomies, when combined (High E-High N, Low E-High N, etc.) were similar to the ancient Greeks Hippocrates' and Aelius Galenus' four humors: sanguine, melancholic, choleric, and phlegmatic. In addition, Eysenck (1998) acknowledged the work of Jung and many others as fundamental to his understanding of personality.

Eysenck (1947) postulated that one's personality type is genetically-based, rather than environmentally-based. Specifically, because of differences in ascending reticular pathways, introverts have a higher baseline level than do extroverts for cortical arousal (Eysenck, 1967), which means that extroverts generally are on a search for ways to raise their cortical arousal level through external stimulation (Forsman, de Manzano, Karabanov, Madison, & Ullén, 2012).

Introverts, on the other hand, find stimulation internally. In other words, extroverts restore their energy levels through social activities via interaction with others, while introverts restore energy levels through solitude and reflection alone. Specifically, introverts generally have a higher sensitivity to dopamine levels (Eysenck, 1967) than do extroverts. This need for continual arousal and lower sensitivity to dopamine levels may account for an extrovert's outgoing behaviors when in a large group of people and the fact that the same interactions quickly overwhelm most introverts.

An individual's personality is exhibited through specific behaviors called traits (habits), which are reactions to arousal (Eysenck, 1947). These traits are built in four levels: (a) specific behaviors that are individualized and not necessarily characteristic of the person's typical responses, (b) similar reactions to repeated stimuli, (c) typically visible traits (categories) of the repeated responses, and (d) general type (extrovert, introvert, neurotic, and stable) that typically appear together and define personality (Eysenck, 1947). Therefore, in general, Eysenck (1947) would describe extroverts as being outgoing, sociable, enthusiastic, and impulsive. This characterization may be responsible, at least in part, for why many researchers suggest that extroverts are happier than introverts. Forsman, de Manzano, Karabanov, Madison, and Ullén (2012) and Smillie, Cooper, Wilt, and Revelle (2012), among others have made this suggestion.

For the purposes of this study, Eysenck's Personality Theory specifically suggests that an individual's personality in inborn and does not adapt depending on the environment. Modern technology that allows researchers to observe brain activity confirms that gray matter volume in specific areas of the brain are positively correlated with various personality types (Forsman, de Manzano, Karabanov, Madison, & Ullén, 2012; Lu, Huo, Li, Chen, Liu, Wang, . . . Chen, 2014). Condon and Ruth-Sahd (2013) assert that introverts can exhibit extroverted tendencies in an

environment in which they feel the need to adapt; however, because of their genetic personality makeup, introverts actually become exhausted because they expend so much energy fighting their natural tendencies. If a student's personality and learning environment do not fit, the possibility exists that academic performance and learning could suffer.

Kolb's Experiential Learning Theory

Experiential Learning Theory (ELT) is a constructivist-based learning theory. Since constructivists believe that learning is the construction of knowledge, ELT suggests that learning takes place by testing one's current knowledge and assumptions, and either incorporating them into one's knowledge or creating new knowledge (Kolb, 1984). ELT originated in the work of Dewey and Piaget, who both expressed ideas about the experiential nature of learning. ELT is also based on constructivist theory that assumes that learners construct knowledge. According to Kolb (1984), when a person completes the testing process and works out conflicts between different ideas, learning happens. Learning requires the whole person and not just the mind, so experience (interaction with one's environment) is the best teacher because individuals learn from their involvement in the learning process. When combining Kolb's ELT with Eysenck's Personality Theory in the context of this study, one's genetically based personality determines the optimal environment in which the experiences promote maximum learning.

Specifically related to this study, Kolb (2005) introduces the idea of learning space. Learning space encapsulates physical, mental, and psychological factors in the learning environment that affect student behavior in the classroom (Kolb, 2005). Introverts possess certain broad psychological predispositions and exhibit specific general behavioral tendencies based on their personality type. Opposing factors such as "action [and] reflection and experiencing [and] conceptualizing" determine students' preferences for their position within the

learning space (Kolb, 2005, p. 200). When joined with Eysenck's Personality Theory and especially significant to the core of this study, Kolb's (2005) application of Experiential Learning Theory – learning spaces – suggests that the concept of person-environment fit tends to maximize individual academic performance (Akiba & Alkins, 2010; Pawlowska, Westerman, Bergman, & Huelsman, 2014).

Related Literature

When considering the existing literature, the problem relevant to this study is a dearth of qualitative research concerning introverted students' academic experiences in an active learning classroom environment, especially from their own perspective. The majority of the literature focuses on the extrovert and treats the introverted personality traits as an absence, lack, or negative opposite of extroverted traits. The IPIP-HEXACO tool measures traits researchers associate with extroversion – expressiveness, liveliness, sociability, and social boldness – with a positive score when these traits are present and a negative score when they are absent; one specific aspect of social boldness in the tool, comfort with public speaking, is rated positively for extroversion, but many introverts are adept at public speaking (Dembling, 2012). I can attest to this fact since I thrive when speaking publicly. According to Dembling (2012), public speaking is an area that allows me (and other introverts) an element of control in a public setting. The general focus of the literature adds to the significance of this study to provide greater emphasis on giving introverted undergraduate students a voice.

Rather than introversion being an absence or negative opposite of extroversion, introverts have their own personality traits that play a significant role in the classroom. Condon and Ruth-Sahd (2013) noted, "Introverted students differ from their more extroverted peers in terms of information processing, classroom behavior, and preferences regarding assignments and

activities" (p. 503). The following review of the literature defines active learning, reviews its benefits and costs, and addresses personality differences between students – particularly introversion vs. extroversion – and the active learning classroom environment. The review also reports on several themes that arose while examining the research conducted in these areas. They include the physical and physiological differences between introverts' and extroverts' brains and brain activity, psychological costs of participating and discomfort that may be felt by introverted students in the active learning classroom, introverts' preferred methods of participating, their preferred types of learning activities, and the ways that introverts process information, acquire knowledge, and process language that differ from extroverts.

Active Learning Definition

Active learning can be understood by contrasting it with its opposite, passive learning. Passive learning happens when someone besides the student, typically a teacher, takes the active role in imparting knowledge during the instructional session. It is for this reason that many educators use the terms 'active learning' and 'student-centered learning' interchangeably. However, there are some differences between the two.

In general, active learning is student-centered, but not all active learning activities can be defined using the student-centered label because the activities are created and directed by the teacher. In order to clearly draw the distinction between these two types of learning, the following definitions are offered. According to Collins and O'Brien (2003), editors of the Greenwood Dictionary of Education:

> [Active learning is] the process of having students engage in some activity that forces them to reflect upon ideas and upon how they are using those ideas. [It is also] requiring students to regularly assess their own degree of understanding and skill at handling

> concepts or problems in a particular discipline. [Additionally, active learning is] the attainment of knowledge by participating or contributing [and] the process of keeping students mentally, and often physically, active in their learning through activities that involve them in gathering information, thinking, and problem solving. (p. 5).

Specifically, strategies for ensuring students acquire necessary knowledge and skills shift from teacher activity in the classroom to student activity. In a personal interview with Dr. Christopher Stabile, Associate Vice Chancellor for Teaching and Learning at Keiser University, he stated that if a teacher is tired at the end of a teaching session, he or she has done too much work (personal communication, May 27, 2017). Dr. Stabile is an avid proponent of active learning techniques in the classroom and believes that students learn best when they put the most effort into the learning environment. In the active learning classroom, rather than instructor-centered activities such as lecture, lecture with discussion, demonstrations, or multimedia supplemented lessons presented by a teacher, students instead engage in "small-group work, computer-managed instruction, reciprocal learning, role playing, [and] integrated case teaching" (Waltz, Jenkins, & Han, 2014, p. 392).

The vast majority of the literature uses the terms student-centered learning or student-centered instruction interchangeably with active learning. However, the differences between the two are notable. As defined by Collins and O'Brien (2003):

> [Student-centered instruction is] an instructional approach in which students influence the content, the activities, the materials, and the pace of learning. This learning model places the student (learner) in the center of the learning process. The instructor provides students with opportunities to learn independently and from one another and coaches them in the skills they need to do so effectively. The SCI approach includes such

> techniques as substituting active learning experiences for lectures, assigning open-ended problems and problems requiring critical or creative thinking that cannot be solved by following text examples, involving students in simulations and role plays, and using self-paced and/or cooperative (team-based) learning. Properly implemented SCI can lead to increased motivation to learn, greater retention of knowledge, deeper understanding, and more positive attitudes toward the subject being taught. (pp. 351-352)

Notwithstanding the commentary on the positive effects of student-centered instruction at the end of the definition, one can observe that the activities in which students participate are the same as those in the active learning definition. However, in the student-centered approach, students are granted more power and autonomous action to determine what and how they learn. In reference to the effectiveness of active learning or student-centered learning, the literature yielded mixed results, in part, because different outcomes – student engagement versus grades – were studied (Waltz, Jenkins, & Han, 2014).

Active Learning Benefits and Costs

A large number of studies explored the benefits of active learning with regard to grades or other measures of course performance (Balch, 2014; Falconer, 2016; Khan & Madden, 2016; Lumpkin, Achen, & Dodd, 2015; Mennella, 2016; Stevenson & Gordon, 2014) and student engagement (Chan, Graham-Day, Ressa, Peters, & Konrad, 2014; Detlor, Booker, Serenko, & Julien, 2012; Hajhosseini, Zandi, Hossein Shabanan, Madani, 2016; Handy & Polimeni, 2015; Mennella, 2016). In general, the results for both outcomes were reported positively, but there were some notable negative outcomes reported.

Compared to a lecture-only control class, Balch (2014) found that including a demonstration assignment followed by a debriefing increased post-test scores. The

demonstration assignment consisted of students picking a partner, and one student would describe an abstract design while the other attempted to draw it; they were limited to verbal instructions – no hand motions. The demonstration assignment was followed by a debriefing lecture. Balch (2014) concluded that the demonstration assignment that augmented the lecture-enhanced student learning. Balch (2014) did find negative factors concerning this active learning supplement. The demonstrations took much more time to complete than lecture alone, and, more significantly, students were often less willing to spend time beyond the demonstrations on related reading assignments (Balch, 2014).

Khan and Madden (2016) also supplemented lecture with an active learning exercise in which students created their own quiz questions and answers immediately following the lecture. Students reported a higher preference for including these exercises and preferred taking ownership for writing their own quiz questions rather than responding to instructor created questions; in addition, Khan and Madden (2016) found self-reported increase in learning was an outcome of this study although they did not measure actual learning. According to Jackson, Hickman, Power, Disler, Potgieter, Deek, and Davidson (2014), being able to create these quizzes may be due to the fact that "[w]orking in groups provides opportunities for students to form learning partnerships with each other, to negotiate with peers to achieve an outcome, and provides an avenue for students to form networking and supportive relationships" (p. 117).

Additional improvements have been reported when accompanying lecture with active learning techniques. Primary improvements were student engagement (Khan & Madden, 2016; Mennella, 2016) and social interaction (Detlor, Booker, Serenko, & Julien, 2012; Falconer, 2016; Hajhosseini, Zandi, Hossein Shabanan, Madani, 2016; Handy & Polimeni, 2015). Additionally, use of active learning techniques increased self-regulation (Cavanagh, Aragón, Chen, Couch,

Durham, Bobrownicki, . . . Graham, 2016; Chan, Graham-Day, Ressa, Peters, & Konrad, 2014; Falconer, 2016; Hajhosseini, Zandi, Hossein Shabanan, Madani, 2016; Handy & Polimeni, 2015) and critical thinking (Hajhosseini, Zandi, Hossein Shabanan, Madani, 2016; Handy & Polimeni, 2015). Markant, Ruggeri, Gereckis, and Xu (2016) and Stevenson and Gordon (2014) reported memory improvements for student in their studies.

Interestingly, the literature seems to indicate that a combination of student-centered and instructor-led instruction yielded the best results concerning content mastery and grades (Minhas, Ghosh, & Swanzy, 2012; Nilsson, Pennbrant, Pilhammar, & Wenestam, 2010; Romm, Gordon-Messer, & Kosinski-Collins, 2010; Tanner & Allen, 2006). In particular, Nilsson, et al., found out that when instructors did not interject their knowledge into the learning situation, "students were mostly left alone to figure out how the knowledge transmitted, demonstrated, or experienced could be understood and made useful in other … situations" (p. 16). In other words, although the student-centered approach appeared to increase student engagement, instructor-led guidance was necessary to facilitate application and understanding.

In addition, Mennella (2016) found that when comparing the utilization of blended instructor-led and student-centered teaching techniques in the classroom versus the use of the flipped classroom approach, there was no benefit gained by the flipped classroom technique over the blended learning. As defined by Abeysekera and Dawson (2015), the flipped classroom is:

> A set of pedagogical approaches that move most information-transmission teaching out of class, use class time for learning activities that are active and social and require students to complete pre- and/or post-class activities to fully benefit from in-class work.

Mennella's (2016) results suggest that the location (in class or out of class) where students received the information transmission from the instructor was irrelevant as long as there was a combination of both the instructor-led and student-centered instruction.

An important finding was that a third ingredient was found to be necessary for maximum learning – the opportunity for students to reflect, which allowed for the "promot[ion] and direct reiteration of complex concepts" (Mennella, 2016, p. 478). Although Mennella (2016) did not differentiate students based on personality, this finding is especially relevant for introverted learners. Since introverts tend to be more reflective in nature than extroverts (Condon & Ruth-Sahd, 2013; Eysenck, 1965; Ulus & Alben, 2015), allotting time to reflect on what is being taught is an important element necessary for their learning. This would be especially true in the fast-paced and social environment of the active learning classroom.

Cavanagh, Aragón, Chen, Couch, Durham, Bobrownicki, and Graham (2016) found that active learning improved self-regulated learning and course performance with student "buy-in" (p. 7). Buy-in was defined as students' willingness to participate in the active learning classroom activities if they perceived them to be personally beneficial. According to Cavanagh, et al. (2016), buy-in occurred in four steps: students were exposed to active learning techniques; they were persuaded that these techniques are beneficial in general; they identified the fact that the activities would benefit them in some way (interest, entertainment, learning, etc.); and, finally, they committed to participation in these activities. In line with the findings of Welsh (2012), buy-in is more likely to occur when the instructor lets students know why the use of a particular active learning technique is important to student learning.

These findings are especially relevant to this study since many active learning classroom activities do not match introverts' preferred methods of participation or types of learning

activities or ways of processing information and language or approaches to acquiring knowledge, all discussed later in this chapter. A significant aspect of optimum learning is person-environment fit (Akiba & Alkins, 2010; Pawlowska, Westerman, Bergman, & Huelsman, 2014), which might play a central role in student buy-in concerning the use of active learning techniques. This study's intention was to allow introverts to tell their stories concerning the potential benefits or costs of active learning to them personally and academically in relation to the active learning classroom environment.

Personality Characteristics of Introverts and Extroverts

Not understood by many people, including educational and psychological researchers (Dembling, 2012), is that introversion is not a physical, mental, or emotional condition that needs to be cured or corrected. According to Dembling (2012), "Introversion is often treated as the space where extroversion is not" (p. 58). Researchers view extroverts as more sociable, behaviorally active, optimistic, and happy than introverts (Forsman, de Manzano, Karabanov, Madison, & Ullén, 2012; Smillie, Cooper, Wilt, & Revelle, 2012). While some of these assertions may have some validity, to say that introverts are not sociable, active, optimistic, or happy are mischaracterizations of their state of being. Introverts do not necessarily lack these qualities; they simply express the listed traits in a different way from extroverts. For example, an extrovert gains energy in a social situation from interacting with a large number of people on a shallow level, but introverts can gain energy in a social situation from engaging one or two trusted individuals on a deeper plane (Dembling, 2012). Introverted individuals are not anti-social; they generally have a few close friends rather than a large number of casual friends or acquaintances (Condon & Ruth-Sahd, 2013; Dembling, 2012).

In the classroom, teachers often view the quiet, aka introverted, student as being at-risk.

Murberg (2010) characterizes introversion and extroversion as "central dimension[s] of human personality" (p. 512) and goes on to assert that introversion is a risk factor for success in the classroom. This claim may be true when referring to the active learning classroom. According to Condon and Ruth-Sahd (2013), balancing teaching methods that are beneficial to both introverts and extroverts is an important differentiated teaching consideration. It is important to understand important characteristics of the introverted personality in relation to what students experience in the active learning classroom. According to Ulus and Alben (2015), silence in the classroom is interpreted as disengagement by many educators but "that silence can be used as a tool for reflection [by introverts], yet as educators we nevertheless come across comments that engagement ought to be seen and heard" (p. 4). This misunderstanding of some students' behaviors in the classroom may be directly related to the students' introverted personality type.

First, introverts tend to take in information and process it thoroughly before acting; for this reason, they can remain on task for an extended period (Condon & Ruth-Sahd, 2013). This reflective style by which introverts take more thought prior to taking action – speaking, writing, doing – rather than acting on impulse suits introverts for receptive tasks (Eysenck, 1965) such as "listening, reading, and structure" (Mall-Amiri, & Nakhaie, 2013, p. 28). Extroverts' general tendency toward an outward focus and sociability can inhibit their ability to concentrate for a long period of time (Eysenck, 1957). The inward focus representative of introverts' preference affects the way they readily gain information. When considering Collins' and O'Brien's (2003) definition of active learning – "the process of having students engage in some activity that forces them to reflect upon ideas and upon how they are using those ideas", introverts' reflective style should be considered a positive characteristic in the active learning classroom environment.

Second, and representative of the differences by which the two personality types gain

information, extroverts benefit from activities that involve “much talk, [social] action, and contact with others” (Blackford, 2010, p. 298). According to Eysenck (1965), “the typical extrovert does not like studying by himself and is generally an impulsive individual” (p. 59-60). Extroverts tend to process information as they are speaking about a particular topic. However, introverts generally draw their energy from “inner psychic activity” (Condon & Ruth-Sahd, 2013, p. 504). It is the inward focus that makes introverts “give weight to facts and ideas [that] explain and underlie what goes on in the world” (Blackford, 2010, p. 298). Introverts tend to process information internally prior to speaking about the topic (Pankratz & Zimenoff, 2014). These innate characteristics of both personality types may suggest that much of what occurs in the active learning classroom favors those of the extroverted personality type. While introverts are processing internally, extroverts are moving on to other topics.

