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An Analysis of Self-Directed Learning of First-Year, First-Generation College Students

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An Analysis of Self-Directed Learning of First-Year, First-Generation College Students

by

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A dissertation submitted in partial fulfillment of the requirements for the degree of Doctor of Philosophy
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DEDICATION

You are never too old to set another goal or to dream a new dream.

— C.S. Lewis

To my mother, Frances – you paved the way for a daughter to dream.

To my daughters, Marta and Anna – you are the heart of all my dreams.
ACKNOWLEDGMENTS

At times our own light goes out and is rekindled by a spark from another person. Each of us has cause to think with deep gratitude of those who have lighted the flame within us.

— Albert Schweitzer

Reaching this milestone was not a solitary endeavor - the journey required the companionship of family, friends, mentors, and coaches. I am deeply indebted to all those who helped me tend the fire.

To my family, I offer my heartfelt thanks. Your love, encouragement, and unwavering faith never failed to ignite the spark within and help me focus on the light at the end of the tunnel. I especially want to acknowledge contributions made by my daughters. Marta, you helped me set small goals, organize my thinking, and refocus my vision when darkness threatened to extinguish the light. From love notes to meals delivered to my computer desk, you are the ultimate motivator and caregiver. Anna, you listened to my thoughts and ideas, read my rough drafts, and used your passion for learning to offer insight and clarity. Your light is a beacon that illuminates my path, calms my steps with reassuring words, and nurtures confidence.

My life is also blessed with a network of friends who provide encouragement when needed, and more importantly, times of celebration.
regardless of need. They remain faithful whether I stumble in the dark or burst into flames with excitement. I must extend a special thank you to Marilyn. No one else has quite the same understanding of getting lost, making U-turns, and crossing the finish line – it takes a bestie.

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This little light of mine, I'm going to let it shine, let it shine, let it shine!

Life is a journey, not a destination. ~ Ralph Waldo Emerson
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ABSTRACT

The purpose of this study was to examine the reflective essays of first-year, first-generation college students for evidence of self-directed learning at the conclusion of their first semester at the university. A phenomenological qualitative method was employed and a content analysis rating rubric used to identify and code evidence related to four themes: Self Awareness, Decoding and Pattern Fit, Autonomy/Responsibility, and Academic Success.

The study findings indicated that first-year, first-generation college students have the capacity to take ownership of their learning in ways exemplified by self-directed learners. Participants demonstrated deep reflection and metacognition and their essays revealed unexpected student vulnerability as they voiced fears and hopes with a nearly innocent transparency and candor. Study findings also emphasized the importance of a support system that includes coursework designed to facilitate understanding of individual learner characteristics, emphasize strategies to maximize learner efforts that lead to successful outcomes, and empower students to become more self-directed. This study also expands the field of adult education by providing evidence that learner control is a key component of self-direction and is positively correlated to academic success. Ample evidence related to metacognition, self-regulation, and learner control was identified in the essay data.
CHAPTER ONE

INTRODUCTION

In 1998 the American Association for Higher Education, in collaboration with the American College Personnel Association and Student Affairs Administrators in Higher Education, published the work of their Joint Task Force on Student Learning (1998). The Task Force examined scholarly work related to conditions impacting learning and the culminating report set forth ten principles to strengthen learning outcomes in higher education settings if applied “to the practice of teaching, the development of curricula, the design of learning environments, and the assessment of learning” (p. 2). Additionally, the report highlighted the role of students in the collaborative effort to improve the quality of learning. Principle 10 asserted

learning involves the ability of individuals to monitor their own learning, to understand how knowledge is acquired, to develop strategies for learning based on discerning their capacities and limitations, and to be aware of their own ways of knowing in approaching new bodies of knowledge and disciplinary frameworks. (p. 2)

In other words, college students should be self-directed learners. However, many first year college students enter the university with little knowledge of the academic demands they face. Coming from the high school...
learning environment where independence may have been limited, they often
grapple with the concept of autonomy and struggle to take ownership of their
learning. Hence, continuing efforts to gain insight into this transition and the
realm of self-directed learning from the perspective of first year college students
are important to the field. This study adds to the research by examining the
experiences of students nearing the completion of their first semester at
university.

**Problem Statement**

Self-directed learning (SDL) is a well-established concept in the field of
adult education and continues to be a topic of research. The term self-directed
learning was introduced into the adult education lexicon when Houle (1961),
Tough (1967, 1971), and Knowles (1975, 1984) began to formalize conceptual
understanding. However, debate continues over how SDL manifests itself
Merriam & Brockett, 1997; Merriam & Caffarella, 1999). Knowles (1975) defined
self-directed learning as a process, but Long (2000a) declared, "We have not
been consistent in differentiating between self-directed learning as a process and
between self-directed learning as conditions that affect the process" (p. 9). Much
like the discussion over the influence of nature versus nurture in the arena of
child development, the adult education field remains uncertain as to whether to
characterize self-directed learning as a state phenomenon in which outside
influences guide self-direction; a trait phenomenon in which inherent, personal
qualities drive the learning; or the interactions between the two (Long, 2000a). Research may provide some resolution of the argument, as stated by Long (2000a), “Regardless, of the position we take on the state/trait hypothesis the need for additional answers persists” (p. 7).

There is a dearth of literature regarding the adult education theory of self-directed learning as it relates to first-year, first-generation college students, a group representing between one quarter and one half of all college attendees (Berkner & Choy, 2008; Pascarella, Pierson, Wolniak, & Terenzini, 2004; Staklis, Bersudskaya, & Horn, 2011). Hence, the state versus trait debate is also void of research related to this significant population of students who strive to be the first in their immediate family to attend college.

Maher (2005a, 2005b) studied first year college students, establishing the foundation for this study. Investigating the process of developing learner self-directedness through the facilitation of metacognition and intentional learning, Maher’s two-phase study resulted in the assertion that additional research of pre- and post-instruction data would allow for comparison to both quantify and qualify any success of learning strategies applied by the population sample (Maher, 2005b). Phase Three was initiated in 2009 (Hall, 2011) with the collection of both quantitative and qualitative data.