Third, and related, introverts are introspective and sober in their thinking (Condon & Ruth-Sahd, 2013). These tendencies also mean that introverts often excel when communicating their ideas through writing (Condon & Ruth-Sahd, 2013). Given the opportunity to reflect and write out their thoughts, introverts can express credible thoughts and increase their visibility in academic environments (Pankratz & Zimenoff, 2014). This credibility and visibility can be revealed orally after having carefully reflected upon and writing their ideas ahead of time. Contrary to what many believe, many introverts do not dread public speaking much more than the average individual; given time to prepare ahead of the speaking occasion, introverts can do well speaking before large audiences (Dembling, 2012). According to Zack (2010), “Many introverts are more at ease in front of a group of people than roaming aimlessly through a cocktail party” (p.145). It is more a matter of control over the situation than it is the interaction with such a large group of people.

Fourth, introversion differs from shyness in that shy individuals have an irrational fear of social interaction, but introverts do not necessarily limit social interactions out of fear; they instead avoid it to conserve energy (Condon & Ruth-Sahd, 2013; Murberg, 2009). In the classroom, this avoidance may manifest itself as what others perceive as passivity (Murberg, 2009). Unlike Western culture, many Eastern cultures see characteristics associated with introversion, such as silence in public, "as connoting seriousness and depth" (Condon & Ruth-Sahd, 2013, p. 506). Furthermore, introverts are likely to be "more attentive and conscientious in certain receptive tasks like reading [and listening], … the types of tasks which need concentration" (Mall-Amiri, & Nakhaie, 2013, p. 28). The differences between extroverts and introverts often manifest themselves kinetically for extroverts and cerebrally for introverts. To the outside observer, these differences may appear, on the surface, as active for extroverts and passive for introverts when, in fact, they are both active but in distinct ways.

Fifth, since introverts are generally good listeners, when they are in social situations, they enjoy long, intellectually stimulating conversations with individuals that they trust (Condon & Ruth-Sahd, 2013). According to Dembling (2012), "Long, thoughtful conversations also require energy [just like moving quickly from one shallow conversation to another], but they replenish it, too" (p. 50). Extroverts will instead be seen speaking with many people either concurrently or consecutively. In the classroom – even in a group discussion – introverts may be viewed as passive, but they are likely listening closely and observing everything that is occurring. Introverts are often very observant and notice subtle nuances in many situations that others, especially extroverts, do not notice (Condon & Ruth-Sahd, 2013).

Physical and Physiological Differences between Introverts and Extroverts

As noted by Eysenk's Personality Theory, research has shown physical and physiological differences in the brains of introverts and extroverts (Eysenck, 1967; Forsman, de Manzano, Karabanov, Madison, & Ullén, 2012; Smillie, Cooper, Wilt, & Revelle, 2012). One of the most prominent differences accounts for the way in which extroverts and introverts gain energy. Extroverts have a low sensitivity to dopamine while introverts' sensitivity is very high (Eysenck, 1967; Forsman, de Manzano, Karabanov, Madison, & Ullén, 2012; Laney, 2002; Lu, Huo, Li, Chen, Liu, Wang, . . . Chen, 2014; Smillie, Cooper, & Pickering, 2011). The variation in dopamine sensitivity means that extroverts constantly seek out activities that stimulate and introverts seek out solitude. Introverts' high sensitivity to dopamine means that they quickly feel overwhelmed in social situations. Laney (2002) compares introverts to rechargeable batteries that need time alone to recharge, and extroverts can be compared to solar panels that need to be out in the world to regain their energy.

In addition, extroverts and introverts differ in "the regional volume [of] a number of gray and white matter regions" of their brains (Forsman, de Manzano, Karabanov, Madison, & Ullén, 2012, p. 65). These regions of the brain control the behavioral activation system (BAS) and the behavioral inhibition system (BIS) that determine whether an individual will tend to seek out a stimulating situation or tend to avoid it (Gray, 1991). Not surprisingly, extroverts have been found to typically have a strong BAS and a weak BIS, and introverts' BAS is weak and their BIS is strong (Forsman, de Manzano, Karabanov, Madison, & Ullén, 2012). In short, extroverts naturally thrive on social situations that kindle the production of dopamine. Introverts, conversely, are easily overwhelmed by an increase in dopamine because their baseline level is so much higher. Hence, they tend to withdraw from social situations quickly to reserve energy.

Besides brain structure differences, cerebral blood flow activity differs for introverts and extroverts. Suggested confirmation of the Eysenck (1967) theory that introverts and extroverts differ in their brain activity and the Forsman, de Manzano, Karabanov, Madison, & Ullén (2012) findings concerning differences in BAS and BIS is the Johnson, Wiebe, Gold, Andreasen, Hichwa, Watkins, and Boles-Ponto (1999) discovery that introverts show increased blood flow in the brain's frontal lobe versus extroverts. The anterior portion of the brain is associated with "remembering events from the past, making plans for the future, and problem solving [and] 'self-talk'"(Johnson, et al, 1999, p. 255).

Another physiological difference between introverts and extroverts to consider is a physical condition experienced by more introverts than extroverts called "primary muscle tension dysphonia" (Dietrich & Abbott, 2012, p. 973). When faced with an impromptu public speaking situation, the larynx muscles undergo strain that makes it difficult for one to be heard. In a spontaneous, small or large group discussion, the inability to be heard means that introverts' input, should they choose to participate in the discussion, would be drowned out in favor of extroverts who do not experience this phenomenon to the same degree.

Psychological Costs/Discomfort for Introverts in Active Learning

The environmental factors associated with active learning classrooms – noise, gregariousness, bustling activity, and team assignments (Park & Choi, 2014) – are all features that tend to favor extroverts rather than introverts. This has been previously suggested by the differences in dopamine sensitivity and brain matter, among other characteristics. Classroom design features that "maximize educational impact and [provide] an educational environment that encourage students' active participation in the learning experience" (Park & Choi, 2014) are built into the active learning classroom. According to Von Gehlen and Sachse (2015), their

distraction study "suggests that extroverts can be very productive in a noisy and busy environment, whereas introverts may need a quiet working environment to be able to focus" (p. 609). Students who naturally prefer a more noisy (including background noise) and socially interactive setting – extroverts – gain energy from the active learning classroom and perform at a higher level (Cassidy & MacDonald, 2007; Oishi, Talhelm, & Lee, 2015). Related to the environment associated with the active learning classroom, Palin (2014) make the following observation about library and learning commons spaces:

> For tasks requiring concentration, such as reading and problem solving, the social and active nature of a learning commons could be distracting. And for the more introverted student, a loud and busy room might seem uninviting. For these reasons, library design should take into consideration different types of work and different personality types. (p. 17)

While Palin (2014) wrote these words concerning library spaces, the ideas directly relate to the active learning classroom environment and the bustle of activities that would typically be found there.

Forsman, de Manzano, Karabanov, Madison, & Ullén (2012) found that introverts' brains had a higher volume of gray matter "in the frontal, parietal, and temporal lobes of the right hemisphere" (p. 65). These regions of the brain are associated with social withdrawal, negative emotions, and loner rather than communal preferences (Forsman, et al., 2012). The Johnson, et al. (1999) findings of increased blood flow in the frontal lobes of introverts further suggest a correlation between decreased BAS (attraction to social activity) and increased BIS (avoidance of social activity). This physical difference in brain structure may be responsible for psychological discomfort introverts feel when placed in a socially active learning environment.

The difference in brain structure between introverts and extroverts suggests a validation of Eysenck's theory that temperament is natural and inborn rather than a learned or adapted behavior or environmentally driven.

Taking a contrary position, Zelenski, Santoro, and Whelan (2012) suggest that introverted individuals actually profit from acting counter to their natural disposition. In other words, they suggest that introverts derive a benefit from acting extroverted. In their study's findings, Zelenski, et al. (2012) suggest that introverts paid no emotional or cognitive costs for acting extroverted. However, even they temper their results:

> [A]lthough everyone seems to benefit hedonically 'in the moment' when acting extraverted, it is possible that mood costs that are not apparent in the lab occur after more time has elapsed. That is, rather than co-occurring positive and negative affect (i.e. stressful exuberance) addressed in these studies, it is possible that behaving counterdispositionally leads to tiredness later … acting counterdispositionally can feel good in the moment, people later feel exhausted and require 'restorative niches' to recuperate. (p. 300)

This counter-dispositional behavior may, in part, be a strategy employed by introverts to "provide them with a buffer in their relationships" with those with whom they must interact in the active learning classroom (Seger-Guttman & Medler-Liraz, 2015, p. 16). However, this "chameleon behavior [may burn out many introverts], [eventually] shutting down communications" (Pankratz & Zimenoff, 2014, p. 76).

In fact, lower dopamine levels, which have been associated with introversion (Eysenck, 1967; Forsman, de Manzano, Karabanov, Madison, & Ullén, 2012; Laney, 2002; Lu, Huo, Li, Chen, Liu, Wang, . . . Chen, 2014; Smillie, Cooper, & Pickering, 2011) may account for

introverts' lower level of performance when distracted by noise (Von Gehlen & Sachse, 2015). Extroverts gain energy, in part, through the increased levels of dopamine, which enables them to concentrate more in a noisy environment. Given the same conditions, introverts are generally unable to focus as well. Furthermore, Condon and Ruth-Sahd (2013) report that "Introverts sometimes try so hard to appear more extroverted that they exhaust themselves" (p. 503). This exhaustion happens even if the introverted student has well developed social skills (Murberg, 2010), and it is not only physical but psychological as well.

Individuals who achieve person-environment fit are found to achieve at a higher level than those who do not (Akiba & Alkins, 2010; Pawlowska, Westerman, Bergman, & Huelsman, 2014). For introverted students, who may be less likely to achieve person-environment fit in an active learning classroom, there are certain "psychological costs [due to] academic stress" (Marilou, 2010) that must be considered. According to Marilou (2010), "Requiring shy or introverted students to verbally contribute to discussions in classes, seminars, tutorials, or other face-to-face venues may result in substantial social anxiety" (p. 30). Dietrich and Abbott (2012) report that normally healthy introverts often experience "primary muscle tension dysphonia" (p. 973) – a common voice disorder causing extra tension in the laryngeal muscles (Dietrich & Abbott, 2012) – when speaking publicly, which necessitates increased effort to be heard. Mentioned earlier as a physiological difference between introverts and extroverts, primary muscle tension dysphonia adds to the psychological costs that introverts often pay in the active learning environment.

Perkan and Sonyel (2014) express introverts' intimidation when in the active classroom environment in the form of metaphors. In one such metaphor, an introverted student expressed his feelings as being "like a lonely person in a crowd who had difficulty expressing myself

because I prefer to be alone and not speak a lot" (Perkan & Sonyel, 2014, p. 219). Introverted students also tend to be intimidated by the more extroverted students because they are more forceful in social interactions (Marilou, 2010; Persky, Henry, & Campbell, 2015). These more reserved students must then determine if the price is too high to attain a college education (Marilou, 2010).

Preferred Methods of Participation for Introverts

Introverts are generally more reflective than extroverts, so they prefer to think before speaking, while extroverts typically think while speaking (Blau & Barak, 2012; Condon & Ruth-Sahd, 2013). Introverts, given the choice, often will remain silent during a lively discussion in the active learning classroom. According to Obenland, Munson, and Hutchinson (2012), that does not automatically mean that they are not learning or benefitting from the discussion. Because of their reflective natures, introverted students are processing the information prior to shouting out the answers rather than processing the information as they are shouting out the answers. Students who are more likely to remain silent (these may not be all introverts) when the teacher engages the class with Socratic-style questioning are still thinking of answers to the questions and are still learning in the process even though they may not respond verbally (Obenland, Munson, & Hutchinson, 2012).

Introverts' reflective style accounts for their higher listening skills as compared to extroverts (Mall-Amiri & Nakhaie, 2013). Listening is a receptive skill, which, according to Eysenck (1965) is particularly well suited for introverts because of their "reflective and thoughtful personality type" (p. 59). In addition, Eysenck (1965) notes that "the typical extrovert does not like studying by himself and is generally [an] impulsive individual" (p. 60). In a typical active learning classroom with open discussion, the introverts are likely to be listening

(reflective) while the extroverts are speaking (impulsive) – each participating in his or her own preferred way. To the uninformed, these actions may indicate low engagement and less learning on the part of the introverts and high engagement and more learning from the extroverts. However, these opposite actions simply indicate different preferences and tendencies by extroverts and introverts and suggests that teaching methods should be used to take advantage of these tendencies.

One such teaching method embraces the use of technology in the classroom. Sawang, O'Connor, and Ali (2017) studied the use of keypads – a type of electronic response device – in the classroom related to personality type and found that introverts, much more so than extroverts, felt that they could be more engaged in the classroom discussion using keypads. In fact, Sawang, O'Connor, and Ali (2017) found a positive correlation between introversion and the actual use of the keypads, which they hypothesized was due to the more reflective nature of using the keypads as compared to oral responses preferred by extroverts. Before pressing a key to respond to a question, introverts were able to reflect on their answers. The nature of this activity suggests a leveling of the playing field in relation to responding to multiple-choice questions or those requiring lower level answers in the classroom.

Similarly, according to Latham and Hill (2014), utilizing means, such as electronic response systems, to allow students to remain anonymous when responding increases the chances that these silent students will respond to the questions posed. In addition to allowing time for introverted students to reflect, the anonymity may reduce the social stress of blurting out answers. Related to introverted students' tendency to be intimidated by their extroverted counterparts, electronic response systems also reduce the perceived need for conformity with the answers of the majority, or most vocal students (Stowell, Oldham, & Bennett, 2010). The

anonymity gained through electronic response devices allow introverts to ‘speak’ their own minds with less intimidation. Moreover, Blau and Barak (2012) report that “introverts expressed greater readiness to partake in discussions via text chat compared to extroverts” (p. 21). This fact likely is related to introverts’ more reflective nature (Blau & Barak, 2012) and their intimidation when dealing with the vocal nature of the active learning classroom (Stowell, Oldham & Bennett, 2010).

McFarlane (2016) asserts that “the distinction often drawn between ‘passive’ as opposed to ‘active’ learning has become an over-simplified dualism that has led to the vilification of introverted students who prefer to study in an undemonstrative manner, often on their own and in silence” (p. 4). Much like Cain (2012), McFarlane (2016) points out the way that the focus on extraversion as an ideal personality trait discounts the unique ways that introverts and extroverts alike prefer to participate and, in fact, learn best. McFarlane (2016) goes on to say:

> Students must expend their energies being compliant and potentially fake certain prescribed attitudes or values. Such demands have nothing to do with the core purpose of a real higher education, which should be about learning and interrogating claims to knowledge and truth in an environment that promotes freedom and personal autonomy. (p. 5)

In effect, introverts may be forced to expend energy on the social exchange in the active learning classroom, redirecting energy that could have been used on the cognitive activities associated with problem solving and critical thinking.

Preferred Types of Learning Activities for Introverts

A one-type-fits-all learning environment tends to lead to placing the blame on the learner for failure to learn, rather than the environment in which they learn (Akiba & Alkins, 2010).

However, differentiated instruction, when utilized properly, adjusts the learning environment to fit the learner (Parsons, Dodman, & Burrowbridge, 2013) and gives every learner the opportunity to learn (Akiba & Alkins, 2010). Extroverts generally thrive with "highly collaborative learning experiences, [while] introverts prefer less interaction" (S. Jackson, 2014, p. 467). With these differences in mind, Alhathli, Masthoff, and Siddharthan (2016) created seven learning scenarios, four of which were considered active and social. The other three were considered individual learning scenarios. Their findings showed a strong positive correlation between extroverts' preference to the active and social activities while the introverts greatly preferred the individual scenarios (Alhathli, Masthoff, & Siddharthan, 2016). This finding corresponds to Eysenck (1967), which indicates that introverts' resting cortical activity lies at a higher level than does extroverts, so introverts reach saturation level much quicker. These observations suggest the probability that active learning classrooms may be detrimental to introverts' academic achievement.

Any learning activity that provides "time for individual focus and reflection, … favors introverted personalities" (Persky, Henry, & Campbell, 2015). In a 2014 study conducted by Ashraf, Fendler, and Shrikhande, they report that introverted students are significantly more likely to be reflective rather than active learners. Self-monitoring, the ability to regulate behavior according to the social situation in which one finds oneself (Cain, 2012), is generally high for extroverts but low for introverts (Golaghaei & Sadighi, 2013). Even those introverts with high self-monitoring ability – being "particularly sensitive to the expression and self-presentation of others in social situations and [being able to use] these cues as guidelines for monitoring and managing his own self-presentation and expressive behavior – require more

energy to interact socially. These facts – reflective preference and low self-monitoring – provide the rationale for introverts' preference for less active learning activities.

Introverts also make a distinction between gaining knowledge and having information about a particular topic (Condon & Ruth-Sahd, 2013). Learning bits of information with no connection to other information is not desirable. Gaining knowledge means that introverts are able to connect pieces of a puzzle together to create a bigger picture and provide applicability. To this end, introverts prefer in-class assignments that connect previously learned concepts to the new ones being taught (Condon & Ruth-Sahd, 2013). To fully make this connection, introverts require time to reflect on how the new information fits into the previously learned information. Once that connection is made, introverts are then able to efficiently process and assimilate the information.

Information Processing by Introverts

Introverts are typically considered task-oriented rather than people-oriented (Harrington & Loffredo, 2010). Schmidt (2014) suggests that this typical orientation away from people may be due to prenatal exposure to testosterone, which would provide another confirmation that personality is inborn as suggested by Eysenck (1947). This orientation affects the way that introverts process information. Introverts construct meaning by looking inward (reflection), while extroverts do so by looking outward (impulse) (Golaghaei & Sadighi, 2013). Introverts typically "sit back and consider information before they make decisions and act or speak" (Kuofie, Stephens-Craig, & Dool, 2015). On the other hand, extroverts tend to speak first and process information as they are speaking (Cain, 2012).

According to Gorla, Chiravuri, and Meso (2013), in their study of business software development, introverts were much more likely to understand requirements utilizing decision

tables than were extroverts even though it took more time for them to answer. Extroverts also required significantly more time to comprehend structured English instructions than the introverts in the study (Gorla, Chiravuri, & Meso, 2013). Introverts' preference to process completely before acting and to work by themselves rather than in groups (Kuofie, Stephens-Craig, & Dool, 2015) puts them at a disadvantage in the active learning classroom.

The time factor is important when considering introverts' ability to adequately process information for decision-making or knowledge acquisition and application. According to Van Kleef, De Drue, and Manstead (2004), time pressure reduces one's "motivation to process information and increases the reliance on inadequate decision heuristics" (p. 516). Based on introverts' tendency to be more reflective in their thinking process, the fast-paced nature of the active learning classroom suggests that introverts could be at a disadvantage. Since "time pressure intensifies the tendency to seek cognitive closure" (Van Kleef, De Dreu, & Manstead, 2004, p. 516), a reflective thinker may try to eliminate ambiguity from a situation through expedient and often irrational methods.

Knowledge Acquisition by Introverts

Related to information processing, personality types also affect the ways in which individuals approach knowledge acquisition (Akhavan, Dehghani, Rajabpour, & Pezeshkan, 2016). Whether on the job or in the classroom, people must know certain information in order to succeed. Introverts and extroverts are more likely to excel in knowledge acquisition (KA) techniques that match their aversion to or animosity for social interaction or spontaneity (Akhavan, Dehghani, Rajabpour, & Pezeshkan, 2016). In their 2016 study, Akhavan, Dehghani, Rajabpour, and Pezeshkan found that extroverts were drawn to interviews, scenarios, commentaries, and limited-information and constrained-processing tasks. The first three require

social interaction and the fourth leaves little time for reflective thinking. Conversely, introverts preferred critical decision method, laddering, concept sorting, and mapping (Akhavan, Dehghani, Rajabpour, & Pezeshkan, 2016). All of these techniques can be completed with little social interaction and allow time for reflective thought.

Similarly, in an earlier study, Furnham, Chamorro-Premuzic, and McDougall (2003) found that introverts held an advantage over extroverts concerning knowledge acquisition when they were allowed individual study time. However, seminar classes gave extroverts the edge because they were "clearly more comfortable for extroverts" (Furnham, Chamorro-Premuzic, & McDougall, 2003, p. 62). Giving introverts time to reflect and extroverts time to socialize in line with their natural proclivities allowed them to maximize their levels of knowledge acquisition

Returning to the time theme, a 1987 study by Burton, Shadbolt, Hedgecock, and Rugg, in which they studied various knowledge acquisition techniques, found that when trying to elicit information from subject matter experts (SME) through the use of interviews, time is an important factor. Of particular note is that when interviewing introverts, the interviews take much longer than those of extroverts, but the interviewer generally gains more knowledge from an introverted SME than from an extroverted one (Akhavan & Dehghani, 2015; Akhavan, Dehghani, Rajabpour, & Pezeshkhan, 2016). Although introverts prefer laddering techniques to acquire knowledge (Akhavan, Dehghani, Rajabpour, & Pezeshkhan, 2016), their reflective nature means that when solicited for information, they will take more time but provide more in-depth information than do extroverts.

Laddering techniques involve the "creation, revision and validation of hierarchical knowledge … often in the form of a ladder due to its hierarchical nature" (Akhavan, Dehghani, Rajabpour, & Pezeshkhan, 2016, p. 197). Laddering allows introverts to reflect at each 'rung' on

the ladder concerning the knowledge that has been added. According to Dehghani and Akhavan (2017), introverts express a preference for laddering because it "has the greatest ability to acquire precise and comprehensive knowledge because it is easy to validate the acquired knowledge" (p. 500). Extroverts, on the other hand, prefer unstructured interviews (Akhavan & Dehghani, 2015; Akhavan, Dehghani, Rajabpour, & Pezeshkhan, 2016; Dehghani & Akhavan, 2017) presumably because of the socialization aspect involved. Laddering, by contrast, can involve interviewing, but it is more structured in nature and is focused on the procedure (task orientation) rather than the personal interaction.

Language Processing by Introverts

The way in which an individual processes information may be, in part, due to the way he or she processes language. Furthermore, for students learning a language other than their native language, "extroversion/introversion is regarded to be one of the most important factors affecting" how well they learn the new language (Golaghaei & Sadighi, 2013, p. 104). According to Renner, Gaball, and Ramalingam (2014), "Extroverts rather than Introverts used 'socio-affective' strategies in language learning" (p. 181). Introverts have been found to possess a higher listening ability (Alavinia & Sameei, 2012), while extroverts have advantages when actually using the language due to their sociability (Alavinia & Hassanlou, 2014; Zafar & Meenakshi, 2012).

In line with the findings above, a study conducted by Kayaoglu (2013) found that introverts used "goal oriented specific behaviors and mental operations [for language processing, but] extroverts used more interpersonal communication strategies" (p. 823). However, in contrast to those viewpoints, Kayaoglu (2013) suggests that introverts can learn languages as well as extroverts; they just learn it in a different way. In certain cultures, "Japan and Turkey

[for instance], communication includes body language and silence [and is] not limited to simple conversational communication" (p. 823). Introverts and extroverts are both successful at language processing, but the techniques they employ are in line with their preferences – internal and individual processing or external and social processing.

Beyond strategies utilized to learn a new language, introverts and extroverts use their native language in different ways; introverts typically use more concrete language, while extroverts' use of language is more abstract (Beukeboom, Tanis, & Vermeulen, 2012). For example, given the same scenario, introverts typically describe visible, objective details, and extroverts usually give a more "interpretive account [and] describe things that are not directly visible" (Beukeboom, Tanis, & Vermeulen, 2012, p. 192). The way language is used goes beyond how colorful stories are told; it also affects the way that introverts and extroverts understand instructions (Beukeboom, Tanis, & Vermeulen, 2012; Renner, Gaball, & Ramalingam, 2014).

Using a metaphor to express how introverted students feel when processing language, Perkan and Sonyel (2014) express that, for introverts, it is "like being a Turk in a French speaking group because I was silent in general [because] while everyone felt free to express themselves, I didn't because of my introvert personality" (p. 219). Although all of the students in the classroom may be speaking the same language, the way they process the words, concretely or abstractly, can lead to misunderstandings. The frustrations felt by both introverts and extroverts tend to lead the introverts to shut down and the extroverts to press the issue. These differences can spiral out of control as introverts withdraw even further as extroverts push more, trying to get the introverts to express themselves.

Summary

The theoretical framework for this study relies on Eysenck's personality theory that suggests that personality traits are inborn, rather than influenced by environment. Individuals can act against their natural tendencies for a short period of time but at some personal cost physically and psychologically. In addition, Kolb's ELT provides the foundational idea that students learn best when their learning environment best matches their personality. There are documented benefits academically to the use of active learning techniques for all students but only when they perceive that the process will be personally beneficial to them in some way. The observed differences between introverts and extroverts in the way they process language and information may put introverts at a disadvantage in the extrovert favoring active learning classroom.

Additionally, introverts' preference for learning activities that allow them to act in a reflective and anonymous manner, even when participating in group activities, potentially puts them out of step during a typical active learning classroom session. These differences may be explained by the physical and physiological differences between introverts' and extroverts' brains and brain activity. The physical and physiological differences between introverts and extroverts may, at least in part, explain the differences in their preferences for differing methods of participation, types of learning activities, ways they acquire knowledge, and ways they process information and language. Finally, the psychological costs of participating and discomfort felt by introverted students in the active learning classroom may affect their academic performance long term. Those costs may ultimately cause them to avoid the pursuit of higher education.

The content and context of the information provided in this chapter should not be perceived as a jeremiad – a long, mournful lament – concerning the plight of introverts in the active learning classroom. Instead, all of the factors reported herein have been studied individually but have not been coalesced to study their effects on introverts' academic performance from the students' perspective. This study's intent was to fill the gap in the literature by allowing introverted students to tell their story.

CHAPTER THREE: METHODS

Overview

This chapter begins with a brief description of the research design – transcendental phenomenology. The research design is the foundation for the research questions also listed in this chapter, which are designed to provide data concerning introverted undergraduate students' experiences in the active learning English classroom. Following the list of research questions is a brief description of the site of the study and the individuals who participated in the study. Next, the study's procedures are described, along with the researcher's role in relation to the site and the study's participants. Data collection and analysis methods are then clarified. Finally, techniques for trustworthiness of the study are explained and ethical concerns are taken into consideration and solutions are provided.

Design

The research design is an important element to consider in order to meet the research goals. For this study, qualitative research was chosen as the appropriate method and, specifically, transcendental phenomenology was selected to reach the study's goals.

Qualitative Research Design

The study was qualitative in nature because the purpose is to describe the experiences of introverted undergraduate students in the active learning English classroom. In citing Denzin and Lincoln (2011), Creswell (2013) provides a basic definition of qualitative research that reads, in part, "qualitative researchers … [attempt] to make sense of, or interpret, phenomena in terms of the meanings people bring to them" (p. 44). It is for this reason that this study utilized the qualitative approach – to allow introverted undergraduate students to tell their stories and provide the meanings they have brought to this phenomenon.

According to Sallee and Flood (2012), it is important for qualitative research to bridge the gap between theory and practice. In particular, they cite Cochran-Smith and Lytle (1990) in pointing out that the "teachers' voices are missing in research and, therefore, knowledge produced is neither useful nor applicable to teachers' daily experiences" (Sallee & Flood, 2012, p. 137). It can be argued that including the students' voices would provide as much or more applicable knowledge for teachers to use in their daily experiences in the classroom.

Phenomenology

According to Husserl and Kersten (1980), the phenomenological approach is the proper method for describing the experiences of those who have lived through a particular phenomenon. It is the stories of those who have experienced the phenomenon in question that are most important and help others to understand those experiences. Hermeneutical and transcendental phenomenology are the two basic types that can be employed. The former allows the researcher to experience the phenomenon along with the participants while with the latter the researcher attempts to allow the participants to tell their own stories. According to Creswell (2013), the difference lies in the focus of the description of the phenomenon – the "interpretations of the researcher [versus] a description of the experiences of participants" (p. 80).

Hermeneutical is one type of phenomenology in which the researcher experiences the phenomenon "from the inside" (Van Manen, 1990, p. 8). In fact, Van Manen (1990) argues that one cannot truly understand the phenomenon except through personal experience. The idea is that the phenomenon cannot be separated from those who experience it; therefore, one must become a part of the phenomenon to fully grasp it (Laverty, 2003). Actually living the experience allows one to interpret the phenomenon by feeling what it is like to undergo it (Van Manen, 1990).

The argument against hermeneutical phenomenology is that one must be removed from the phenomenon – no judgments or preconceived notions from prior experience – in order to be able to see an unbiased view of it (Laverty, 2003). Transcendental phenomenology relies heavily on the concept of intentionality (Moustakas, 1994), which refers to "the internal experience of being conscious of something" (Moustakas, 1994, p. 27). As a researcher who desires to understand a phenomenon, separating one's self from the experience – any biased concerning it or prior experience with it – one can allow those who have experienced the phenomenon to describe their intentionality toward it in their own words.

Specifically, transcendental phenomenology was utilized for this study to describe the shared experience of the study's participants without interpretation, which requires bracketing of the researcher's experiences related to the study (Creswell, 2013, Moustakas, 1994). According to Moustakas (1994), bracketing, known as Epoche, allows the researcher:

> to launch the study as far as possible free of preconceptions, beliefs, and knowledge of the phenomenon from prior experience and professional studies – to be completely open, receptive, and naïve in listening to and hearing research participants describe their experience of the phenomenon being investigated. (p. 21).

This openness and receptiveness on my part was important for this study because I am an introvert who has experienced the active learning classroom. Without undergoing the Epoche process, there is the danger of my own experience overshadowing the experiences of the study's participants. It is vital that the participants' stories be told rather than my own in order for me to see the phenomenon clearly and for others to fully understand the shared experience of introverted undergraduate students in the active learning classroom environment.

Rationalization

Introverted students are often "invisible" (Dow, 2013, p. 2), and "perplexing and frustrating" to teachers because of their silence (Condon & Ruth-Sahd, 2013, p. 503). Therefore, this study aimed to describe the shared experiences (Creswell, 2013; Moustakas, 1994) of introverted students in university undergraduate active learning English classrooms. Hence, the phenomenological approach is the most appropriate choice (Creswell, 2013; Moustakas, 1994). Specifically, transcendental phenomenology was utilized to describe the shared experience without interpretation, which required bracketing my personal experience and beliefs as an introvert who has participated as a student and instructor in active learning exercises (Creswell, 2013; Moustakas, 1994).

Among others, Alavinia and Hassanlou (2014) conducted a correlational study concerning introverts and their academic performance. The findings of their study found no correlation between personality type and their academic performance on three types of essays (Alavinia & Hassanlou, 2014). Other studies' findings were mixed when examining various types of academic performance (Gorla, Chiravuri, & Meso, 2013; Lakhal, Sévigny, & Frenette, 2015; Pawlowska, Westerman, Bergman, & Huelsman, 2014).

Alavinia and Hassanlou (2014) specifically noted that their study did not test the environment in which the participants of their study learned, and they suggested that further research should be conducted to test personality-environment fit. There have been some quantitative studies that have tested proper fit for those with varying personality types (Oishi, Talhelm, & Lee, 2015; Pawlowska, Westerman, Bergman, & Huelsman, 2014). However, there exists a gap in the literature relating to introverted undergraduate students experiences in the active learning classroom. The lack of attention paid to describing introverted undergraduate

students' experiences in the active learning classroom presented the opportunity for this study to fill that gap.

Research Questions

The following research questions framed this study:

1. How do introverted undergraduate students describe their experience in an English course structured with an active learning classroom environment?
2. How do participants describe the academic atmosphere of the active learning classroom?
3. How do participants describe the effect the active learning classroom environment has on their academic performance?
4. How do participants describe the social atmosphere of the active learning classroom?
5. What benefits do participants describe from taking part in the active learning classroom?

Site

The site was State College (a pseudonym) with approximately 7,500 undergraduate students (39% male, 61% female; 66% White non-Hispanic, 14% Black non-Hispanic, 12% Hispanic, 8% Other; average age 25 with 18-24 years making up 62%) on three campuses who are all required to take English Composition I and II as part of their degree programs. This site was chosen because of the potential number of students who are typically enrolled in English courses – English Composition I and II, and other English courses – that are taught utilizing active learning techniques.

State College, a community college with approximately 7,500 undergraduate students of

diverse backgrounds, provided an excellent setting for this study. Participants were introverted students, chosen from among those enrolled in English Composition I and II whose instructors create an active learning environment in their classrooms. Data were collected utilizing several techniques – interviewing, cognitive representations, and online non-synchronous focus groups. Data analysis consisted of first horizonalizing the data, then organized into categories or themes, which was then developed into textural and then structural descriptions (Moustakas, 1994).

Participants

The participants for this study were introverted undergraduate students who were enrolled in active learning English classrooms. Purposeful sampling was used based on specific criteria. According to Suri (2011), purposeful sampling provides access to "information-rich cases" (p. 67) and raises the "likelihood of reaching data saturation" (p. 72). In other words, according to Coyne (1997), the researcher selects the sample "purposefully to fit the study" (p. 627).

The criteria for the study were related to the participants, classroom setting, and sample size. Participants were identified as introverted using a score of 15-30 – Clear to Very Clear introvert – on the Myers-Briggs Type Indicator. Active learning classroom activities were identified based on the Active Learning Inventory Tool (Van Amburgh, Devlin, Kirwin, & Qualters, 2007). In order to achieve maximum variation in the sample, 10 participants were chosen based on variation in gender and ethnicity. The intent was to closely match the characteristics of the student population in age and gender. Therefore, six participants were 24 years of age or younger, and four were older. Six participants were female and four were male. Various ethnicities were nearly equally represented.

Procedures

Institutional Review Board (IRB) approval from both Liberty University and State College was obtained prior to collecting data (APPENDIX A). Following IRB approval from both institutions, I gave recruitment letters (APPENDIX B) to teachers to distribute to their students. The students who were selected for participation were provided a consent form (APPENDIX C), which were returned prior to conducting the semi-structured interviews. Data were then collected using semi-structured interviews, cognitive representations, and online non-synchronous focus groups. The study focused on describing introverted undergraduate students in the active learning English classroom. Data analysis followed the modification of the Van Kaam method outlined in Moustakas (1994). This method began with horizonalization (Moustakas, 1994) of the statements made by participants relevant to their experiences in the active learning classroom. Next, data were arranged around meanings of the statements, and descriptions were developed to describe the essence of the participants' experiences. Epoche was utilized as a part of the data collection and analysis steps to reduce researcher bias.

The Researcher's Role

I was an associate dean at a multi-campus private university and now serve as the Writing Studio Coordinator for that same university. I also teach online for one of the three State College campuses. I am also an introvert who utilizes some active learning teaching methods in the classroom. One reason for this practice is that the expectation has been communicated from college administrators. Another reason is that personal research has revealed that even introverts can benefit from specific active learning techniques (Akiba & Alkins, 2010; Condon & Ruth-Sahd, 2013; Davidson, Gillies, & Pelletier, 2015; Dow, 2013; Jackson, Hickman, Power, Disler, Potgieter, Deek, & Davidson, 2014). Being an introvert myself, and believing in the concept of

differentiated instruction, I work to use active learning techniques that will engage extroverts but also help introverts to raise their academic performance level.

My own experiences in active classroom settings, in part, prompted this study. Although I worked to bracket out my own experiences, I believe my experiences furthered my ability to communicate with the study's participants and create data collection methods that yielded the greatest amount of information to explore the research problem.

As a qualitative researcher for this study, my role was etic – an outside, objective observer. Therefore, it was necessary to bracket my own feelings and experiences to minimize the effect that they might have had on data collection and analysis – empathy, joining the conversation, interpretation, projection (Creswell, 2013). In order to bracket, I kept a journal to describe my assumptions, biases, expectations, and experiences. Participants were selected from students attending classes at the other two State College campuses with whom I have no relationship nor history.

Data Collection

Applicable methods of data collection for this phenomenological study were utilized, including administration of the MBTI, ALIT, semi-structured interviewing, cognitive representations, and online non-synchronous focus groups, as explained below. All 10 participants completed the MBTI and the semi-structured interviews, but not all participants completed all data collection methods. However, there was some participation in all methods.

Myers-Briggs Type Indicator

All students in the undergraduate English courses that have been structured as active learning classroom environments who have consented to participate in the study were administered the MBTI. The MBTI was not used as a quantitative tool but simply to identify

potential participants' personality type – introvert or extrovert. The study's candidates were not administered the entire MBTI, because, since introversion is the personality indicator of interest, questions 1, 8, 15, 22, 29, 36, 43, 50, 57, and 64 were of greatest interest. These questions directly indicate one's tendency toward introversion or extroversion.

Those students who scored in the Clear range (15-24) and the Very Clear range (25-30) were considered for further participation. These scores are equivalent to selecting five or more introverted tendency answers on the ten previously identified questions. In order to increase the likelihood of willingness to participate in the study, professors whose students are under consideration for participation were asked to provide an extra credit assignment or bonus points. Additionally, a drawing for a gift card was used.

Active-Learning Inventory Tool

The Active Learning Inventory Tool (ALIT, APPENDIX D) was developed by Van Amburgh, Devlin, Kirwin, and Qualters (2007) to identify active learning techniques utilized during instruction. Twenty-two activities were identified as active learning techniques that were classified into three categories – low, moderate, and high complexity (Van Amburgh et al., 2007). This tool was used in this study to identify procedures used that would classify as active learning classroom techniques.