Contributing to Maher’s (2005b) Phase Three research plan, Hall (2011) investigated self-direction among first-year, first-generation college students as measured by the Personal Responsibility Orientation to Self-Direction in Learning
Scale (Stockdale, 2003). Although Hall’s findings provided some evidence of self-directed learning among first-year, first-generation college students, this exploration of the phenomenon anchored in the voice of individual student experience added a missing dimension and broadened understanding of the relationship between learner control and academic success.

Learner control plays an important role in self-directed learning. Brockett and Hiemstra (1991) recognize learner control as a key concept when they define personal responsibility as “the ability and/or willingness of individuals to take control of their own learning that determines their potential for self-direction” (p. 26). Hall’s (2011) assertion “The viewpoint that learner control is a key component of self-direction has implications for practitioners in higher education” (p. 117), further attested to the need for additional study. In addition, he specified a need for examination of written essays for evidence of student ability to “analyze immediate academic demands and acceptance for increased responsibility for learning” (p. 125).

Additional research related to student success in higher education institutions was also called for by the University of South Florida (USF) Student Success Task Force (USF, 2010) after a five-month study on the Tampa campus. The Task Force recognized the need for USF to “do everything possible so that all students have the opportunity to succeed in their education objectives” (p. 157) and highlighted campus initiatives related to this study, including the Freshman Summer Institute; the First-generation Access and Pre-Collegiate
Program; and Tutoring and Learning Services. However, the importance of student self-direction was also emphasized: “students are ultimately responsible for taking the initiative to succeed in the major or program of their choosing” (p. 157). To address the issues related to student success at USF, a variety of goals were established, including

The university should build an Institutional Research capacity focused on student success that would conduct the qualitative and quantitative research necessary to inform decisions about proposed changes in policies, assist in the development of new or improved programs and services, and provide support for other actions and initiatives designed to improve student success” (p. 151).

This study responded to recommendations for additional research and contributed to Phase Three of Maher’s (2005b) initial studies of learner self-direction, through qualitative inquiry of the phenomenon of self-directed learning in the same population identified by Hall (2011): first-year, first-generation college students at the conclusion of their first semester at the University of South Florida.

**Purpose**

The purpose of this study was to examine the reflective essays of first-year, first-generation college students for evidence of self-directed learning at the conclusion of their first semester at the university. The study follows Hall’s (2011) quantitative research and utilized a qualitative approach to examine the
phenomenon of student experience in a 2009 first-year, first-generation access program required course, Strategic Learning. The course emphasized various aspects of self-directed learning, including the exploration of the individuality of learning, metacognitive thinking, and intentional strategies. A culmination exercise guided the students through a reflection process to produce an essay describing themselves as self-directed learners. This study explored the phenomenon of student experience based on the personal voice expressed in the reflection essays.

Merriam and Simpson (2000) state, "The defining characteristic of research is that it is a systematic, purposeful, and disciplined process of discovering reality structured from human experience" (p. 5). Grounded in the personal voice of first-year, first-generation college student experience, this study contributed to two primary purposes of research in adult education: the expansion of the knowledge base of the field, and improved quality of practice (Merriam & Simpson, 2000).

Research Questions

The purpose of this study was to examine the reflective essays of first-year, first-generation college students for evidence of self-directed learning at the conclusion of their first semester at the university. The following research questions guided the investigation by providing structure for the inquiry process and data analysis (Merriam & Simpson, 2000).
1. To what extent did students identify and validate their personal learning profile in their reflective essays?

2. To what extent did students report their process for applying the learning system framework to the analysis of academic tasks?

3. To what extent did students report the purposeful adaptation of their personal learning profile and apply strategies appropriate to the academic task demand?

4. To what extent did students state examples of personal responsibility and accountability for their own learning?

5. To what extent did students report academic success?

**Theoretical Framework**

This study was framed by the adult education theory of self-directed learning. Brockett and Heimstra’s (1991) Personal Responsibility Orientation (PRO) Model (Figure 1) characterization of self-directed learning as an interaction between outside influences and inherent, personal qualities provides the theoretical framework for this study.

Personal Responsibility, the initial focus of the PRO Model, represents the willingness of individual learners to take ownership of their learning, thoughts, actions, as well as the consequences that result from their choices. Distinguishing between the instructional processes that serve as an external guide to Self-Directed Learning and the internal personality characteristics that
lead to Learner Self-Direction, the PRO Model delineates two separate components.

![Diagram](image)

**Figure 1.** Personal Responsibility Orientation Model (Brockett & Hiemstra, 1991). Used with permission.

As a vital link between these external and internal factors, and the learners' personal responsibility, Brockett and Hiemstra (1991) suggested an optimal environment for Self-Direction in Learning may be achieved when congruence between the model components aligns with the broader social context of the learning situation.

The PRO Model offers a broad conceptual framework in which to study self-directed learning in the social context of first-year, first-generation college students. Through the expanded self-directed learning construct which addresses the multiple components of the instructional environment, the
individual student, the social context, and the interaction among those components, the PRO Model provides multiple pathways to discovery.


Flavell, Miller, and Miller (2002) explained “The human mind is conceptualized as a complex system of interacting processes which generate, code, transform, and otherwise manipulate information of diverse sorts” (p. 26). The Brain-Mind Connection construct (Figure 2) emphasizes the path of sensory inputs as they pass through four discrete patterns of operation before reaching
the mind where working memory is housed. After empirical research, including factor analysis of the operations (Johnston, 1996, 1998) and confirmation of person-specific use regardless of race, gender, or ethnicity (Johnston and Dainton, 1997), the learning patterns were entitled Sequence, Precision, Technical Reasoning, and Confluence.