Several professors who describe their classrooms as active ones were enlisted to complete the ALIT by marking which of the listed activities they regularly used in a typical class session. Using the ALIT, active learning classroom environments were found to have no more than three active learning activities that complete the "full CPR cycle – content, participation, reflection" – during a fifty-minute class session (J. Van Amburgh, personal communication, July 16, 2016) but were used on a consistent basis throughout the semester. The CPR cycle includes the

professor providing contextual instruction (content), followed by students participating in some type of learning activity, and closing with a time of reflection on what was just learned either by the students alone, in groups, or led by the professor (J. Van Amburgh, personal communication, July 16, 2016). The participants for this study were chosen from the professors' classes whose self-reported instructional styles reflected a wide range of activities found on the ALIT.

Semi-structured Interviews

Participants were asked to participate in individual interviews with the researcher using the questions below. Further exploratory questions were asked to further elucidate the students' descriptions of their experiences in the active learning classroom. Interviews were audio-recorded for later transcription by me. A sample interview transcript is found in APPENDIX E.

1. What is your major and what made you decide to pursue it as a career?
2. How long have you attended State College, and how has your experience been studying here?
3. What would you say is the best part of attending State College? Why?
4. How has your time at State College compared to your experience in high school?
5. How would you define an active learning classroom?
6. How would you describe your experience in an active learning classroom?
7. How would you describe the social atmosphere of an active learning classroom?
8. How would you describe the academic atmosphere of an active learning classroom?
9. How would you characterize your ability to perform academically in an active learning classroom?
10. What benefit, if any, have you found in being a part of an active learning classroom environment? If none, why so?

Questions 1 through 4 were asked to build rapport and trust with the participants.

According to Ryan and Dundon (2008), developing social interaction on off-topic subjects, including background information on the participants or organization to show interest in participants prior to focusing on the study's agenda, can develop trust and lower defensiveness in the participants. Moustakas (1994) also recommends social interaction at the outset of an interview to build trust. Questions 5 through 10 are open-ended questions (Moustakas, 1994) to allow participants to tell their own story in a thick, rich manner with minimal guidance.

The questions were reviewed and approved by the Liberty IRB, but no pilot study was conducted to refine the wording. It is important that participants understand what is being asked. It is also important to effectively communicate with the participants to elicit useful information pertinent to the study; therefore, some guidance was given to help participants understand.

Cognitive Representations

Participants were asked to make drawings that represented their experiences in the active learning classroom (sample in APPENDIX F). According to Tversky (2011), these drawings can convey meaning, and are external representations of thought. As an additional element of this data collection method, participants were asked to write a brief caption to capture the meanings behind the drawings.

Online Non-synchronous Focus Groups

Based on the analysis of the interview transcripts and journals for shared experiences, several of the ten participants took part in an online focus group (sample in APPENDIX G). The focus group was non-synchronous based on introverts' predisposition toward thinking before speaking and preferring time to reflect on information before providing a response (Blau & Barak, 2012; Condon & Ruth-Sahd, 2013). Participants were provided access to an online

discussion site similar to what they use in their classes where they posted answers to the interview questions. This method allowed them to provide more in depth answers and add information based on their peers' postings. No draft questions were employed; the original interview questions (5 – 10) were repeated to provide the participants the opportunity to add to, change, or clarify the responses they gave in the semi-structured interviews to further elicit responses from participants to more fully describe their experiences. They were also asked to respond to the posts of the other members of their focus group. This online interaction took place over a period of one (1) week.

Data Analysis

Data were analyzed using a modification of the Van Kaam method as described in Moustakas (1994). Once data were collected, the following steps were followed:

1. "Listing and Preliminary Grouping" (Moustakas, 1994, p. 120) – I made a list of statements from the participants concerning their experiences. This process is called horizonalization (Moustakas, 1994) in which all statements are considered equally.
2. "Reduction and Elimination" (Moustakas, 1994, p. 120) – I then began to organize statements based on similarity. Repetitive and parallel comments were placed together.
3. "Clustering and Thematizing the Invariant Constituents" (Moustakas, 1994, p. 120) – I then took the previously organized statements and further reduced them into themes.
4. Validation of the themes (Moustakas, 1994) – Each identified theme was then validated by the complete record.
5. "Textural Description" (Moustakas, 1994, p. 120) – Themes were reported based on what the participants said – verbatim quotes are used as a part of the process.

6. "Structural Description" (Moustakas, 1994, p. 120) – The meanings of what was said were reported by putting the statements into context.
7. Composite Description – The textural and structural descriptions were combined to describe the "meanings and essences of the experience" (Moustakas, 1994, p. 120).

Trustworthiness

Trustworthiness of the data was achieved using multiple methods to construct a clear description of the participants' shared experience as introverted students in an active learning classroom environment. The techniques are categorized according to the specific aspect of trustworthiness they illustrate – credibility, dependability and confirmability, or transferability. The methods listed below also aided in validating the data for its trustworthiness concerning the researcher's reliable interpretation of what the participant intended by their responses (Williams & Morrow, 2009).

Credibility

As a sub-category of trustworthiness, credibility for a phenomenological study increases the likelihood that the participants' experiences reported by the researcher corresponds with the reality of their actual experiences. According to Rolfe (2006) and Sinkovics, Penz, and Ghauri (2008), credibility can be equated with internal validity found in a quantitative study. A credible study "establish[es] a match between the constructed realities of the respondents and those realities represented by the researcher(s)" (Sinkovics, Penz, & Ghauri, 2008, p. 699). In order to ensure credibility of the current study, the following methods were employed: Epoche, Triangulation, and Member Checks.

Epoche. In order to minimize researcher bias, I worked to bracket out my previous experiences and preconceived ideas about what the participants experience in the active learning

classroom (Moustakas, 1994). According to Moustakas (1994), this process allows the researcher to acquire new knowledge rather than assuming he or she knows the outcome already. Bracketing was done by keeping a journal of my previous knowledge and reflection on my thoughts and feeling throughout the research process (Hamill & Sinclair, 2010). In addition, the other trustworthiness techniques listed (triangulation, member checks, peer/expert review) helped to determine if bracketing has been achieved.

Triangulation. The utilization of multiple methods of data collection (interviews, journals, and focus groups) provided a corroborating effect from the data collected (Creswell, 2013; Shenton, 2004). Utilizing "a diversity of informants" (Shenton, 2004, p. 66) through various means helps to create a "rich picture of the attitudes, needs or behavior of those under scrutiny" (Shenton, 2004, p. 66). Triangulation does not "check the validity of the data" itself but validates the researcher's interpretations because of the use of "multiple data sources" (Hadi & Closs, 2016, p. 643).

Member Checks. Participants were asked to read and verify transcripts of interviews and the researcher's analysis of all the data. This technique was intended to allow the participants to verify that the researcher encapsulated the intent of their words. It also allowed subjects the opportunity to "offer reasons for particular patterns observed by the researcher" (Shenton, 2004, p. 68).

Dependability and Confirmability

A second sub-category of trustworthiness is dependability and confirmability. Much like reliability in a quantitative study, dependability in a qualitative study establishes data stability in reference to time and study conditions (Connelly, 2016). Confirmability corroborates the consistency and repeatability of the study's findings (Connelly, 2016). Data saturation, "the

point at which no new information is gained with the introduction of additional data" (Williams & Morrow, 2009, p. 578) also increases the quality, hence dependability, of the data. In both cases, dependability and confirmability of a qualitative study's methods and findings ensure the researcher has taken a consistent approach in establishing and reporting the phenomenon. Peer and Expert Reviews were the method used to confirm the current study's dependability and confirmability.

Peer/Expert Review. Colleagues and professors were asked to review the study to provide an unbiased view of the theoretical framework and methodology. They were able to "challenge assumptions … refine methods, [and] strengthen … arguments" (Shenton, 2004, p. 67). As such, peer review "keeps the researcher honest" (Creswell, 2013, p. 251) by looking closely at and questioning procedures and findings to produce an accurate description of the participants' experience with the phenomenon.

Transferability

The final sub-category of trustworthiness, transferability, refers to how applicable a study is in other contexts (Connelly, 2016). Transferability serves as a form of external validity (Hadi & Closs, 2016; Williams & Morrow, 2009). Quantitative studies strive for generalizability in that repetition of the study's methods in other settings would produce similar results. In contrast, qualitative studies "focus on the informants and their story without saying this is everyone's story" (Connelly, 2016, p. 436). Rather than generalizability on a statistical basis, qualitative researchers should be open about their methods and analysis (Connelly, 2016). In the current study, this openness was achieved through clear articulation of the study's methods.

Clear Articulation of Methods. Detailed descriptions of the methods will allow other researchers to reproduce the procedures, but "not necessarily the participant sample or findings"

(Williams & Morrow, 2009, p. 578). The nature of qualitative research limits the possibility of duplicating the findings, but clearly describing methodology will allow seasoned researchers to validate the study as having utilized sound methodology, concerning data collection and analysis (Shenton, 2004; Williams & Morrow, 2009).

Ethical Considerations

There were several ethical considerations to take into account related to the participants in this study. First, there was a security concern for the privacy of the individuals. Pseudonyms were used for all participants and the educational institutions with which they are affiliated. Each participant approved his or her pseudonym. Demographic information was also minimized to disguise their identities. Participants' demographic information is limited to age and some basic familial relationships they shared. Second, there was the security of the interview and online focus group transcripts and the journals created by the participants. Hard copies are maintained in a secure and locked location; digital formats of journals, interview transcripts (audio and written), and focus group transcripts are password protected. Third, there was the potential emotional and psychological discomfort that participants might have experienced in the interviews and other activities. Participants were permitted breaks, if necessary, during the interviews and to opt out at any time. The opt out information was provided in writing on the consent form and verbally during the interviews.

Summary

Chapter Three began with a description of the research design and justification for its use. The study has a transcendental phenomenological design to describe introverted undergraduate students' experiences in the active learning English classroom (Creswell, 2013; Husserl &

Kersten, 1980; Moustakas, 1994). The research design serves as the underpinning for the research questions.

The site for the study was State College, which has approximately 7,500 undergraduate students from which the participants for the study were drawn. Two-thirds of the students are White, one-sixth are African-American, and one-seventh are Hispanic. All students are required to complete English Composition I and II in order to graduate. In order to participate in the study, classrooms were identified as active learning using the ALIT and participants were classified as introverts utilizing the MBTI.

Following IRB approval from both institutions, data were collected using multiple methods – interviews, cognitive representations, and online non-synchronous focus groups. Once collected, the data was analyzed using Moustakas' (1994) modification of the Van Kaam method, which includes putting all relevant data on a level plain, organizing it according to themes, and developing a description of the essence of the participants' experiences.

Next, trustworthiness of the study's findings was assured through multiple methods. These methods are outlined in Creswell (2013) and Moustakas (1994), and they are triangulation, member checks, peer and expert review, and epoche. Finally, ethical considerations such as participants' privacy and potential harm were considered. Data were protected electronically through password-protected devices, and physically through locked cabinets or a safe. Identities were protected with pseudonyms, and participants were allowed to strike any information during member checking that they felt might have compromised their identities. Participants were allowed to stop at any time if they sensed any physical or psychological harm.

CHAPTER FOUR: FINDINGS

Overview

The purpose of this transcendental phenomenological study was to describe the experiences of introverted undergraduate students in the active learning English classroom in a community college setting in Florida. Chapter Four begins with a description of the participants and their experiences in the active learning classroom. Data were collected using semi-structured interviews, online asynchronous focus groups, and cognitive representations of participants' experiences. The Active Learning Inventory Tool (ALIT) developed by Van Amburgh, Devlin, Kirwin, and Qualters (2007) was used to identify professors' consistent use of active learning techniques to verify that participants experienced the phenomenon in question. Several professors completed the ALIT, and the students of those professors who indicated the continuous use of active learning exercises during a typical session were invited to participate in the study. The research questions guiding this study were as follows:

1. How do introverted undergraduate students describe their experience in an English course structured with an active learning classroom environment?
2. How do participants describe the academic atmosphere of the active learning classroom?
3. How do participants describe the effect the active learning classroom environment has on their academic performance?
4. How do participants describe the social atmosphere of the active learning classroom?
5. What benefits do participants describe from taking part in the active learning classroom?

Finally, the collected data were analyzed and a common description of the participants' shared experiences was developed.

Participants

In total, 10 participants took part in the study to share their experiences as introverts in an active learning classroom. All of the participants characterized themselves as Clear or Very Clear Introverts by completing, and as measured by, the Myers-Briggs Type Indicator. They were participants in a college English Composition course identified as an active learning classroom environment at the time of the study or had completed it during the previous semester. Identification of active learning classrooms and recruiting of participants took place over the latter half of one semester and the beginning half of the following semester.

Of the 10 participants, four self-identified as White or Caucasian, three as African American or Black, and three as Latino/Latina or of Hispanic origin. The majority (six) of the participants were recent high school graduates under the age of 21. The remainder (four) were adults who have returned to school after starting a family and are seeking a change in their careers. The median age of the participants was 20 with a mean of 24 years old.

Each of the 10 participants are listed in Table 1 below and are then briefly introduced. They are identified by ethnically relevant and gender specific pseudonyms to protect their identities. The pseudonyms are not intended to stereotype or demean those who participated but are representative of the cultural characteristics of their actual names. All participants approved their assigned pseudonyms.

Table 1

Student Participant Demographics

Pseudonym	**Age**	**Ethnicity**
Amy	42	Caucasian
Boyd	18	Caucasian
Connor	18	Caucasian
DeShawn	20	African American
Ebony	36	African American
Filipe	27	Hispanic
Gail	25	Caucasian
Isabela	20	Hispanic
Jasmine	19	African American
Luciana	20	Hispanic

Amy – 42 years old

Amy, Caucasian, is the oldest of the ten participants. She is a married stay-at-home mother of three children aged 20, 18, and 17. Her oldest child is also a student at State College and is her inspiration for starting college. Amy married her husband upon graduation from high school, so it has been over 20 years since she has taken classes of any type. During our interview conversation, she noted that:

> I feel like everyone's mother in my classes. Everyone seems so much more outgoing than me and so much quicker to learn. It has been so long since I have been in school that it all seems foreign to me at times. If it wasn't for my son, I might not be here.

Boyd – 18 years old

Boyd, Caucasian, is one of the youngest participants, along with Connor. After the summer break, Boyd started his college career right out of high school. The English Composition class was among his first college classes, which he stated was part of the stress he felt – new school, new teacher, and new fellow students. Active learning is not a new phenomenon to Boyd since some of his teachers employed this technique in high school. He did note, in the interview, that the methods used in college were somewhat different – more interactive – from high school because there always seemed to be such a focus on the standardized testing all the students faced in high school.

Connor – 18 years old

Connor, Caucasian, along with Boyd, is the second of two 18-year-olds who participated in the study. He completed college math courses, as a dual enrolled student (taking college courses concurrent with his high school schedule), during his senior year of high school. Connor completed the first of two English Composition classes during the summer semester after high school graduation, so he said that he feels like an experienced college student even though he only recently graduated from high school.

DeShawn – 20 years old

DeShawn, African American, is a first generation college student. His parents are very proud that he is the first in his family to attend college. DeShawn did go to work and to his own apartment immediately out of high school, but enticement from his parents to allow him rent-free living arrangements as long as he was an actively enrolled college student brought him back to his parents' house. The entire college experience is new to DeShawn; he stated that the "classes are so much more difficult than my high school classes, but my parents are counting on me to be

the first college graduate in our family that I have to stick it out" (Interview with DeShawn, July 2018).

Ebony – 36 years old

Ebony, African American, is the second oldest participant in the study. Ebony left high school early and has been working in retail for 20 years. Her excellent work ethic has led to several promotions in the company that employs her, but she reached a point on the corporate ladder where she needed a college degree. Ebony returned to school to complete her General Equivalency Diploma (GED) and has now begun to take college level classes.

Filipe – 27 years old

Filipe, Hispanic, has been working with his father in construction since he graduated from high school. The family business is growing, and his parents thought it would be a good idea if he were to earn a degree in Business so that he can take over when it is time for his father to retire. Filipe is a first generation American; his parents are naturalized United States citizens, which means that English has always come as a struggle for him. That struggle, along with Filipe's introverted nature, made the active learning English classroom a challenge for him.

Gail – 25 years old

Gail, Caucasian, is a single mother of an 8 year-old girl. Prior to her daughter's birth, Gail quit high school and completed her GED. After struggling for several years financially, Gail has started college to try to make a better life for her small family and to set an example for her daughter. Gail has always enjoyed writing but has found the active learning method used in her college English class to be somewhat intimidating because she has always considered her writing to be part of her private world. She stated that, "Sometimes I feel exposed and a little embarrassed to let others see my personal thoughts" (Interview with Gail, July 2018).

Isabela – 20 years old

Isabela, Hispanic, took Advanced Placement (AP) classes throughout the majority of her high school career and has found college classes to be conducted in a similar fashion. In the interview, she stated, "I took a couple of years to decide what I wanted to do before starting college. I even considered the military but decided that college would be the better route for me. I still don't know what I want to do with my life, but I enjoy taking classes, so here I am." She said that she is used to the active learning classroom style, but it is still not easy to step into the classroom each day and not know what the teacher might have in mind.

Jasmine – 19 years old

Jasmine, African American, had the highest score on the MBTI of all the participants, indicating that she is the most introverted. Not surprisingly, her cognitive representation of the way that the active learning classroom feels to her (shown in APPENDIX F as a sample) has the caption, "All Alone With The Spotlight On Me." Jasmine took online courses from the Florida Virtual School through most of her high school career, but her mother wanted her to experience the traditional college classroom atmosphere rather than continuing to take classes online.

Luciana – 20 years old

Luciana, Hispanic, although only 20 years old is the only participant besides Amy who is married. She married her boyfriend one month after high school graduation and then worked to help him earn a diploma in heating, ventilation, and air conditioning repair and maintenance. Now that he has graduated and established himself in the workforce, they have decided that it is Luciana's turn to obtain an education. She is attending State College to earn her Associate of Arts degree and then plans to transfer to the large, local university through its direct connect program – all community college graduates are guaranteed admission. She assumes that there

will be more active learning classroom experiences during the remainder of her time at State College and once she transfers. She stated, with a tone of resignation, "I'll just have to get used to it" (Interview with Luciana, July 2018).

Results

The Results section includes details about the steps taken to develop the themes that emerged using data from the semi-structured interviews, cognitive representations, and nonsynchronous online focus groups. These details include a listing of the themes that surfaced along with the repeated words and phrases. The themes provided a clear context for answering the research questions, which helped to determine how introverted undergraduate students described their experiences in an active learning classroom environment. A narrative that provides "textural description" (Moustakas, 1994, p. 120) of answers to research questions follows the thematic description and listing.

Theme Development

Participants repeated certain words and phrases throughout the various data collection methods – semi-structured interviews, cognitive representations, and nonsynchronous online focus groups. After listing these commonly used words and phrases, I organized them based on their similarity with repetitive and parallel words and phrases placed together (Moustakas, 1994). This action is called "reduction and elimination" (Moustakas, 1994, p. 120). These repeated and parallel words and phrases lent themselves to specific themes, which I then validated based on the complete record of data (Moustakas, 1994).

Major themes. Two major themes manifested themselves through data analysis, along with four subthemes associated with the first theme. One might have expected the first theme based on previous research – the active learning classroom environment does not match the

participants' introverted personality traits. Four subthemes provide more detail concerning this environmental mismatch. The second major theme, quite unexpected, was that the participants were able to develop coping mechanisms to perform at their typical academic level.

Theme number one. The first theme – the active learning classroom environment does not match the participants' introverted personality traits – concerned the participants' reflective nature, their tendency to process information internally before sharing with others, their predisposition to be overwhelmed in social situations, and the fact that the participants gain energy from internal rather than external stimuli. This theme is explained specifically through four subthemes, which became apparent from the data analysis. They are (a) the desire to observe before participating [observe], (b) the pressure to perform [pressure], (c) the desire for time to think [time], and (d) the expenditure of energy [energy].

Subtheme number one. The first subtheme – the desire to observe before participating – had to do with the participants' expressed preference to be able to watch, listen, and take notes prior to participating in the classroom activities. Participants indicated their desire to be able to process information and make a plan before the professor asked them to share their thoughts or provide answers to questions that he or she asked. As the participants revealed, the active learning classroom's dynamic atmosphere often moved at a faster pace than they would have preferred.

Subtheme number two. Subtheme two – the pressure to perform – was a result of the participants' view that the classroom activities often required some type of public performance. The pressure they felt also tied to the loss of control the participants stated they experienced from not being able to prepare beforehand. Participants implied that each activity felt like an impromptu performance for them. Judgment, scrutiny concerning their performance, and

embarrassment were all feelings participants expressed from having taken part in the classroom activities.

Subtheme number three. The desire for time to think – the third subtheme – tied directly to all three of the other subthemes. The participants indicated that the active learning environment did not afford them the time in class to process the information, which was the focus of the various classroom activities. This lack of processing time increased the pressure to perform because they did not feel prepared to share what they had taken from the activities. With the increased pressure and attempts to improvise (think through the activity very quickly), participants expended an inordinate amount of energy.

Subtheme number four. The fourth subtheme – the expenditure of energy – came from the participants' stated physical and emotional tiredness from social interaction. It also tied directly to their feeling performance pressure when participating in classroom activities. Participants indicated that they felt extremely uncomfortable at those times, felt nervous, and drained from the time spent in the energetic atmosphere of the active learning classroom environment.

Theme number two. The second theme – participants were able to develop coping mechanisms to perform at their typical academic level – became evident through data analysis pertaining to research question three. This question asked how participants perceived the effect that the active learning classroom environment had on their academic performance. In answering this question, data showed that participants personality traits did not match the active learning classroom environment, which was consistent with major theme one. However, unexpectedly, data revealed this second theme.

Participants acknowledged the mismatch but also indicated that their academic performance was on par with their previous experiences when taking non-active learning classes. Data showed that they had learned to adapt by using the strengths of their personality traits in spite of the environmental mismatch. They utilized their reflective natures, their ability to process information thoroughly, capacity to express ideas in writing, and listening ability to learn the material presented in the class; generally, the participants performed this environmental management on a different timeline than the class presented.

Table 2 below presents many of the repeated words and phrases from which the themes and subthemes were developed. These expressions from the participants elucidated my thinking concerning the two major themes that presented themselves.

Table 2

Repeated Words and Phrases from Data Analysis

Repeated words and phrases	**Researcher developed codes**	**Associated themes/subthemes**
Like to watch and listen	WL	Observe, Pressure
Want to take notes	N	Observe
Others watching and judging	J	Pressure, Energy
Feel pressure	PR	Pressure
Able to learn	L	Cope
Feel out of place	PL	Pressure
I just shut down	SD	Pressure, Energy
I feel nervous	NR	Pressure, Energy
Write better	W	Cope

I don't want to make a fool of myself	F	Pressure
Want a chance to write	WR	Observe, Time

Table 2 (continued)

Not until class was over	OV	Cope
There are times we get to work alone	WA	Time
Need time to put it together	TP	Time
Ahead of time	TA	Time
Need time to think	TT	Pressure, Time
Record classes	RC	Cope
Afterward I feel tired	TR	Energy
Afterward I feel drained	DR	Energy
Manage time	MT	Cope
Helped to recover	RC	Cope
When it's over, I am exhausted	EX	Energy
Times when I feel jittery	JT	Energy
I need to be alone	AL	Pressure, Energy

Research Question Narrative

The purpose of this transcendental phenomenological study was to describe the experiences of introverted undergraduate students in the active learning English classroom in a community college setting in Florida. The intent of the research questions was to allow the students who experienced this phenomenon to tell their stories by describing their experiences. In the process of telling their stories, thus answering the research questions, certain themes became evident.

Data analysis showed that theme one – the active learning classroom environment does not match the participants' introverted personality traits – was evident in answering all five of the research questions. Theme two – participants were able to develop coping mechanisms to perform at their typical academic level – was evident exclusively in answering research question three. The explanations below provide insight into what they experienced.

Theme 1 – Active learning classroom does not match participants' personality traits. This section contains an explanation of the data obtained concerning the first major theme. It is organized by research question and developed using the subthemes.

Research question one. *How do introverted undergraduate students describe their experience in an English course structured as an active learning classroom environment?* This is the most general of all of the research questions and the intent was to allow participants to provide the general impression they had of the time they spent participating in the active learning classroom. After spending a few minutes setting the participants at ease with the interview process, the first question asked them to define the active learning classroom. Many of them were not sure what the term 'active learning' meant, but, rather than defining it for them, I asked them to think about their English classroom experience. This question, along with several others, led the participants to open up about their experiences. Several of the participants chose the word 'chaotic' as part of their definition, but three subthemes were most evident in their answers – observe, pressure, and energy.

The desire to observe before participating. The subthemes that emerged were consistent with the characteristics of introverts detailed in Chapter Two. For instance, the desire to observe prior to participation aligns with introverts' reflective style as indicated in Eysenck (1965). Ebony said, "A lot of times the class is moving on to another subject while I'm still thinking

about the last one" (Interview with Ebony, June 2018). The speed of the class often outpaced the participants. As an example, in one of Filipe's journal entries, he noted that, "[by the] time I come up with a really good anser [*sic*] to the questions, we [are] already doing something different."

The pressure to perform. Closely related to the first subtheme of wanting to be able to observe first before joining in is the second subtheme in which the participants felt the pressure to perform. According to Van Kleef, De Drue, and Manstead (2004), time pressure causes introverts to lose their motivation to process information properly (in their minds) and makes them feel that they must rely on inadequate information to be a part of the class. This way of thinking encapsulates the participants' expression of feeling pressure. Amy, in the interview, said, "I don't like the feeling that everyone is watching me and judging me" (Interview with Amy, June 2018). Even though Isabela had expressed that she was accustomed to the active learning style, she echoed Amy's sentiment when she said, "It's not so much the public speaking part; it's having everyone's eyes on you, waiting to hear what you have to say before you have had time to think it out" (Interview with Isabela, July 2018).

The expenditure of energy. Participants consistently spoke about their feelings prior to class sessions beginning and after the sessions were over. For instance, Amy said, "I get nervous every time I'm getting ready to go to class" (Interview with Amy, June 2018). The general feeling was of trepidation at the thought of what the professor might ask of them in class. As if speaking for the entire group, Isabela wrote in the online focus group, "I've gotten used to the idea that we're going to have to put ourselves out there each time we go to class, but it hasn't changed the feeling of dread before I go" (Online focus group, July 2018).

Beyond the angst that plagued them on their way to class, there was a general feeling of fatigue once they completed the class sessions. Luciana reported, "Once the class is over, I am exhausted" (Interview with Luciana, July 2018). DeShawn, who feels pressure from his parents and grandparents to be the first college graduate in the family, said:

> There are some days that I think about not going because I know that afterwards I'm going be drained [*sic*], and my parents are still going to want me to go somewhere. By that time, I am done with people for the day (Online focus group, July 2018).

These expressions are consistent with Dembling's (2012) statement that introverts lose energy in large social situations and gain energy in smaller, more intimate ones when engaging with a trusted friend or family member. In addition, these feelings expressed are in harmony with Forsman, de Manzano, Karabanov, Madison, and Ullén (2012), whose brain research suggested that introverts brains have a higher base level of dopamine so that active social situations quickly overwhelm them, and, therefore, they lose energy under those conditions.

Research question two. *How do participants describe the academic atmosphere of the active learning classroom?* After gaining a general sense of the participants' experience in the active learning classroom environment, the intent of the second and third research questions was to gain a better understanding of their academic experience while participating in an active learning class. Similar to the first research question, two of the same subthemes came to the forefront upon analysis – observe and pressure – while, for the second and third research questions, a third theme arose – time.

The desire to observe before participating. Introverts' reflective style (Eysenck, 1965), which often is displayed as silence during some class activities, does not mean that they are disengaged from those activities (Ulus & Alben, 2015). Even though Connor expressed that he

felt like an experienced college student, even at age 18, he still expressed his reflective style when he said, “Class is always hard because the teacher asks us to jump right into the activities before I have even had a chance to figure out what is going on” (Interview with Connor, June 2018).

The pressure to perform. The participants were clear in their thoughts about their preferences during the activities taking place in the classroom. Having an opportunity to be able to stop and put down their thoughts on paper was important. Condon and Ruth-Sahd (2013) noted that introverts could be effective communicators, especially through writing. Boyd noted that one of the differences he noticed from high school was the faster pace. “[At State College] We only met twice per week for a little over an hour, which made it feel like we had just barely gotten started, and it was time to go” (Interview with Boyd, June 2018). The time factor colored not only their general impression of the classroom environment but also the academic atmosphere. “The pace and the short time we spend in class does not give me time to think about what I want to tell everyone; I hate looking foolish when I don’t know the answer” (Interview with Gail, July 2018).

The desire for time to think. The lack of time in the participants’ minds added to the pressure to perform. All ten participants stated that the active learning classroom left them with precious little time to be able to process the information. This preference is consistent with Pankratz and Zimenoff (2014), who emphasized introverts’ tendency to process information thoroughly before sharing what they determined with others. Jasmine, who took online classes from the Florida Virtual School through most of her time in high school, said, “I was used to being able to take as much time as I needed to think about the problems in class because I took

classes online. That's not how it was in my English class here [at State College]" (Interview with Jasmine, June 2018).

Research question three. *How do participants describe the effect they perceive the active learning classroom environment has on their academic performance?* In any classroom situation, the goal is that students learn. As related in Chapter One concerning the problem that prompted the study, although much research has been done concerning the benefits of the active learning methodology – even for introverts – there is a dearth of qualitative research concerning introverted students' academic experiences in an active learning classroom environment. The intent of this question was to allow introverted undergraduate students in an active learning English classroom to describe how they believed the experience affects their academic performance. In answering this research question, three subthemes were noticeable – observe, pressure, and time.

The desire to observe before participating. According to Mall-Amiri and Nakhaie (2013), an introvert's nature predisposes him or her toward activities such as reading course material and listening to lectures, and he or she will desire to have structure in lesson presentation. Additionally, introverts tend to process information internally in a thorough manner prior to speaking. The study's participants expressed those tendencies extensively. Filipe wrote, in the online focus group discussion, "I always read [the] book before class, but [it] don't [*sic*] help much [be]cause we never get [a] chance to just listen." DeShawn said, "There must be a plan, but it never seems that way when the professor just wants us to talk of the top off our head" (Interview with DeShawn, July 2018). Reflecting her feeling of having her privacy violated, Gail said, "Just once, I would like to just be able to take notes while the teacher teaches

instead of her always wanting me to express my thoughts about something; I want to think about things first" (Interview with Gail, July 2018).

The pressure to perform. Consistent with Forsman, et al. (2012), who suggested that introverts' strong behavioral inhibition system (BIS) causes them to avoid overstimulation, participants conveyed that the active learning classroom environment caused panic feelings at times. Jasmine explained, "There are times when I feel jittery just sitting in class, knowing that the teacher was going to call on me" (Interview with Jasmine, July 2018). Ebony also said, "During group activities, I usually stayed quiet, but I felt like the teacher was always watching to see who joined in and who didn't; it really made me nervous" (Interview with Ebony, June 2018). There was a pressure to perform and a general sense of embarrassment because they did not feel prepared for many of the activities. Cain (2012) and Dembling (2012) both indicate that social situations often trigger feelings of powerlessness. Those feelings can cause embarrassment, as indicated by Connor, when he stated, "The professor asked me a question in the middle of one of the activities, and I was not ready; man, I was totally embarrassed" (Interview with Connor, June 2018).

The desire for time to think. Many of the participants cited classroom noise as an issue when it came time to be able to perform academically. Park and Choi (2014) suggest that the animated atmosphere of the active learning classroom may be a detriment to introverts' academic performance. Several participants corroborated that suggestion. Filipe stated, "It's almost always noisy in the class; it made me difficult to straighten my head [sic]" (Interview with Filipe, July 2018). Amy, among others, used the word chaotic. "It always seems busy, uh, I don't know, crazy …, chaotic" (Interview with Amy, June 2018). Isabela said, "I need time to think about what we're doing, or I won't understand it" (Interview with Isabela, July 2018).

Research question four. *How do participants describe the social atmosphere of the active learning classroom?* Although the social aspect of the active learning classroom is not a central focus of this study, it does play an important role in the methodology and in the experience of introverted versus extroverted undergraduate students. As stated in Chapter Two, the IPIP-HEXACO tool associates a positive score with sociability and social boldness, but measures them based on extroversion. The negative scores that introverted students are likely to earn might lead to the label of at-risk students in the active learning classroom. The research question's intent is to allow introverted undergraduate students to voice their feelings concerning the social atmosphere. Two subthemes – pressure and energy – revealed themselves in the course of analyzing the data.

The pressure to perform. Most of the participants reported that speaking in front of their fellow students was no more difficult than for the average person. According to Zack (2010), public speaking situations and social engagements (parties) are very different affairs for introverts. It is a matter of control over the situation that makes the difference (Dembling, 2012).

The majority of the study's participants reported that the social atmosphere of the active learning classroom was uncomfortable for them. It was almost as if the social atmosphere of the classroom was more like a party where they felt a loss of control. Boyd, among others, stated, "I don't like to make a fool of myself" (Interview with Boyd, June 2018). Luciana echoed that sentiment by saying, "I feel out of place a lot of the time in class; everyone else seems to be having fun, but I don't like it when they laugh when I make a mistake" (Interview with Luciana, July 2018). Reflecting the perceived need for prior preparation, Gail said, "If I get a chance to put everything together first, I'm okay with talking in front of the class, but in the English class they just spring on you; you never know what to expect" (Interview with Gail, July 2018).

The expenditure of energy. As noted in Chapter Two, Eysenck (1967), Forsman, de Manzano, Karabanov, Madison, and Ullén (2012), Laney (2002), Lu, et al. (2014), and Smillie, Cooper, and Pickering (2011) point out a difference in baseline dopamine levels between introverts and extroverts. The difference manifests itself so that introverts tend to be quickly overwhelmed by social activity, while extroverts constantly seek out social engagement to raise their dopamine levels. Introverts tend to lose energy from social engagement, whereas extroverts gain energy.

The study's participants expressed symptoms that would indicate the overwhelming feelings and loss of energy indicated by those researchers. For example, concerning feeling overwhelmed, Amy stated, "Whenever we do those activities, I kind of shut down because I can't think [and] that makes me feel worse, so I shut down even more" (Interview with Amy, June 2018). Gail also said, "There are times in class when I feel jittery and just want to sit out whatever we're doing; it can be overwhelming at times" (Interview with Gail, July 2018).

In addition, there was a universal need to physically rest after class, indicating a great expenditure of energy. For some, like Jasmine, that meant going home to sleep. In the interview, she said, "After English class, I usually go straight home and take a nap because I'm worn out" (Interview with Jasmine, July 2018). For others, it meant seeking out time to be alone and recharge. Ebony related that "many of the other students would be, like, so jazzed up after class that they would go somewhere together [and] sometimes they would ask me, but I just needed to be alone" (Interview with Ebony, June 2018).

Research question five. *What benefits do participants describe from taking part in the active learning classroom?* This question changes the focus from the participants' views of the active learning classroom atmosphere to the possible benefits because of or despite the

atmosphere. The question's intent is also to explore Zelenski, Santoro, and Whelan's (2012) suggestion that introverts derive a benefit from acting extroverted. The single subtheme that stood out from the answers participants provided was time.

The desire for time to think. According to Jackson (2014), introverts prefer learning activities that provide for more work that is independent and less interaction. The responses from the study's participants reflected that preference. For example, Filipe said, "I liked it when the professor would give us a topic to look up between classes and told us to be ready to discuss it with the class next time" (Interview with Filipe, July 2018). On a related note, Amy said, "I don't mind Jigsaw, [which is] … kind of the same thing as writing what we learned and sharing, but we get to work on it between classes" (Interview with Amy, June 2018).

Filipe and Amy, like most of the others (with the exception of Gail and Jasmine) felt no more intimidated by the public speaking requirements than any of the other students in the class, as long they had time to prepare what they planned to say. When asked about the fact that she would have to share publicly, Amy said, "Doing it ahead of time lets me write it out just the way I want to say it" (Interview with Amy, June 2018). Isabela added to that thought by saying, "I don't necessarily read it directly from my notes, but I feel like I sound smarter because I have had time to prepare" (Interview with Isabela, July 2018).

In addition to the idea of being able to prepare ahead of time, the participants also suggested Jackson's (2014) independence quality by their preference for individual work during class sessions. Ebony stated, "There are times when we get to work alone; those are the best" (Interview with Ebony, June 2018). Luciana answered similarly when speaking of preferences in the classroom and related it to the idea of having time to think and prepare before sharing. "A lot of times, after doing an activity, the professor asked us to share what we got out of it, and I never

wanted to be the first to share so that I could write down a few thoughts before she asked me" (Interview with Luciana, July 2018).