Every learner uses all of the patterns, as Dawkins, Kottkamp, and Johnston (2010) explained, “The degree to which we use each of these filters is measured by how each Pattern facilitates or limits the stimuli’s entry into the mind” (p. 7). The Sequence learning pattern filters for aspects of learning related to organization and planning. Sequence drives the need to think in steps, follow

The four operational learning patterns of Sequence, Precision, Technical Reasoning, and Confluence work within the three simultaneous mental processes of cognition, conation, and affectation (Dawkins, Kottkamp, & Johnston, 2010; Johnston, 1996, 1998), providing the foundation of the Interactive Learning Model construct (Figure 3).

Johnston (1996) described the three mental processes represented in the ILM in terms of the learner. Cognition represents aptitude, conation is action, and affectation refers to feelings. Cognition and conation work together to create informed effort; there is a learning focus driven by thinking and knowing. When conation and affectation interact the result is engaged effort; direct energy that compels the learner to take action. The combination of affectation and cognition
results in reflective effort; attitudes of efficacy are displayed through feelings. The combined interaction of all three mental processes results in the will to learn.

![Interactive Learning Model Diagram]

**Figure 3.** The Interactive Learning Model (Dawkins, Kottkamp, & Johnston, 2010). Used with permission.

The will to learn and its relationship to self-directed learning guided this investigation of self-directed learning among first-year, first-generation college students on the theoretical frameworks of the Personal Responsibility Orientation (PRO) Model (Brockett & Heimstra, 1991) and the Brain-Mind Connection &

**Significance of the Study**

There is a dearth of literature regarding the adult education theory of self-directed learning as it relates to first-year, first-generation college students. Maher (2005a, 2005b) studied first year college students, establishing the foundation for this research and launching a third phase that identifies the first-year, first-generation student. Hall (2011) began the Phase Three research and was the first to empirically examine the relationship between self-directed learning and first-year, first-generation college students through quantitative methods. This study was a continuation of Maher’s (2005b) Phase Three research and utilized qualitative inquiry to provide additional understanding of the phenomenon of self-directed learning among first-year, first-generation college students at the conclusion of their first semester at the University of South Florida.

**Research Design**

This phenomenological qualitative study of self-directed learning from the perspective of first-year, first-generation college students advanced the field of adult education by examining personal reflections of students reaching the end of their first college semester. Much may be learned about the phenomena of students as adult learners in the context of instructional practices they have experienced.
Merriam and Simpson (2000), refer to phenomenology as part of philosophical inquiry “which examines the underlying opinions, beliefs, values, and assumptions to bring clarity to a field of practice” (p.84). Giorgi (1988) in Ary, Jacobs, and Razavieh (2002), explains that phenomenology “merely wants to understand how, through experience, all the events and objects of the world appear to the consciousness” (p. 447). This study increased understanding of the personal experiences of participants as they reflect on themselves as learners and ascribe meaning to the phenomenon in their own voice through written essays.

For the purposes of this study, both deductive and inductive processes (Ary, Jacobs, & Razavieh, 2002; LeCompte & Schensul, 1999; Patton, 2002) were used to render meaning from the reflective essays of first-year, first-generation college students. Following the recommendations of Maher’s (2005a, 2005b) study of a similar population, this researcher applied deductive analysis using the essay protocol, content analysis rating rubric, and data themes that emerged in Maher’s foundational work. However, this analysis also featured inductive processes as the researcher observed and captured new themes that emerged from the data.

The study utilized secondary data assembled by Tutoring and Learning Services (TLS) and the Freshman Summer Institute (FSI) at the University of South Florida. The FSI provided a structure for a convenience sample in the ongoing research of Maher (2005a, 2005b), the Director of TLS. As a component
of Maher’s ongoing investigation, the use of secondary data for this study is intentional.

**Limitations**

As with any research study that focuses on the human experience, this study may hold limitations. One limitation may relate to the nature of the open-ended response data collected from the participants in the form of written essays. The study population may not be equally skilled in articulating ideas and perceptions in writing (Creswell, 2009; Patton, 2002), and the nature of the written essay limited the opportunity for the investigator to probe for clarification of thoughts and ideas mentioned. Additionally, while the essays were to be completed independently, outside of regular class time, no method for verifying those conditions or determining the effort exerted by the participants exists (Patton, 2002). Furthermore, participants may have constructed responses based on a personal impression of what they deemed most acceptable and preferred by the instructor of their Strategic Learning course.

Qualitative data in the form of written essays may also limit this investigation as a phenomenological study. Although language is one way to communicate phenomena, it may not adequately capture the scope and magnitude of individual experiences (Merriam and Simpson, 2000).

Also of concern are limitations inherent in secondary data, most notably the lack of control over the data collection process. Eight independent instructors of the Strategic Learning course collected convenience sample data, including
reflection essays, at the conclusion of the 2009 Freshman Summer Institute. The reflection essay assignment was based on a protocol containing explicit written instructions to the students regarding the questions and electronic submission. Those uniform instructions were provided by the director of a tutoring and learning services program at the host institution. The director also maintained secure storage of the electronic data until such time that a study to examine the data could be approved. This investigator was not involved in data collection or storage, and played no role in the FSI or Strategic Learning course in 2009.

This qualitative study did not result in fixed data but instead generated a compilation of experiences of first-year, first-generation college students to illuminate understanding of the nature of learner self-direction in this population (Davenport, 2010). Although this study may shed light on the self-directedness of first-year, first-generation college students, it should not be assumed that the results can be generalized beyond the study population and single institution. Transferability may be impacted by both selection and setting effects. The selection effects that establish the unique group for this investigation include first-year, first-generation college students and participants in the six-week Strategic Learning course. In addition, the context of the six-week Strategic learning course and the USF Summer Bridge program may contribute setting effects (Ary, Jacobs, & Razavieh, 2002).