Essentially, the participants felt that they were still able to advance academically if there were opportunities to reflect on what had occurred or could prepare prior to becoming actively involved in the classroom environment. On the other hand, Amy and others saw the activities as creating unnecessary noise and nerves for them, but they could understand how some people might learn better with the action. Amy said, "I would have to say I have not seen any real benefits … I could learn without all of the noise" (Interview with Amy, June 2018). Boyd added, "I know some of my friends really liked it because it seemed fun, but it just made me nervous and wore me out" (Interview with Boyd, June 2018).

DeShawn looked at the active learning classroom environment from the opposite viewpoint. He said, "I was not really into all that stuff, but I don't think it kept me from learning" (Interview with DeShawn, July 2018). In other words, even though he and the others could not see any true benefit to the active learning classroom, they also did not feel like it kept them from learning either. "As long as the professor would give me a chance to think a little, I did okay in the class" (Interview with Connor, June 2018).

General analysis of theme one. In taking a closer look at the four subthemes and how they are manifested in the descriptions of the participants' activities, it is evident that time to process is the central key. When the participants expressed that they preferred to observe prior to participating in any activities, their true desire was to have time to process what was happening and how they would react to it. As they felt the pressure to perform, the participants primarily wanted time to be able to process the information and formulate an intelligent response and to maintain some level of control over their circumstances. Certainly, when they expressed a

desire to have time to think, the participants expressed their reflective style, which would give them time to plan and prepare. Even when expressing their feelings concerning the expenditure of energy, the participants expressed a preference in how they wanted to spend their time or the time necessary to recover from each classroom experience.

Theme 2 – Participants developed coping mechanisms for academic performance. Participants conveyed that the active learning classroom environment caused panic feelings at times but that they were still able to learn. Amy said, "Well, it makes me nervous to do some of the thing we do [in class], but I still learn stuff; I can write a lot better now than I could when we started the class" (Interview with Amy, June 2018). Amy went on to say, "Not all of the activities are bad; I think some of them are helpful." That response was common among the participants. They stated that there was a pressure to perform and a general feeling of embarrassment because they did not feel prepared for many of the activities. Nonetheless, there was almost universal agreement that they were able to perform at the academic level to which they were accustomed.

Activities that most of the participants pointed out as helpful were ones that were a close match for the participants' personality traits. Concerning their academic performance, participants communicated the idea summed up by Connor, when he said, "When we were given the time to think about things, I felt like I could get the concepts straight in my head; a lot of times that did not happen until after class was over" (Interview with Connor, June 2018). In fact, Isabela used the "after class was over" idea on a regular basis. She obtained permission from her professor to record the class sessions and would listen to the recordings once she was home for the day. "By that time, I had already been thinking about what had happened in class and could,

uh, fill in the blanks in my mind by listening to the recording; it was easier to block out the noise when I was by myself at home" (Interview with Isabela, July 2018).

The strategy to sort out and process information after the class sessions were over was the main technique used by the participants. In addition to Connor and Isabela, as well as others, working out ideas and concepts post-class session, Luciana conducted a personal debriefing session after class. Her approach generally took her minute by minute through what had just transpired a few hours earlier:

> I always went straight home and rested a while. I had to have some alone time. Then I would sit down and think about what happened from when I walked in the door until I left. Whenever I would think about a vocabulary word or some game we played, I would look up the words to help me understand. Then I would go back over the game to figure out what the point was. By the time I got done, I usually had a pretty good idea of what we were supposed to learn. (Interview with Luciana, July 2018)

She repeated this strategy after nearly every class session. "It also helped me get as ready as I could for the next class" (Interview with Luciana, July 2018).

The 'after class' strategy also helped the participants with the energy recovery process. Even though, like Luciana, many of the participants felt the need to physically rest after they finished a class session, reviewing the day's activities aided their energy renewal. Boyd said, "Just having some time alone to go over stuff, instead of being in the middle of all that noise, usually helped me figure things out" (Interview with Boyd, June 2018). Echoing the idea of decompression, Gail stated, "I don't like to share so much anyway, and in the class, it was share this, share that, do this, do that; being able to take my time, ***alone,*** helped me get it straight in my head" (Interview with Gail, July 2018, emphasis based on the tone expressed).

It is notable to point out that the participants were not all in the same class nor did they take classes with the same professor. Some professors used more active learning techniques in a typical class session than others. However, participants noted that the 'after class' strategy was helpful for reexamining what had already transpired and for preparing for the next class session. It was their most successful tactic regardless of what professor facilitated their classes. However, they did try other 'in class' approaches with limited success. For example, participants took advantage of exercises that more closely matched their personality traits to maximize learning while in the class. Amy said, "I don't mind everything we do in the class; like when the professor gives us a chance to write about what we just learned, that's ok" (Interview with Amy, June 2018). DeShawn, too, said, "Think-pair-share was good, whenever the professor used that; we got a chance to catch up with what was going on" (Interview with DeShawn, July 2018). According to Filipe, muddiest point (when the professor asks students to write what one point confused them the most) was the best. "Muddy [*sic*] point helped the most [be]cause the teacher had to back up and explain some stuff I missed" (Interview with Filipe, July 2018).

A notable exception to the sentiment that the active learning classroom did not affect their academic performance was Jasmine. She said, "I didn't like it at all, and my grade in the class was not what I usually get; I'm going to try to convince my mom to let me go back to online classes" (Interview with Jasmine, July 2018). Jasmine was in the minority, though. The remainder of the participants had their preferences, which would have been to avoid the pressure they felt in class. Nevertheless, they felt that they were still able to learn the course material as well as they would have in another class. Ebony said, "As long as I could get a few minutes in

class to catch my breath and then put it all together after class, I did ok" (Interview with Ebony, June 2018).

Summary

Chapter Four began with a description of the study's participants. There are 10 undergraduate college students attending State College, a community college in Florida. All 10 participants scored as Clear or Very Clear introverts according to the MBTI. They all shared an experience recently as students in an active learning English classroom environment, which is the phenomenon under consideration. The 10 participants' demographics roughly match that of State College, the community college where they attend classes. Of the 10 participants, four were Caucasian, three were African American, and three were Hispanic or Latino. Their median age was 20, and the mean was 24 years of age. Several of the participants were recent high school graduates, while others have spent time in the workplace, building families and lives beyond schooling.

These participants shared their experiences with the phenomenon through semi-structured interviews, online non-synchronous focus groups, and by creating cognitive representations of their experiences in the active learning classroom. Analysis of the data collected revealed two major themes, one of which also revealed four subthemes that encapsulated the participants' feelings regarding the time spent in the active learning classroom. The recurring themes were (a) the active learning classroom environment does not match the participants' introverted personality traits, and (b) the participants were able to develop coping mechanisms to maintain their usual academic performance. The subthemes categorized under theme one were (a) a desire to observe before participating, (b) the pressure to perform, (c) a desire for time to think, and (d) the expenditure of energy.

The chapter concluded with a narrative that described the participants' experiences in relation to the research questions. The answers to the research questions were organized according to the themes and subthemes revealed for each question. Not all four subthemes were relevant to all questions, and theme two was connected to only research question three. The pressure to perform was the most indicated subtheme with four of the research questions connecting to this subtheme. The desire to observe prior to participation and the need for time to think were indicated by data for three of the research questions. Expenditure of energy was the least indicated subtheme, only connecting to two of the research questions.

Participants' expressions that they felt the pressure to perform had their roots in the inability to reflect on the concepts that were being explored during classroom activities. They felt that they were unable to process information properly before communicating their thoughts about those concepts. This inability to process manifested itself in feelings of being judged, ineffective communication with their peers and the professor, panic, embarrassment, and a loss of control.

Theme one, under the four subthemes, tied together in the related subtheme of time. All the subthemes had some element of time as their foundation. The desire to observe prior to participation revealed itself in wanting time to process, as did the pressure to perform. The time connection to the desire for time to think is obvious, in that there was an expressed desire to be given time to process. The link to expenditure of energy is less apparent, but it shows itself by introverts' preference in how they spend their time and the way they use time to recuperate from time spent with large groups of people.

Theme two revealed the participants overall ability to adapt to the situation in which they found themselves. Although the active learning classroom environment appeared to be in direct

contrast to the participants' preferences, they were able to develop strategies such as taking the time to process information after each class session. This coping strategy was necessary to overcome the environmental mismatch that occurred while the class sessions were in progress.

CHAPTER FIVE: CONCLUSION

Overview

The purpose of this transcendental phenomenological study was to describe the experiences of introverted undergraduate students in the active learning English classroom in a community college setting in Florida. The problem was a dearth of qualitative research concerning introverted students' academic experiences in an active learning classroom environment. This study's intention was to allow introverted undergraduate students who participated in an active learning English classroom environment to tell the stories of their experiences. The research questions that guided this study are the following:

1. How do introverted undergraduate students describe their experience in an English course structured with an active learning classroom environment?
2. How do participants describe the academic atmosphere of the active learning classroom?
3. How do participants describe the effect the active learning classroom environment has on their academic performance?
4. How do participants describe the social atmosphere of the active learning classroom?
5. What benefits do participants describe from taking part in the active learning classroom?

The chapter begins with a brief summary of the findings as indicated by the data analysis in Chapter Four. A discussion of the findings and implications in light of the theoretical framework and relevant literature follows the summary. Next, implications of the study in theoretical, empirical, and practical terms are examined. A brief outline of the study's

delimitations and limitations follows the examination. Finally, recommendations for future research are reviewed.

Summary of Findings

Analysis of the data revealed two major themes related to the experiences of introverted undergraduate students participating in an active learning English classroom environment. The first theme – the active learning classroom environment does not match the participants' introverted personality traits – further developed into four subthemes that explained the mismatch in detail. The four recurring subthemes that arose were (a) a desire to observe before participating; (b) the pressure to perform; (c) a desire for time to think; and (d) the expenditure of energy. Data revealed that these subthemes, and hence theme one, helped to answer all five research questions. The second theme – participants were able to develop coping strategies to maintain their usual academic performance – helped to answer research question three, which asked how participants perceived that the active learning classroom environment affected their academic performance.

The intent of the first research question was to allow participants to share their general feelings about participating in an active learning classroom. Data analysis revealed three of the four subthemes linked to this question, namely, the (a) desire to observe before participating, (b) pressure to perform, and (c) expenditure of energy. Some participants stated that the classroom seemed chaotic at times. This description described the pace of activity, loss of control during activities, and amount of energy it took for participants to remain involved. When describing the pace, participants stated that they had difficulty keeping up because they did not have time to adequately think about what answers they would give before the class moved on to another subject. The absence of reflection time led to participants feeling that they have no control over

what was happening in the classroom. The fast pace also meant that they had to expend great amounts of energy to try to keep up with the rest of the class. The expenditure of energy started prior to class because they were anxious about what was going to happen and resulted in feeling physically drained by the time class was over.

The second research question had as its intent to permit the study's participants to describe their general impressions of the academic environment. The three subthemes that data analysis revealed were the (a) desire to observe prior to participation, (b) pressure to perform, and (c) desire for time to think. Several participants indicated that the professor often did not afford them the opportunity to understand the requirements of the current activity fully because it seemed that spontaneity was the desire. At least that was the conclusion to which the participants came. It left the participants feeling as if they were going through the exercises blindly. This spontaneity left the participants feeling embarrassed because there was the pressure to perform when they did not feel comfortable with their knowledge level (and therefore, capability) to complete the exercises adequately. Not being able to process the information from the class satisfactorily was the major complaint concerning the desire for time to think. Overall, the introverted students' tendency toward reflection rather than impulsiveness made the academic atmosphere a difficult one to manage at times.

The third research question asked participants to express their perceptions about how the active learning classroom environment affected their academic performance. This research question was of most interest to me because the active learning classroom environment appears to be diametrically opposed to introverts' preferences in the classroom. The same subthemes evident in the second research question were observable here – the (a) desire to observe prior to participation, (b) pressure to perform, and (c) desire for time to think. In addition, theme two

provided data about the participants coping ability concerning the seemingly unfavorable environment. Participants indicated that they attempted to be prepared before each class session, but they needed the opportunity to listen and gain their bearings academically. They also expressed that they felt an invasion of privacy when the professor asked them to share their thoughts extemporaneously about a subject without having the opportunity to mull it over first. In fact, they felt like that time to ponder did not occur until after each class session had ended.

Despite the seemingly complete disparity between introverts' natural tendencies and basic tenets of active learning, the vast majority of the participants indicated that they were still able to perform at their customary academic level. There was a psychological price to pay because they felt great discomfort while participating in the active learning classroom environment. There was also a physical price to pay because they were so tired after each class session. In spite of those costs, all but one participant indicated that their learning was at an acceptable level. It appears that they were able to adapt in order to perform academically despite the active learning environment. Participants who were enrolled in classes where the professors provided opportunities to complete activities more suited to their personality traits (Jigsaw, Muddiest Point, Think-Pair-Share, and other reflective activities) were able to employ 'in class' strategies to learn the concepts presented. The majority of the participants also utilized 'out of class' methods as well. They made use of various techniques to reflect on what had taken place in the class session they had just finished and to prepare for what might occur in the next class session.

The fourth research question was important to answer because of introverts' tendencies to avoid and sometimes loathe social situations. The subthemes under theme one that answering this question revealed were the (a) pressure to perform and (b) expenditure of energy. The

study's participants did report some difficulty with speaking in front of their peers, but they felt it was no more than the typical person would feel. As long as the professor allowed time to prepare prior to speaking, there were minimal nerves. They felt more in control of the situation when it came to the speaking situation, having already planned what they would say and how they would say it.

However, the participants did report that were often times when they did not get time to prepare, which made it difficult for them. They reported feeling a loss of control, feeling pressured to perform, and having to expend a great deal of energy emotionally. Several of them reported a spiral of emotions wherein they felt extremely nervous, causing them to shut down emotionally. This made them feel embarrassed, which caused them to shut down even more. The social atmosphere was often overwhelming for the participants.

Research question five sought to determine if the study's participants found any benefit to the techniques they encountered in the active learning classroom. The answer for the majority of the activities was a resounding 'no' from the participants. The single subtheme evident in their responses was the desire for time to think. As long as the professor gave participants time to think about what they were doing, they felt that there was a benefit. However, many of the exercises moved too fast for them to process the information. The participants considered many of the activities as unnecessary noise and energy wasted. Reflection time was essential for the participants to feel that they gained anything from the activities. Between the feelings expressed concerning research question three and research question five, it appears that the study's participants were able to perform academically because they used coping mechanisms mostly outside the active learning classroom environment. Requiring the need to adapt to the classroom environment puts the introverted student at a disadvantage.

Discussion

The theoretical framework for this study relied on Eysenck's Personality Theory and Kolb's Experiential Learning Theory. Eysenck's Personality Theory states that introversion and extroversion personality traits are genetic rather than being dependent on one's environment (Eysenck, 1947). Kolb's Experiential Learning Theory intimates that learners have the best results when they have direct involvement in the learning process (Kolb, 1984). In tandem, these theories suggest that the environment in which one learns must match the learner's personality traits since those traits are inborn rather than adaptable. The literature includes a number of studies about the benefits of active learning, including those for introverted students. This section includes a discussion of the study's finding as they relate to the theoretical framework as well as the related literature concerning active learning and introverts in the classroom.

Discussion of Findings in Relation to the Theoretical Framework

Eysenck's Personality Theory indicates that one's personality traits – introversion and extroversion – are genetically based and not dependent on one's environment. Eysenck (1967) suggested that introverts have a higher baseline level of dopamine than do extroverts. The result is that extroverts tend to seek out highly social and other dynamic situations to gain energy while the same circumstances tend to overwhelm introverts quickly so that they seek solitude to regain energy. Through brain scans, introverts' brains typically show gray matter differences between introverts and extroverts, which seem to confirm the dopamine level difference (Forsman, et al., 2014). In addition, these differences in brain make-up point toward other fundamental differences between the two personality types. Introverts tend to have an inward focus, associate less with people, are more reserved, and are more reflective than are their extroverted counterparts. Introverts are capable of acting extroverted for short periods, but it generally

means they expend a great deal of energy, which they must replenish in solitude or quiet interaction.

Participants in this study confirmed Eysenck's theory when they communicated their expenditure of energy while taking part in the active learning classroom environment. In opposition to their more extroverted peers who gained energy by partaking in the classroom activities, the study's participants sought refreshment through seclusion following each classroom session. Many of them expressed that they were tired at the end of class; a few of them expressed wonder at some of their classmates who wanted to socialize after class.

The study's participants also expressed their reserved and reflective tendencies when they indicated a desire to observe prior to participating in classroom activities and the need for time to process information before they shared their thoughts with others. According to Eysenck's theory, extroverts tend to process while speaking, and introverts tend to process thoroughly before they speak. Participants confirmed this tendency for introverts when they shared their need for time to think.

The other theory that supported this study was Kolb's Experiential Learning Theory. This theory suggests that learners construct knowledge optimally through interaction with their environment (Kolb, 1984). According to Kolb (1984), learners' interactions with their environment means they go through a testing of ideas until they work out conflicts and learning takes place. The learning environment, which Kolb (2005) calls learning spaces, creates opportunities for opposing factors such as "action [versus] reflection and experiencing [versus] conceptualizing" to present learners with the challenge of learning (p. 200).

Participants revealed the conflict with their environment and the struggle to learn due to an environmental mismatch with their personality traits. The opposing factors of action, which is

a basic characteristic of the active learning classroom environment, came in conflict with one of the basic personality characteristics of an introvert – reflection. Participants made their preference known that they wanted the professor to give them time to reflect on the concept being taught through the activities, but the dynamic environment made that needed reflection very difficult, if not impossible to achieve.

Related to this idea of action and reflection are the opposing ideas of experience and conceptualization. The typical approach taken in the active learning classroom is for learners to experience the concept in question. By that experience, educators assume that learners will construct knowledge as they follow the process in Kolb (1984). They will dynamically test their knowledge at the time of interacting with the material and either modify their current knowledge or add new knowledge. However, the study's participants indicated that reflection is necessary to be able to conceptualize and either integrate or incorporate the concepts being taught.

Viewing Kolb's Experiential Learning Theory in isolation suggests that learners gain the optimum level of knowledge by interacting with their environment as a critical thinking exercise. Through new experiences in the learning environment, learners are able to test the new against the old and either add to, modify, or dispense with the old to develop new constructs. However, when united with Eysenck's Personality Theory, there is the strong suggestion that for optimum learning to occur, learners must go beyond simple experiential learning. The learning environment itself must closely match learners' preferences according to their personality type, or they must create that atmosphere on their own to enhance the level of learning. This 'environmental creation' is what the majority of the participants in this study did to be able to maintain their customary academic performance. The single participant who could not adapt to

the classroom environment nor create a suitable environment to match her preferences saw her academic performance falter.

Discussion of Findings in Relation to the Empirical Literature

During this study, data analysis revealed two major themes: the active learning classroom environment does not match participants' introverted personality traits and participants were able to develop coping mechanisms to perform at their typical academic level. Four subthemes explained the first theme: the desire to observe prior to participation, the pressure to perform, the desire for time to think, and the expenditure of energy. The first theme with its associated subthemes confirmed and corroborated the existing literature. The second theme was unexpected and the existing literature only indirectly addresses it.

Theme one. The active learning classroom environment does not match introverted learners personality traits. First, the participants' desire to observe prior to participation in classroom activities is in line with Condon and Ruth-Sahd (2013), Eysenck (1965), and Ulus and Alben (2015), who suggest that this desire is due to the participants' reflective natures as introverts. In addition, as introverts, the participants are inclined to read and listen as they process information (Mall-Amiri & Nakhaie, 2013), which are reflective rather than impulsive activities. Introspection and soberness of thought are hallmark characteristics of introverts (Condon & Ruth-Sahd, 2013), which stands in opposition to the spontaneity and somewhat shallow nature of the active learning classroom.

Second, the participants' feeling that they were under pressure to perform during classroom activities relate, in part, to Van Kleef, De Drue, and Manstead (2004) findings that when introverts feel a time pressure they lose their motivation to thoroughly process information and then feel they are inadequately prepared to take part in classroom activities. In addition,

lacking the time to put their thoughts down on paper before participating also lessens introverts' motivation. They prove to be effective oral communicators once they have had the opportunity to organize their thoughts in writing (Condon & Ruth-Sahd, 2013). According to Zack (2010) and Dembling (2012), the preparation provides a sense of control in these public-speaking situations that somewhat relieve the pressure.

There are also physiological reasons why introverts feel this pressure to perform. Forsman, et al. (2012) indicated that introverts have a strong behavioral inhibition system (BIS), which leads them to avoid overstimulation. This fact, in conjunction with their high baseline level of dopamine (Eysenck, 1967; Forsman, et al., 2012; Laney, 2002; Lu, et al., 2014; Smillie, Cooper, & Pickering, 2011) means that introverts are likely to shut down emotionally when under such pressure. According to Cain (2012) and Dembling (2012), this pressure brings on a feeling of powerless as well.

Third, the participants' expressed desire for time to think also creates pressure. Jackson (2014) explains that introverts' prefer independent and solitary learning activities. Working in groups or impromptu sharing activities does not allow adequate processing and reflection time. Without time to reflect, introverts are not able to process the information thoroughly prior to sharing, which, according to Pankratz and Zimenoff (2014) is their preferred method.

Fourth, the participants' extraordinary energy expenditure left them feeling jittery prior to class and exhausted after class. These feelings are in line with Eysenck (1967); Forsman, et al. (2012); Laney (2002); Lu, et al. (2014); and Smillie, Cooper, and Pickering (2011) assertions that introverts have a high baseline level of dopamine. When introverts dread going to class and then participate in the classroom activities, they deplete their energy reserves from the social interaction. Cain (2012) and Dembling (2012) corroborate this assertion when they note that

introverts lose energy when interacting socially. Because of this energy loss, introverts tend to withdraw from these social situations to preserve energy.

Theme two. The study's participants were able to develop coping mechanisms to maintain their typical academic performance. The existing literature only indirectly focused on this ability because the participants were effectively creating an environment compatible with their learning preferences. They created a compatible 'in class' environment (only somewhat successfully) and an 'out of class' environment (much more successfully) to deal with the shortcomings of the active learning classroom environment. The existing literature addresses person-environment fit thoroughly. However, the existing literature does not address this environment creation ability.

According to Cavanagh, et al. (2016), learner buy-in greatly enhances the efficacy of active learning techniques. The authors go on to clarify that buy-in occurs in four steps: exposure, description of general benefit, explanation of specific benefit, and then commitment. One specific benefit to the learner would be enhanced learning. However, based on the work of Akiba and Alkins (2010) and Pawlowska, et al. (2014), the highest level of learning occurs when there is a person-environment fit. Data that revealed theme one suggests that the person-environment fit does not occur when introverts participate in an active learning classroom. As indicated in theme one, there are psychological [and physical] costs to the introverted learners (Marilou, 2010).

Related to person-environment fit, Minhas, Ghosh, and Swanzy (2012); Nilsson, et al. (2010); Romm, Gordon-Messer, and Kosinski-Collins (2010); and Tanner and Allen (2006) found that a combination of instructor-led and student-centered activities resulted in the highest content mastery versus either method alone. In addition, Mennella (2016) determined that time

for reflection was the most important ingredient. Participants in this study found that activities that allowed for these reflection times also permitted them to develop an 'in class' environment compatible with their learning preferences.

While analyzing the data from this study, I found that the study's participants developed coping mechanisms to maintain their typical academic performance. In relation to person-environment fit, the participants effectively created an environment compatible with their personality traits and learning preferences. They demonstrated the compatible environment in two parts: 'in class' behaviors and 'out of class' behaviors. The 'out of class' behaviors appeared to be more effective than the 'in class' behaviors due to varying facilitation methods on the part of their professors. Some professors provided more activities that allowed for reflection than others.

These behaviors extend beyond conventional healthy study habits. With the 'in class' behaviors, participants created a social and academic space congruent with their preferred learning. Rather than being required to continue to expend energy to comply with the expectations communicated in the active learning classroom, they were able to replenish energy while continuing to work. This adaptive behavior aligns with McFarlane (2016) who suggested that the active learning classroom might force introverts to divert energy away from cognitive activities to conform to the social and physical expectations of the surrounding environment. The participants found ways to redirect the energy back to cognitive pursuits and to replenish their reserves through solitude before undertaking the next activity.

The 'out of class' behaviors occurred separate from the classroom. Typically, the participants took time to replenish their energy prior to taking up these behaviors. Either they slept for some period, or they found quiet and solitude to replenish. Following that, the

participants would replay the class session in their minds to bring to mind the activities. Participants' strategies involved recalling and defining vocabulary words, reliving games and activities in a quiet setting to discern the concepts taught, and thinking about possible topics for the next class session. The participants repeated this process between every class session. At least one participant used recordings of the class sessions to mentally sort out what was important to her from what she called noise. Essential ingredients of the environment they created were the time factor, the opportunity to reflect, the quiet, and the solitude.

Implications

Based on the findings, there are theoretical, empirical, and practical implications for introverted undergraduate students in an active learning classroom environment. These implications are important to ensure that all learners benefit from the positive aspects of active learning methods documented in the literature.

Theoretical

Kolb (1984) suggested that learners perform at their highest level when interacting with their environment. They confront new information and work out any conflicts between old paradigms of thoughts with new concepts; once they have worked out the differences between old and new, learners construct new knowledge (Kolb, 1984). Eysenck (1947) found that personality traits such as introversion and extroversion are genetic. Individuals can act out of character for a short time period but at a psychological and physical cost (Eysenck, 1967).

When considering these two theories in tandem, it becomes evident that the type of environment in which learners find themselves is important. When taking part in the active learning classroom environment, participants tended to shut down emotionally and expended a great deal of energy – both emotional and physical. This predisposition made it difficult for

participants to construct new knowledge because interaction with the environment appeared to work against them. In a purely active learning environment, introverts will likely struggle to perform academically. Therefore, teachers should pay attention to the match between learners and their environment to maximize academic performance. Administrators should develop training that guides teachers to go beyond the typical learning style differences – visual, auditory, and kinesthetic – to understand the importance of environmental fit for their students.

Empirical

The bulk of the literature focuses on extroversion and ignores introversion. The majority of the literature that does address introversion treats this personality trait as an absence of extroversion. However, the literature that does illuminate introverts' tendencies and preferences in the classroom found that introverts are typically more reflective than impulsive. This tendency means that introverts typically excel in reading, writing, and listening skills (Condon & Ruth-Sahd, 2013; Mall-Amiri & Nakhaie, 2013). Conversely, they find challenges with impromptu speaking because there is no reflection time to prepare. Introverts can excel in public speaking given that time, though. The physiological differences between introverts and extroverts suggest that the social environment of the active learning classroom is better suited to extroverts than to introverts.

Participants of this study indicated that time for reflection and mental preparation were crucial for them to perform at a high academic level. They created a compatible environment in class with varying degrees of success. Not only did the environment creation allow them time to reflect, it also provided a time for energy replenishment so that they were better able to maintain an adequate energy level for each socially orientated activity. Teachers should build those

reflective opportunities into their daily schedules to ensure introverted students have enough energy to compete cognitively with their extroverted peers on a level playing field.

Practical

From a practical standpoint, researchers and practitioners alike have touted differentiated instruction (under various names) for over half a century. Washburne (1953) advocates adapting the curricula to the learners "ability, interests and development" (p. 138). Typical differentiation today focuses on various learning styles in the VAK tradition for visually oriented learners, those whose auditory senses take priority, and kinesthetic, or hands-on, learners. The basic tenet of differentiated instruction is to adapt the learning activities to the preferences of the learners.

When teachers utilize active learning techniques along with differentiated instruction, they carry out Kolb's (1984) Experiential Learning Theory. Whether their attempt is conscious or not, teachers' intentions are to maximize learning through (a) learner interaction with the environment and (b) adapting the environment to the learner. The literature has shown that both of these goals, when met, do help to maximize learning.

Nonetheless, this study suggests that teachers must expand their understanding of differentiated instruction. They must also incorporate fundamental ways to adapt the environment to the learner beyond VAK. When educators do not account for basic personality differences, they have defeated the purpose of differentiated instruction and asked the introverted learner to adapt to their environment instead. Teachers must go beyond the 'noise' and other outwards signs of active learning and provide reflective exercises like reading, writing, and individual thinking. Administrators interested in retention must also develop training programs that incorporate learning styles training for various personality type students.

Delimitations and Limitations

I made certain design decisions that defined the boundaries of the study. The Delimitations section below explains those design decisions. In addition, I have identified potential weaknesses of the study that were beyond my control due to the focus of the study. The Limitations section describes those limitations below.

Delimitations

The purpose of this transcendental phenomenological study was to describe the experiences of introverted undergraduate students in the active learning English classroom in a community college setting in Florida. For that reason, I defined several boundaries to focus on the subject of the study. I chose phenomenological design because the intent of the study was to allow participants to describe their experiences. Phenomenology is the appropriate design to allow those who have experienced a specific phenomenon (Husserl & Kersten, 1980; Creswell, 2013); in this case, an introverted personality type in the active learning classroom. The choice of an English classroom in a Florida community college was a decision of convenience due to my location and employment.

I restricted participation in the study to those who scored Clear or Very Clear introversion on the MBTI to ensure that participants' personality type undoubtedly met the focus of the study. Only participants 18 years of age or older were selected to only include those students who were truly college undergraduates rather than dual enrolled high school students that might have also experienced the phenomenon. I only included those classes whose professors classified their classrooms as active learning ones according to the ALIT to minimize subjectivity concerning the definition of what constitutes an active learning classroom.

Limitations

There are several possible limitations to this study based on its design, focus, sample size and population. First, because the study is phenomenological in design, the results are not generalizable and may be difficult to duplicate. The sample size of 10 is small although it is acceptable for a phenomenological study due to data saturation. However, it may have provided a limited view of introverts in an active learning classroom. A related limitation is that I did not control for shyness in this study. Based on the data, it does not appear that the participants were shy, with the possible exception of Jasmine.

There is a third limitation inherent to the study because I am an introvert who has experienced the phenomenon in question. Although I took care to bracket out my experience as an introvert, there is the possibility of bias in the description of the findings. Besides bracketing, I took care to minimize this limitation through member checking of the collected data, but bias may not have been eliminated.

A fourth limitation concerns the decision to limit participation to those 18 years of age or older. State College has a significant number of dual enrolled students, who are students who have not completed their high school education but simultaneously enrolled in college courses. By excluding these students as possible participants, it is possible that those who were experiencing active learning style activities for the first time were barred from participation. These novice introverts may have provided more detailed and comprehensive data.

Recommendations for Future Research

By local standards, State College is a small school with its student population being approximately one-fourth that of the next larger community college and roughly one-tenth the size of the third community college in the general metropolitan area. The study focused on the

active learning classroom environment in only one of this small school's many offerings. Future research should be considered in the larger colleges and expand to other disciplines that utilize active learning techniques.

Participants appeared to have created their own compatible environments to maintain their typical academic performance. In addition to canvassing a larger population, future researchers could place particular emphasis on the mix of impulsive versus reflective activities that professors employ during their class sessions. This new emphasis could potentially determine the optimum balance for introverts to gain the best advantage from the active learning classroom environment.

Teachers often view introverts as being 'at-risk' students (Dembling, 2012; Murberg, 2010; Rosheim, 2018; Ulus & Alben, 2015). According to Rosheim (2018), when introverts are quiet in the classroom, it is possible that teachers can affect their sense of self-worth and, possibly, their academic performance based on the teachers' attitude toward those students. Future researchers should consider studies that explore teachers' attitudes toward introverted students and the resultant effect on academic performance, retention, and emotional issues these students experience.

Not all participants were able to engage in 'environment creation.' This inability means that the environmental mismatch may have been a strong, contributing factor to the lower academic performance Jasmine experienced. Future researchers should consider what skills or personal attributes enable some but not all learners to create an environment compatible with their learning preferences.

Additionally, prior research indicates positive gains for introverts when utilizing active learning techniques in the classroom (Blackford, 2010; Davidson, Gillies, & Pelletier, 2015;

Jackson, Hickman, Power, Disler, Potgieter, Deek, & Davidson, 2014; Jackson, 2014; Linvill, 2014). The researchers primarily based their findings on formative assessment outcomes. The current study suggests that an introvert's ability to create a compatible learning environment has a major impact on their academic performance and learning. Future researchers should consider whether the active learning techniques or the introverts' environment creation abilities is the greater factor influencing their academic performance and learning.

Summary

The purpose of this transcendental phenomenological study was to describe the experiences of introverted undergraduate students in the active learning English classroom in a community college setting in Florida. Although numerous researchers suggested many benefits of active learning techniques, even for introverts, they have not given introverted learners a voice concerning their experiences in the active learning classroom. Introverts will typically be seen and not heard, so this study endeavored to provide them a voice.

One important consideration for optimum learning is person-environment fit (Akiba & Alkins, 2010; Pawlowska, Westerman, Bergman, & Huelsman, 2014). It is likely the most significant outcome of the current study. The current study's data suggested that the active learning classroom environment does not match the personality tendencies of introverted learners. This mismatch potentially creates learning challenges for introverted students who are required to participate in activities designed for an active learning classroom. Teachers then have the responsibility to differentiate instruction based on personality as well as VAK learning styles to meet the needs of their students. Specifically, they should include reflective exercises to provide information-processing time for their introverted students.

The current study's data also showed that introverts potentially have the ability to create an environment that is compatible with their learning preferences when faced with a mismatch. 'In class' and 'out of class' strategies introverts use help them to find time to reflect and to replenish their energy supplies. However, one of the fundamental principles is that teachers should adapt the environment to their students. Teachers should leverage the introverts' demonstrated ability to adapt in order to level the playing field for introverts with their extroverted peers.

During our interview, Boyd articulated the experiences of the participants in the clearest way. When thinking about the academic atmosphere of the class, he said:

> I know some of my friends really liked it because it seemed fun, but it just made me nervous and wore me out. If we got to do things like think-pair-share, it helped some to recover, but most of the time I had to work on stuff later. You know, after class. Uh, after I had a chance to wind down and get my head straight again. Just having the time alone to go over stuff, instead of being in the middle of all that noise, usually helped me figure things out. (June, 2018)

In this brief answer, Boyd conveyed the difference between the extroverted and introverted students in the class, the energy it took for them to participate, and the in class and out of class strategies they employed to create a compatible environment to perform academically.

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APPENDIX A: IRB APPROVAL LETTER

LIBERTY UNIVERSITY.
INSTITUTIONAL REVIEW BOARD

February 5, 2018

Richard L Green
IRB Approval 2960.020518: Breaking the Silence: A Phenomenological Study of Introverted Undergraduate Students' Experiences in the Active Learning English Classroom

Dear Richard L Green,

We are pleased to inform you that your study has been approved by the Liberty University IRB. This approval is extended to you for one year from the date provided above with your protocol number. If data collection proceeds past one year, or if you make changes in the methodology as it pertains to human subjects, you must submit an appropriate update form to the IRB. The forms for these cases were attached to your approval email.

Thank you for your cooperation with the IRB, and we wish you well with your research project.

Sincerely,

[redacted]

G. Michele Baker, MA, CIP
Administrative Chair of Institutional Research
The Graduate School

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APPENDIX B: CONSENT FORM

Consent Form

A Qualitative Study of Introverted Students' Perceptions of the Active Learning Classroom

Richard Lee Green
Liberty University
School of Education

You are invited to be in a research study of introverted students' experiences in an active learning classroom environment. You were selected as a possible participant because you are a university student who has taken part in and experienced the active learning classroom environment. I ask that you read this form and ask any questions you may have before agreeing to be in the study.

This study is being conducted by Richard Lee Green, a graduate student in the Liberty University School of Education.

Background Information:

The purpose of this study is to describe what and how introverted students experience when participating in the active learning classroom environment. The description would include introverted students' view of the academic environment and the social environment encountered in the active learning classroom, and how they feel that the active learning classroom environment affects their academic performance.

Procedures:

If you agree to be in this study, I would ask you to do the following things:

1. Complete a Myers-Briggs Type Indicator questionnaire – Approximate time to complete, twenty (20) minutes.
2. If chosen, based on your score on the Introvert/Extrovert scale, respond to a number of interview questions related to your experience in the active learning classroom environment. These interviews would be recorded and transcribed for analysis. Approximate time to complete, one (1) hour.
3. If chosen, based on your score on the Introvert/Extrovert scale, create a cognitive representation (descriptive drawing with explanation) of your experience in the active learning classroom environment. Approximate time to complete, thirty (30) minutes.
4. If chosen, based on your score on the Introvert/Extrovert scale, keep a journal of your experience in the active learning classroom environment for approximately two (2) weeks. Approximate time to complete for each entry, 30 minutes. Total time, two (2) hours.
5. If chosen, based on your score on the Introvert/Extrovert scale, participate in a non-synchronous online focus group to further describe selected shared experiences in the active learning classroom environment. The focus group's digital content will be saved for analysis. Approximate time to complete, three (3) hours over a period of two weeks.
6. Total participation in all activities would be approximately seven (7) hours.

Risks and Benefits of being in the Study:

The study has several minimal risks: Although actual names of participants, third parties, and the school with which they are associated will be disguised, there is~~,~~ the remote possibility that individuals or schools can be identified based on demographic information. All possible efforts will be made to minimize this risk, including the use of pseudonyms and minimal demographic information (age range and ethnicity).