Transferability of findings related to participants’ capacity as self-directed learners may be attributed to factors outside this study. These factors include
human cognitive and emotional development, participation in other college
courses, and personal experiences in-class and/or out-of-class.

**Definition of Terms**

Specific terms used in this proposed research may elicit multiple
meanings. The following operational definitions are provided to provide
clarification and a contextual foundation for understanding.

**Academic Success.** Self-reported indicators, including specific grades or scores
(e. g., GPA or end-of-course grade), as well as subjective comments alluding to
success (e. g., much better student now; went from failing to passing; showing
improvement).

**First-generation college students.** Students who report on their college admission
application that neither parent completed a baccalaureate degree.

**Freshman Summer Institute (FSI).** A six-week summer bridge program for first
year, traditional aged (17-19) college students at the University of South Florida.

**Learning Connections Inventory (LCI).** A self-report instrument that is
administered to identify an individual’s learning patterns and place the patterns
on a continuum to indicate an individual’s level of use.

**Let Me Learn Process **®**(LML Process®).** “An Advanced Learning System that
prepares all learners to be accountable for their learning outcomes” (Dawkins,
Learning Patterns. Four cognitive operations that drive learning by filtering stimuli based on unique combinations of use. The four patterns are referred to as Sequence, Precision, Technical Reasoning, and Confluence.


Personal Learning Pattern Profile. A learner’s description of their unique combination of four learning patterns as measured by the Learning Connections Inventory (LCI).

Self-Directed Learning (SDL). “A process in which individuals take the initiative, with or without the help of others, in diagnosing their learning needs, formulating learning goals, identifying human and material resources for learning, choosing and implementing appropriate learning strategies, and evaluating learning outcomes” (Knowles, 1975, p. 18).

Task Analysis. A process of decoding an academic task “to determine the degree to which each of the four [Learning] Patterns is required to complete the task successfully.” (Dawkins, Kottkamp, & Johnston, 2010, p.146).

Organization of the Dissertation

This study is organized into five chapters. Chapter One introduces the study and discusses the problem, purpose, research questions, theoretical framework, significance, research design, limitations, researcher background, and definition of terms pertinent to the study.

Chapter Two provides a review of literature related to the academic field of adult education and the purpose of the study. Topics explored include self-
directed learning, motivation, metacognition, self-regulation, the Let Me Learn Process®, foundational research by both Maher and Hall, and first-generation college students.

Chapter Three discusses the research methods and procedures employed for the study, including the design, population, sampling, data collection, and informed consent. A detailed explanation of the researchers’ four-phase plan for data analysis is provided and specific strategies to assure high quality research are clarified.

Chapter Four presents the study findings related to the research questions and qualitative themes. In addition the results of code-recode and multiple method triangulation methods are discussed and the chapter concludes with a summary.

Chapter Five completes the dissertation with researcher discussion, conclusions, implications for practice, and recommendations for further research.
CHAPTER TWO

REVIEW OF THE LITERATURE

The purpose of this study was to examine the reflective essays of first-year, first-generation college students for evidence of self-directed learning at the conclusion of their first semester at the university. The review of literature focused on topics germane to the purpose and begins in the field of adult education with an overview of self-directed learning, followed by a discussion of current thinking. A discussion of self-directed learning and sub-processes of motivation, metacognition, and self-regulation follow. Next Johnston’s (1998) Let Me Learn Process® is described, followed by discussion of foundational research by Maher (2005a, 2005b) and Hall (2011). The chapter concludes with significant theories pertaining to first-generation college students.

Self-Directed Learning

Self-directed learning (SDL) is a well-established concept in the field of adult education and valued as an ideal for students in higher education. In 1998 the American Association for Higher Education, in collaboration with the American College Personnel Association and Student Affairs Administrators in Higher Education, published the work of their Joint Task Force on Student Learning (1998). The Task Force examined scholarly work related to conditions
impacting learning, and the culminating report highlighted the role of students in the collaborative efforts to improve the quality of learning. In summarizing a vision of students as self-directed learners, the report asks that

students take charge of their own learning and organize their educational programs to include a broad array of experiences both inside and outside the classroom; become aware of the cumulative nature of their education, and consequently plan and monitor their development; and establish personal relationships with faculty and staff as an essential part of their education. (p.17)

In other words, college students should be self-directed learners. The report further supports this ideology with a call to action among faculty and staff in institutions of higher learning, requesting that they “help students understand their relative strengths and weaknesses in learning; ask students to observe and record their own progress in learning…. enable students to monitor their own learning… and help them delineate and articulate their learning interests, strengths, and deficiencies” (Joint Task Force on Student Learning, 1998, p. 18), to name a few.

Self-directed learning was introduced into the field of adult education decades ago by Houle (1961) and further developed as a concept by Tough (1967, 1971) and Knowles (1975, 1984). However, despite wide acceptance of the concept, debate over the ways in which self-directed learning manifests itself continue today (Brockett & Hiemstra, 1991; Candy, 1990; Long, 1990, 1991,
There is little consensus on whether self-directed learning is a trait or state phenomenon. In his often cited definition, Knowles (1975) associates with the state phenomenon position by declaring self-directed learning is a process in which individuals take the initiative, with or without the help of others, in diagnosing their learning needs, formulating learning goals, identifying human and material resources for learning, choosing and implementing appropriate learning strategies, and evaluating learning outcomes. (p. 18)

Twenty-five years later, Long (2000a) declared "We have not been consistent in differentiating between self-directed learning as a process and between self-directed learning as conditions that affect the process" (p. 9). Much like the discussion over the influence of nature versus nurture in the arena of child development, the adult education field remains uncertain as to whether to characterize self-directed learning as a state phenomenon in which outside influences guide self-direction; a trait phenomenon in which inherent, personal qualities drive the learning; or the interactions between the two (Long, 2000a).

Although a clear resolution to state versus trait debate remains elusive, four conceptual frameworks of self-directed learning have emerged over the years (Long, 1991, 1998, 2000b). Long (2000b) presented them chronologically as they appeared in the literature:
1. The sociological concept based on Tough's definition and research into adults’ learning projects.

2. The technique concept based on Knowles’ ideas about teaching formats.

3. The methodological concept, based on the distance method of delivering instruction.

4. The psychological concept based on my ideas of self control over the cognitive process of learning. (p. 13)

According to Long (2000b), each framework highlights a different facet of self-directed learning. The sociological conceptualization posits learning as a solitary endeavor. Although learning may include assistance from others, such as teachers or mentors, the process is not dependent on their involvement. In contrast, the technique conceptualization views learning as a group process, with leadership roles assigned for the purpose of designing an environment that supports self-direction in learning. The third conceptualization, methodological, relates to distance education. In the 21st Century, technological advances have delivered educational opportunities that are not bound by the isolation and inaccessibility that were synonymous with distance in the past. Therefore, both the solitary aspect of the sociological concept and the group learning focus of the technique concept can be accommodated by variations in the instructional methods and communication media available in methodological conceptualization of distance education. (Long, 2000b)
These first three conceptualizations are focused on external elements that impact self-direction in learning. Long (2000b) expanded the knowledge base by investigating the mental processes related to self-directed learning. Asserting that self-directed learning is most likely a psychological construct that resides in the cognitive and personality characteristics of the individual, Long’s contributions led to the association of the psychological conceptualization of self-directed learning with three primary dimensions of cognition: motivation, metacognition, and self-regulation (Long, 2000b). If the concept of self-directed learning is indeed a psychological construct, as asserted by Long (2000b), the complexity of the construct provides myriad opportunities for research in adult education applications.

**Motivation**

Motivation plays a principal role in the psychological conceptualization of self-directed learning. Long (2000b) describes motivation as “energy, drive, or desire that encourages, impels, stimulates, or sustains an individual to accomplish a goal or task” (p. 16). Two constructs of motivation are commonly referred to in the literature: intrinsic motivation that is generated within the learner, and extrinsic motivation which is provided externally (Deci, Koestner, & Ryan, 1999; Dole & Sinatra, 1998; Ryan & Deci, 2000; Long, 2000b). Long (2000b) cites a third construct from the research of Deci and Ryan (1985), amotivation or lack of motivation, and notes that learners would need to change from this motivationless state in order to engage in self-directed learning.
extrinsic motivation would be preferable to no motivation, Long (2000b) indicates a preference for intrinsic motivation and hypothesizes “when someone engages in intrinsically motivated learning, self-direction will be more intense, be of a higher quality, and be more persistent” (p.17). Similarly, Dole and Sinatra (1998) found that “motivation can influence an individual’s willingness to struggle with a complex or confusing message” (p. 122).

In a meta-analysis of 128 motivation studies, Deci, Koestner, and Ryan (1999) determined “the value of being intrinsically motivated in many applied settings such as education” (p. 659). They go on to say research on intrinsic motivation has focused attention on the more general benefits of supports for autonomy and competence for motivated persistence, performance, and well-being. Many social institutions face problems including alienation, detachment, and disengagement that could be at least partially ameliorated by promoting higher levels of intrinsic motivation and self-determination. (p. 659)

**Metacognition**

Metacognition is of primary importance in this proposed study and Long (2000b) asserts that its role in understanding self-direction in learning should not be overlooked. He elaborated, “It is posited that when someone is engaged in self-direction they are actively resorting to metacognition” (p. 19).

The concept of metacognition is broad but according to Martinez (2006) its practice is “as old as rational thought” (p. 699). From the teaching practices of
Socrates to more recent decades of inquiry, increased understanding and enhanced descriptions of the nature of metacognition have developed. However, a single, formal definition remains elusive. (Flavell, Miller, & Miller, 2002; Martinez, 2006). As understanding has evolved, definitions of metacognition have been generated, but none warranted inclusion in the American Heritage Dictionary of the English Language (2000). Twelve years later metacognition can be found in the Merriam-Webster Online Dictionary (Metacognition, n.d.) and is defined as the "awareness or analysis of one's own learning or thinking processes." In simplest terms, metacognition is the process of examining ones' own thoughts and is commonly defined as “thinking about thinking” among classroom educators. Expanding the meaning, Martinez (2006) suggests metacognition is “the monitoring and control of thought” (p. 696). This characterization is well aligned with Flavell's (1979, 1981) work that emphasized the important role metacognition plays in cognitive monitoring. When learners keep track of how they are progressing through an assignment (e.g., recognizing they are reading without comprehending and employing a new strategy to improve comprehension) they are engaging in the process of cognitive monitoring (Flavell, 1981).

Flavell (1981) asserted that four classes of phenomena act and interact to guide the monitoring process: “Metacognitive knowledge, metacognitive experiences, goals (or tasks), and actions (strategies)” (p. 273). Metacognitive knowledge is what a person knows or believes about their own cognitive abilities;
recognizing both strengths and weaknesses (Schwartz & Perfect, 2002). This includes thoughts related to the cognitive processes of how tasks are understood and managed, and what strategies may be best to solve a particular problem (Flavell et al., 2002).

Metacognitive experiences develop over the years, as learners engage their memory to retrieve information. Flavell, Miller, and Miller (2002) explain “Through years of experience as a rememberer (and forgetter!), you have learned to recognize and respond adaptively to your metacognitive experiences” (p. 264). These successful and unsuccessful experiences related to memory inform the judgments and decisions learners make (Schwartz & Perfect, 2002). The phenomena of goals/tasks and actions/strategies often act in tandem and are particularly relevant for problem solving. Through participation in cognitive tasks, learners may begin to understand how the complexity of the information impacts decisions about how to manage the task. Similarly, learning can emphasize the strategies or means that are most likely to assist them in successful goal attainment (Flavell et al., 2002). Flavell, Miller, and Miller (2002) elaborate:

Metacognitively sophisticated children or adults are like busy executives, analyzing new problems, judging how far they are from the goal, allocating attention, selecting a strategy, attempting a solution, monitoring the success or failure of current performance, and deciding whether to change to a different strategy. (p. 263-264)
Although there is little research in the metacognition of adult learners, Flavell, Miller, and Miller (2002) emphasize “metacognitive skills can be successfully taught” (p. 167) and remind us that metacognition “is a tool of wide application for solving many sorts of problems” (p. 167). One example, from higher education, can be drawn from challenges associated with the fundamental task of comprehending complex text. Maki and McGuire (2002) point out “For text material, metacognition includes judgments about levels of comprehension and learning of the text, and predictions about future memory for the material” (p. 39).