In addition, as a part of this study, you will be asked questions that require you to share your feelings about and your experiences when participating in the active learning classroom environment. Answering these questions may cause feelings of emotional or psychological discomfort. At any point during the interview(s) you may opt to end your participation in the study.

The benefits to participation are helping educators understand the experiences of introverted students in their active learning classrooms and devise differentiated instructional methods that will benefit all students regardless of their academic ability or psychological make-up.

Compensation:

You will not receive payment for participation or be compensated in any other way.

Confidentiality:

The records of this study will be kept private. In any sort of report I might publish, I will not include any information that will make it possible to identify a subject. Research records will be stored securely, and only the researcher will have access to the records.
Pseudonyms for participants and third parties (including the school participants attend) will be used to protect the privacy and confidentiality of all participants. Data collected in physical form during the study will be stored in a safe maintained by the researcher and will be shredded and burned three years after the completion of the study. Digital forms of data will be encrypted and stored in digital form (flash drive/CD/DVD) and maintained in a safe by the researcher. Recordings will be erased after three years of the study's completion. Only the researcher will have access to the physical or digital forms of data. The researcher cannot ensure that other participants or those with whom you discuss your participation in the study will maintain your confidentiality and privacy.

Voluntary Nature of the Study:

Participation in this study is voluntary. Your decision whether or not to participate will not affect your current or future relations with Liberty University. If you decide to participate, you are free to not answer any question or withdraw at any time without affecting those relationships.

How to Withdraw from the Study:

If you choose to withdraw from the study, please contact the researcher at the email address/phone number included in the next paragraph. Should you choose to withdraw, data collected from you, apart from focus group data, will be destroyed immediately and will not be included in this study. Focus group data will not be destroyed, but your contributions to the focus group will not be included in the study if you choose to withdraw.

Contacts and Questions:

The researcher conducting this study is Richard Lee Green. You may ask any questions you have now. If you have questions later, **you are encouraged** to contact him at rlgreen@liberty.edu or 407-925-3646. The Liberty advisor for this study, Dr. Fred Milacci, may be contacted at fmilacci@liberty.edu .

If you have any questions or concerns regarding this study and would like to talk to someone other than the researcher, **you are encouraged** to contact the Institutional Review Board, 1971 University Blvd, Green Hall Suite 18837, Lynchburg, VA 24515~~02~~ or email at irb@liberty.edu.

You will be given a copy of this information to keep for your records.

Statement of Consent:

I have read and understood the above information. I have asked questions and have received answers. I consent to participate in the study.

☐ *I agree for interviews associated with this study to be recorded in audio format.*

Signature: _____ Date: _____

Signature of Investigator:_____ Date: _____

APPENDIX C: PARTICIPANT RECRUITMENT LETTER

Dear Student:

As a graduate student in the School of Education at Liberty University, I am conducting research as part of the requirements for a doctorate degree. The purpose of my research is to understand how introverted undergraduate students describe their experience in an English course structured as an active learning classroom environment, and how they describe the academic atmosphere of the active learning classroom. It is also to understand how they describe the effect they perceive the active learning classroom environment has on their academic performance, how they describe the social atmosphere of the active learning classroom, and what benefits they sense from taking part in the active learning classroom. I am writing to invite you to participate in my study.

If you are 18 years of age or older, score as a Clear to Very Clear Introvert as measured by the Myers-Briggs Type Indicator, are enrolled as an undergraduate student in a classroom identified as an active learning environment, and are willing to participate, you will be asked to complete the Myers-Briggs Type Indicator. If you score as a Clear to Very Clear Introvert, you will also be asked to participate in a one-on-one interview with me, complete a cognitive representation (drawing that represents your impressions), make journal entries for two weeks following your classroom sessions, and participate in an online focus group. It should take approximately seven (7) hours over a two-week period for you to complete the procedures listed. Your name and/or other identifying information will be requested as part of your participation, but the information will remain confidential.

Participation in this study is voluntary. Your decision whether or not to participate will not affect your current or future relations with Liberty University. If you decide to participate, you are free to not answer any question or withdraw at any time without affecting those relationships.

To participate, send an email to me at rlgreen@liberty.edu to let me know that you would like to participate. I will send you a consent form via email. The consent document contains additional information about my research. Please complete the consent form, sign it, and return it to me as an attachment via email. You may also send it via mail to Richard Green, 121 Caldwell Street, Apopka, FL 32712. Once I am in possession of the signed consent form, I will send the link for you to be able to complete the Myers-Briggs Type Indicator (MBTI). If you score as a Clear to Very Clear Introvert on the MBTI, I will contact you to schedule an interview.

Everyone who completes the MBTI will be entered in a drawing for a $100 Amazon gift card.

Sincerely,

Richard L Green
Doctoral Candidate

APPENDIX D: ACTIVE LEARNING INVENTORY TOOL

Complexity Level[1,*]	Code	Activity Description[2,3]
Low Complexity	A*	*Question & Answer:* Students orally respond to a question, comment, etc either ***voluntarily*** or by ***cold-calling.*** ****A1 and A2 denote simple knowledge / comprehension questions (recall) and generally are asked by instructor but limited or no time is provide for the student to process / respond. A1 denotes students responded to question / A2 denotes students were asked to respond AND given time but did not respond – will track A1 and A2 for numbers but not time as conducted in less than 1 minute. A3 denote a higher-order question, where students are provided time (>1 min) to process then respond. This does not include rhetorical questions.***
	B	*One-minute paper / Focused Listing / One Sentence Summary:* Short writing task designed to allow students to focus attention on a single important term, name or concept from a particular lesson / session
	C	*Think/Pair/Share:* Short, individual written response to a prompt/question; ***then*** instructed to share and discuss briefly with partner; ***then*** asked to share with larger group
	D	*Brain Dump / Free Write:* Short write in which students write down everything they know about an announced topic.
	E	*Muddiest Point:* At some point during or after an in-class presentation, students write a quick response to the prompt, "What was the muddiest point in ____?"
	F	*Misconception / Preconception Check:* Simple technique for gathering information on what students perceive they already know
	G	*Application Activity:* Written activity in which students apply 1-2 principles and concepts to real life situation
	H	*Student-Generated Questions:* Students create questions for quizzes or exams that are crafted to capture central elements of the course
	I	*Formative Quizzes / Surveys (Background Knowledge Probe):* Ungraded quizzes / surveys to determine comprehension
	J	*Computer Based Interaction Systems: (Personal response system)* Students participate in the lecture by responding to questions / statements via computers / wireless technology.
	K	*Self / Peer Formative Assessment:* Activities that require students to assess performance against applicable criteria; extend to offer specific suggestions for improvement
Moderate Complexity	L	*Small Group Presentations / Discussions:* Presentations / discussions of course material – led by ❑ ***Faculty*** vs. ❑ ***Student***
	M	*Role Playing / Simulations / Games:* Students and/or faculty performing specific roles for demonstration purposes Simulations / games include guiding principles, specific rules and structured relationships
	N	*Categorizing Grid / Pro-Con Grid:* Students are presented with 2-3 important categories (superordinate concepts) along with a scrambled subordinate terms, images, equations or other items that belong in one or another of the superordinate categories.
	O	*Defining Features Matrix / Memory Matrix:* Students categorize concepts presented according to presence (+) / absence (-) of defining features
	P	*Debates:* Small or large group structured exploration of central concepts, data, beliefs, values
	Q	*Peer Teaching:* Students teaching each other basic and/or intermediate levels of course materials or needed skills
	R	*Concept Maps:* Drawings or diagrams that show the mental connections that students make between a major concept presented and other concepts they have learned
High Complexity	S	*Cases:* Scenarios that require students to integrate their skills to solve problems that relate to course material
	T	*Cooperative Cases:* Scenario-based problem-solving activity using small groups to tackle specific questions/issues from larger list
	U	Jigsaw: Team-based: each member becomes subject matter expert in 1 of 4 areas selected from current course material. Each member teaches their subject matter.
	V	*Cooperative Learning / Problem Based Learning:* Students work together to learn course knowledge and to develop course skills.

Green, Richard Lee

From: Van Amburgh, Jenny <J.VanAmburgh@northeastern.edu>
Sent: Tuesday, November 13, 2018 5:05 PM
To: Green, Richard Lee
Subject: Re: Seeking to permission to publish dissertation with ALIT included in appendices

Dear Richard,

Of course and I would love a copy of your dissertation when complete.

Best
JVA

****
Jenny A. Van Amburgh, PharmD, RPh, FAPhA, BCACP, CDE
Clinical Professor and Assistant Dean for Academic Affairs
Residency Program Director
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Clinical Pharmacist
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From: Green, Richard Lee <rlgreen@liberty.edu>
Sent: Monday, November 12, 2018 6:47:32 AM
To: Van Amburgh, Jenny
Subject: Seeking to permission to publish dissertation with ALIT included in appendices

Hello Dr. Van Amburgh,

It has been over two years since we first communicated about your Active Learning Inventory Tool (ALIT). You granted permission for me to use the ALIT as part of my research with introverts and the active learning classroom. I want to again thank you for allowing me to use it. It helped tremendously, and I found that you were correct when you stated that most teachers neglect to include the reflection step, which turned out to be a crucial factor for introverts.

I am finally completing the dissertation process and will be defending my research about two weeks from now. I would like to include a copy of the ALIT as one of my appendices and am seeking your permission to publish with the ALIT included.

Thank you very much,

Richard L Green

APPENDIX E: SAMPLE INTERVIEW EXCERPT

Question 5

Interviewer: Ok. How would you define an active learning classroom?

Interviewee: Um. I'm not sure what you mean when you say active learning classroom.

Interviewer: Well, I don't really want to define it for you because I would like for you to give your own definition. Think about the English Composition class you're in now.

Interviewee: Oh, ok. Whenever we go to class, we can expect that the professor is going to have group activities for us to do. I guess that's what you mean. Umm, I remember that she said …

Interviewer: When you say she; you mean the professor, right?

Interviewee: Yeah, the professor said that she liked to get students involved in learning. So, I guess I would define the active learning classroom as when students are involved in group activities that are, uh, supposed to be designed to help student learn better. It always seems busy, uh, I don't know, crazy …, chaotic; that's the word I'm looking for. It seems chaotic at times.

Question 6

Interviewer: Well, that leads to the next question I have for you. How would you describe your experience in an active learning classroom?

Interviewee: I get nervous every time I'm getting ready to go to class.

Interviewer: Why?

Interviewee: Well, you know.

Interviewer: Let me assure you again. Your identity will be completely protected. No one will connect these answers to you, especially your professor and your friends.

Interviewee: (Sigh) Ok, I'm not really outgoing. I like to just be in the class and watch, and listen, and take notes. I don't really like to speak out. I don't like that feeling that everyone is watching me and judging me. Whenever we do those activities, there's a lot of pressure.

Interviewer: What do you mean by pressure?

Interviewee: I guess I'm feeling some of the same pressure now. Like I have to have a good answer right away.

Interviewer: Just take your time.

Interviewee: Whenever we do those activities, I kind of shut down because I can't think. That makes me feel even worse, so I shut down even more.

Interviewer: Ok.

Interviewee: People think I'm grumpy, but I'm not. I just feel a lot of pressure.

Question 7

Interviewer: I don't want you to feel pressured. We can stop for a while or we can stop all together.

Interviewee: It's ok. We can keep going.

Interviewer: All right then, how would you describe the social atmosphere of an active learning classroom?

Interviewee: Do you mean when we are doing activities?

Interviewer: Whatever you want to tell me.

Interviewee: Well, I talk with a couple of the other students in the class. But a lot of times I feel out of place.

Interviewer: Why?

Interviewee: Well, everyone else seems to be having so much fun, and all I do is sit there hoping I don't get picked. It's fun to watch everyone else, but I don't want to be the one having to be out there in front of everyone.

Question 8

Interviewer: How would you describe the academic atmosphere of an active learning classroom?

Interviewee: Well, like I said before, It's chaotic at times. There's a lot of noise in the room. Everybody's talking at once, and it all starts to bounce around in my head. Even when we are doing something together as a whole class

Interviewer: Does everything you do in the class feel that way?

Interviewee: No, I guess not. I don't mind everything that we do in the class. Like when the professor gives us a chance to write about what we just learned and then share it with another person, that's ok. I don't mind doing Jigsaw, either.

Interviewer: What is Jigsaw, and what is it about Jigsaw that makes it better?

Interviewee: It's kind of the same as writing what we learned and sharing, but we get to work on it in between classes. When we come back to class, we share the part of the chapter we were assigned.

Interviewer: What makes that better? You still have to put yourself out there.

Interviewee: Yeah, I know, but I get time to put it together ahead of time. I can even read it out loud if I want. Doing it ahead of time lets me write it out just the way I want to say it.

Interviewer: All right, so, you like Jigsaw, and you don't mind, um, writing and sharing. What activities would you say you don't like?

Interviewee: I would say role playing and games. Games are the worst.

Interviewer: Why would you say that?

Interviewee: I don't want to make a fool of myself. I don't get time to think about what to say.

Question 9

Interviewer: Well, then, how would you characterize your ability to perform academically in an active learning classroom?

Interviewee: I'm not sure what you mean.

Interviewer: Do you think that being in an active learning classroom affects you being able to learn the class material?

Interviewee: Oh, hmm, probably not.

Interviewer: Why not?

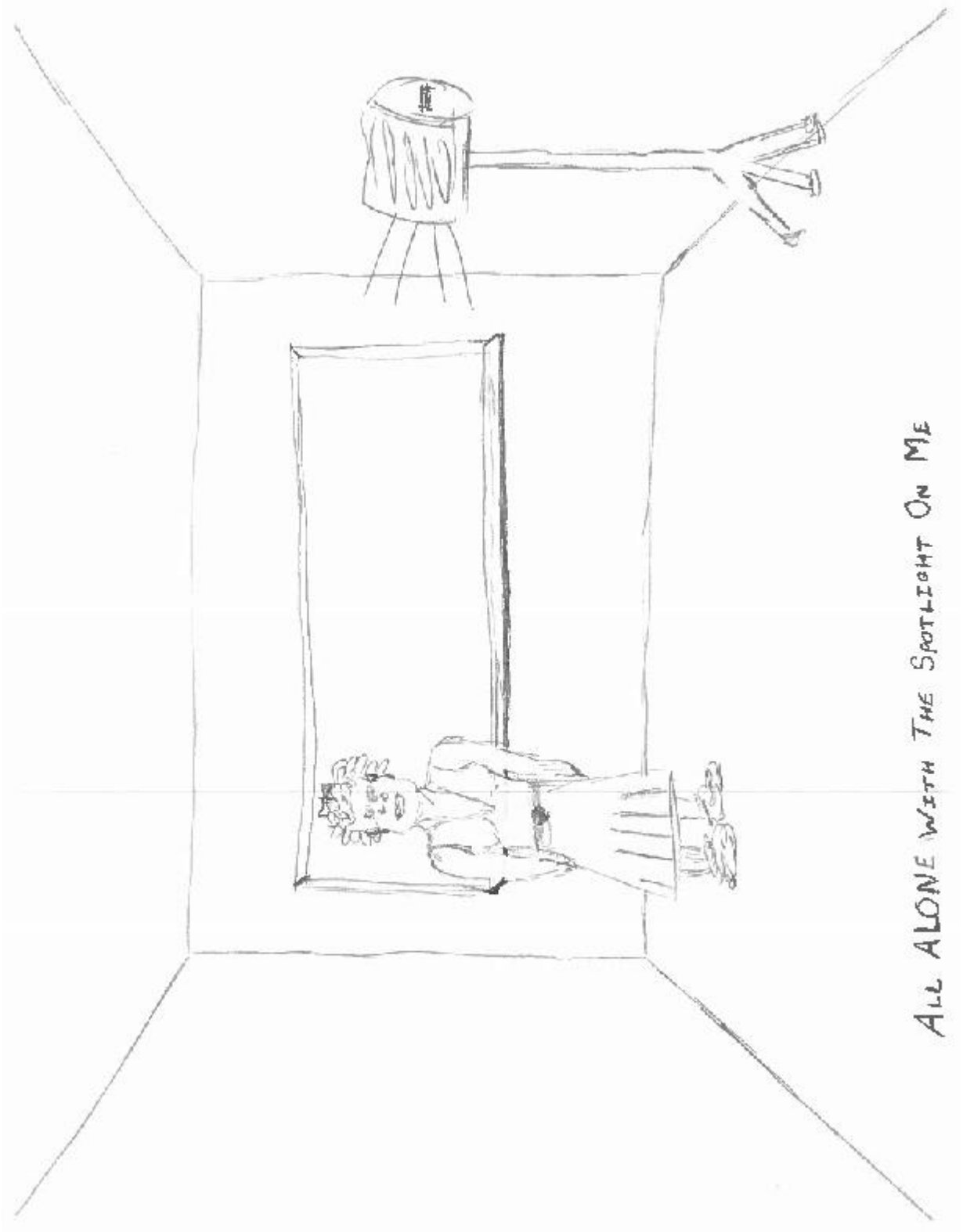
Interviewee: Well, it makes me nervous to do some of the things we do, but I still learn stuff. I can write a lot better now than I could when we started the class. Not all of the activities are bad. I think some of them are helpful.

Question 10

Interviewer: Well, that kind of leads into the final question. What benefit, if any, have you found in being a part of an active learning classroom environment? If none, why so?

Interviewee: Hmm, I would have to say I have not seen any real benefits. I would really prefer not to have to go through all of the nerves and still be able to learn. I said some of the activities aren't so bad, but I don't know that they are really helpful either. I could learn without all of that noise.

APPENDIX F: SAMPLE COGNITIVE REPRESENTATION



APPENDIX G: SAMPLE TRANSCRIPT OF ONLINE FOCUS GROUP

Q: How would you describe your experience in an active learning classroom?

Participant 1: It's nerve racking most of the time cause I don't like having to put myself out there for everyone to judge me.

Participant 2: I've gotten used to the idea that we're going to have to put ourselves out there each time we go to class, but it hasn't changed the feeling of dread before I go.

Participant 1: I know what you mean, I feel queezy just thinking about somedays.

Participant 3: There are some days that I think about not going because I know that afterwards I'm going be drained, and my parents are still going to want me to go somewhere. By that time, I am done with people for the day.

Participant 2: Yeah, I can't wait to leave some days so I can just go somewhere by myself. I don't go home for the same reason you said. I wait till I know everybody''s gone out.

Participant 4: I always read book before class, but don't help much cause we never get chance to just listen.

Participant 2: That's what I told my mom. She just told me to do my best.