Metacognition plays a primary role in self-directed learning; however Hennessey (2003) cautions “possessing the ability to be metacognitive does not guarantee that learners will engage in thoughtful application of that ability” (p. 107).

**Self-Regulation**

Self-regulation, as an outcome of metacognition, empowers learner control of actions; however, it is neither a simple or linear progression from metacognition to self-regulation (Hertzog, 2002; Koriat, 2002; Long, 2000b; Sinatra & Pintrich, 2003; Son & Schwartz, 2002). There are multiple sub-processes of self-regulation, reported by Long (2000b) as “self-monitoring; self-instruction; self-reinforcement; goal setting; self-planning; self-selection of strategies; and self-evaluation” (p. 20).

Studies in the field of applied metacognition refer to two separate but related sub-processes of “monitoring” and “control” (Hertzog, 2002; Koriat, 2002;
Son & Schwartz, 2002; Schwartz & Perfect, 2002). Adding to the confusion, discussions of the sub-processes of self-regulation often use terminology that links understanding back to metacognition (Hertzog, 2002; Koriat, 2002; Son & Schwartz, 2002; Schwartz & Perfect, 2002). For example, Schwartz and Perfect (2002) use the term metacognitive monitoring and define it as “processes that allow the individual to observe, reflect on, or experience his or her own cognitive process” (p. 4); and the term metacognitive control, described as “the conscious and non-conscious decisions that we make based on the output of our monitoring processes” (p. 4). Son and Schwartz (2002) add the term metacognitive judgment to the mix in a discussion of the shift in research from metacognition “to issues of metacognitive control, or how people use metacognitive judgments to adjust, strategize, and maximize learning” (p. 16).

Despite variations in terminology, much can be learned from studies of the complexity of self-regulation in different contexts. In motivation studies, Deci, Koestner, and Ryan (1999) report “the primary negative effect of rewards is that they tend to forestall self-regulation” (p. 659). Investigating the relation between monitoring and control, Son and Schwartz (2002) conclude “awareness of self-regulation and competent metacognitive control seems to be the important factor when attempting to improve learning performance” (p. 27). And in the concluding chapter of *Applied Metacognition* (Perfect & Schwartz, 2002), Koriat summarized nine studies in nine different contexts, and cautions “effective monitoring skills
and accurate metacognitive beliefs do not necessarily translate into effective self-regulation strategies” (p. 279).

**Let Me Learn Process ®**

The Let Me Learn Process ® (LML Process®) “is an advanced learning system that provides learners with the means to articulate who they are as a learner, and then guides teachers in developing the learning environment necessary for students to employ their personal learning strategies with intention” (Let Me Learn, n.d.). Based on Johnston’s (1996, 1998, 2008) Brain-Mind Connect & Interactive Learning Model®, the LML Process is aligned with the sociological and psychological conceptualizations of self-directed learning (Long, 2000b). This resonates in Daskins, Kottkamp, and Johnston’s (2010) description of the LML Process® as “an advanced learning system that prepares all learners to be accountable for their learning outcomes” (p.141).

Entrance into the LML Process® can be associated with the sociological construct of self-directed learning as it primarily a solitary endeavor. With limited guidance, the learner completes the Learning Connections Inventory (LCI). This is a first step to better understanding of self in terms of the four operational patterns, Sequence, Precision, Technical Reasoning, and Confluence, that make up each learner’s brain-mind interface as described in the Interactive Learning Model (Johnston, 1998, 2008, 2010).

The LCI is administered in either paper or electronic formats as a two-part, 28-question, self-report tool with three open-response questions (Johnston &
Dainton, 1997). Dawkins, Kottkamp, and Johnston (2010) describe the LCI as “a self-administered interview that captures the degree to which an individual uses each of the four Patterns” (p. 9) and further explain:

Tallying an individual’s responses to the LCI produces a score for each of the four Learning Patterns. The individual’s score for each Pattern falls into one of three ranges or levels: a score of 7 to 17 indicates Avoid, a score of 18 to 24 indicates Use As Needed, and a score of 25 to 35 indicates Use First. (p. 10)

Maher and Slotnik (2012) made the distinction “The results do not categorize or place a learner into a single quadrant, but instead emphasize that every learner uses each of these interactive processes in concert to varying degrees along a continuum” (p.11). The Use First range on the continuum represents Patterns that function strongly and automatically, driving cognition (thinking), conation (actions), and affectation (feelings). Patterns that fall into the Use As Needed range represent those that the learner can comfortably call into service when needed, but there is no strong pull to use them. Learners are unlikely to use the Avoid range Patterns unless absolutely required to do so and then the negative feelings often hamper learning. To assist learners in understanding their unique set of Patterns, the LML Process® includes descriptors that illustrate how each Pattern influences thinking, actions, feelings, and internal self-talk across the continuum of use (Dawkins, Kottkamp, &
Instructional activities in the LML Process® provide experiences to increase understanding of individual learning patterns, culminating in the creation of a Personal Learning Profile (Dawkins, Kottkamp, & Johnston, 2010; Johnston, 1998, 2008, 2010; Johnston & Pawelski, 2010). With the Profile, the learner must synthesize what they know about their patterns and bring validity to their LCI scores, using their own words to describe their typical “thoughts, actions, and feelings when asked to complete a task that requires Sequence, Precision, Technical Reasoning, and Confluence” (Dawkins, Kottkamp, & Johnston, 2010, p. 15). The goal is not to generate a complete and perfect Profile the first time, but to revise it over time as a tool to map personal growth as a self-directed learner.

At this juncture, the learner may be empowered by the knowledge of their unique Patterns and the various ways they influence learning, but using this knowledge to intentionally impact learning is more challenging. Here the LML Process® gets to the heart of Johnston’s (1996, 1998, 2008) Brain-Mind Connect & Interactive Learning Model® where the combined interaction of all three mental processes (cognition, conation, and affectation) results in the will to learn. However, the learner may not have all the requisite knowledge to intentionally change as necessary and control the will to learn. Sinatra and Pintrich (2003) account for the complexity of this process and “characterize intentional
conceptual change as the goal-directed and conscious initiation and regulation of cognitive, metacognitive, and motivational processes to bring about a change in knowledge” (p.6). To move in this direction, the learner must directly align with the psychological conceptualization of self-directed learning and its three primary dimensions of cognition: motivation, metacognition, and self-regulation (Long, 2000b, p. 15).

The LML Process® is not built on the assumption that motivation, metacognition, and self-regulation are automatic processes and therefore begins this phase of the instructional process by promoting metacognition as an active, not passive process. Even so, Hennessey (2003) warns against assumptions that an active learner “selectively attends to information, activates prior conceptual knowledge, monitors comprehension, and assess the status of the new information in relationship to prior conceptions while cognitively engaging in academic tasks” (p. 111). Hennessey goes on to say “These cognitive processes require that learners be willing and able to recognize, evaluate, and, if necessary, reconstruct existing ideas and beliefs” (pp. 111-112) and argues “that this level of cognitive processing is highly sophisticated and involves intentional level processing” (p. 112).

The LML Process® responds to such warnings by scaffolding the learner and making complex science easier to comprehend. For example, in the Let Me Learn text for students in higher education, Johnston and Pawelski (2010) explain metacognition as
the internal talk of your Patterns as they collectively consider information and experiences (Cognition), organize, research, figure out, and evaluate the risk involved in taking on a new learning challenge (Conation), and feel their responses to the situation they are facing (Affectation). (p. 30)

The LML Process® assists the learner in moving through the internal pattern talk and on towards self-directed learning through the Metacognitive Drill (Figure 4), referred to by Dawkins, Kottkamp, and Johnston (2010) as “a step-by-step practice of the metacognitive process” (p. 141).

As part of the LML Process®, teachers often demonstrate the seven actions of the Metacognitive Drill: Mull, Connect, Rehearse, Express, Assess, Reflect, and Revisit (Dawkins, Kottkamp, & Johnston, 2010). As the learner works through the first four actions of the Metacognitive Drill, they also engage self-instruction and self-reinforcement, aspects of self-regulation (Long, 2000b). As the learner Mulls, they consider the assignment and determine what is expected and how they might begin. By Connecting, the learner begins to activate prior knowledge and fit the pieces together with the new challenge (Dawkins, Kottkamp, & Johnston, 2010; Johnston, 1998, 2008, 2010; Johnston & Pawelski, 2010). Next the learner begins to Rehearse; a private time to think through the challenge and consider actions before discussing it openly. Finally the learner is ready to Express themselves, a sort of field test of ideas or products, which often results in receiving feedback from others. (Dawkins,

At this point in the Metacognitive Drill, learner actions shift towards evaluative thinking and self-regulation sub-processes of monitoring, self-evaluation, and self-planning (Hertzog, 2002; Koriat, 2002; Long, 2000b; Son & Schwartz, 2002; Schwartz & Perfect, 2002). To Assess, the learner measures their work against the criteria of the challenge. The next step is to Reflect, when the learner stops to face themselves and review their work, asking if it represents their best effort. Dawkins, Kottkamp, and Johnston (2010) point out “This is the heart of becoming an intentional learner, the phase where the buck stops”
(p.142). Finally the learner reaches Revisit, a time to think about what they learned in this challenge and what action will be taken in the future if they face a similar task. (Dawkins, Kottkamp, & Johnston, 2010; Johnston, 1998, 2008, 2010; Johnston & Pawelski, 2010; Ostermann & Kottkamp, 2004).

Dawkins, Kottkamp, and Johnston (2010) argue “the most underused phases are Assess, Reflect, and Revisit because these are seldom, if ever, part of experience in school or work” (p. 143). In the LML Process®, as teachers and students begin to openly discuss metacognitive practices, especially those related to judgment, reflection, application of skills in new settings, there is potential for growth in self-directed learning capacity. Johnston (2010) states

The good news found in reflective practice is that it does not conclude with assigning blame and shame or with rewarding success.

Instead…revisiting metacognitive decisions serves to reinforce the specific strategies that led to success and reconsider those that led to failure.

Revisiting grows metacognitive capacity and personal insight. (p. 71)

In addition to the Metacognitive Drill, the LML Process® provides learners tools, such as the Word Wall, FIT, and the Strategy Card, to engage self-regulation and its sub-processes. The Word Wall is designed to assist with task analysis. Lists of cue words that are typically found in assignments, such as outline, measure, construct, or improvise, are organized by the four learning Patterns. Learners practice de-coding assignments by labeling the key words to determine which Patterns are needed to fulfill the task requirements. Dawkins,
Kottcamp, and Johnston (2010) confirm the effectiveness of the Word Wall, “Decoding tasks makes them understandable and doable. Students enjoy breaking the code of assignments because they know that by doing so they will tackle the task with greater success and less frustration and wasted energy” (p. 141). The ability to analyze academic tasks by decoding assignments empowers and motivates learners. Osterman and Kottcamp (2004) state “Possessing knowledge of self as a learner, understanding the requirements embedded in learning task, and understanding how to analyze task has motivated teachers and students to use this new knowledge and understanding to improve their practice” (p. 163).

Through the process of task analysis, the learner may find that their Patterns are mismatched to the task requirements. To complete the assignment successfully, modifications of their preferred Pattern use may be required. The LML Process® provides support for learners as they face the challenge of intentional change with the FIT tools. Dawkins, Kottcamp, and Johnston (2010) explain it as “FITing the learner to the task using the tools of Forge, Intensify, or Tether” (p. 19). When the task demands use of an Avoid Pattern, learners must intentionally focus their thinking, actions, and feelings regarding that pattern to Forge ahead and complete the task. The image of a blacksmith exerting great force to reshape iron with steady strikes of the hammer is indicative of the strength, focus, and commitment required to succeed outside your learning comfort zone. Sinatra and Pintrich (2003) stress “Intentional level processing is
not only initiated by the learner, it is under the learner’s conscious control” (p. 4). When a task requires Patterns that fall in the range of Use as Needed, the learner can Intensify their efforts to match the demand. This would not be a task the learner is really excited about, but neither is it one they panic over and dread. Johnston (2010) explains that the Use as Needed Patterns “serve as our ballast, providing a counterbalance…to the extremes of our Use First and Avoid Processes” (p. 96). With just a little more focus and intention, the learner can Intensify Pattern use to successfully complete the assignment. The third FIT Tool is Tether. Because the Use First Patterns dominate and drive everyday learning, most learners automatically approach an assignment from this comfortable and confident way of working. However, when task analysis reveals the Use First Pattern is not needed for an assignment, the learner must restrain, or Tether the Pattern. Imagine the chef who happily uses a spatula to build a birdhouse and then is surprised when it falls apart. The right tools for the right job will make a difference but, once again, it requires focus and intention to FIT learning Patterns to task demands (Dawkins, Kottkamp, & Johnston, 2010; Johnston, 1998, 2008, 2010; Johnston & Pawelski, 2010; Ostermann & Kottkamp, 2004).

The Let Me Learn Process® shows great promise for increasing self-direction in learning. Maher and Slotnik (2012) report its use “with teachers, administrators, and the business community at 19 national and international sites” (p. 13) including faculty at seven universities, including the University of South Florida (USF). Maher’s (2005a, 2005b) studies explored the LML Process®
as implemented at USF and because it forms the basis for the curriculum used in the 2009 Freshman Summer Institute Strategic Learning course, the LML Process® plays a central role in this study.

2004 – 2005 Research by Maher

The enhancement of the teaching and learning process through a better understanding of human learning has guided the professional practice of Patricia Maher, Ph. D., for more than 30 years. As the Director of Tutoring and Learning Services (TLS) at the University of South Florida (USF) since 2003, Maher guides academic support options in partnership with the USF Library Learning Commons. “The mission of TLS is to strengthen students’ ability to learn effectively and efficiently and support their timely and successful progression toward graduation” ((University of South Florida, 2012b, n. p.). In addition to providing tutoring in university courses related to math, science, business, and languages, TLS offers study skills workshops in virtual and face-to-face formats, and learning support courses such as Critical Reading and Writing, Advanced Learning Systems, Advanced Reading, and Strategic Learning (University of South Florida, 2012a).

The content of two learning support courses, Advanced Learning Systems and Strategic Learning, is based on Johnston’s (1998) Let Me Learn Process®. For a variety of reasons both courses are not typically offered each semester. The decision to offer the two-credit hour Advanced Learning Systems course or
the one-credit hour Strategic Learning course is often based on the specific
needs of the student cohort group or availability of administrative resources.

In 2004, Maher (2005a) organized an initial study to assess the impact of
Johnston’s (1996) Interactive Learning Model on “students’ ability to utilize the
processes of metacognition and intentional learning as tools to increase self-
direction in learning” (p. 5). According to Maher, Phase One was “intended to be
the first in a multi-phase research process established with the intention for
expansion and refinement” (p. 17).

During the 2004 Fall Semester, Maher (2005a) used a convenience
sample of 93 first-year college students enrolled in five sections of the two credit
hour Advanced Learning Systems course. The classes met once weekly across
the 15-week semester in two-hour sessions. Multiple data, including the Learning
Connections Inventory (LCI) scores and the students’ responses to end of
semester, short answer essay questions, were collected from the participants by
five individual course instructors.

Maher (2005a) reported several trends in the LCI scores that could
influence instructional decisions. Of note was the fact than none of the
participants scored in the range that indicates they avoid using the Sequence
pattern: “This group of students appears to require a high degree of organization,
structure, and clear goals in their learning environment” (pp. 8-9). Additionally,
nearly one-third of the participant scores identified Technical pattern as a Use-
first preference, suggesting that these learners had “a strong need for their learning expectations to have relevance and practical application” (p.9).

The content analysis of 60 reflective essays resulted in Maher’s (2005a) identification of four themes: 1) Self Awareness and Understanding, 2) Task Analysis and Intentional Learning, 3) Autonomy and Responsibility, and 4) Increased Success. Nearly all participants validated their learning patterns and many provided examples as evidence of Self Awareness and Understanding. Maher (2005b) found the results related to Task Analysis and Intentional Learning difficult to interpret because of the relationship between Themes Two and Three, however, many participants did show “growth in their capability to both analyze tasks and consider some form of intentional adjustment to their approach in order to enhance their success rate” and they provided examples “indicating that students were beginning to utilize the metacognitive process to intentionally select strategies based on the needs of the situation” (p12). The third theme, Autonomy and Responsibility, garnered few specific comments from participants, however there was some indication of a “growing sense of autonomy and responsibility for their own learning success through the use of metacognition” (p15). The participants provided general statements related to Increased Success, but only a few offered specific examples that “directly credited a specific gain to their growing understanding about themselves and the learning process” (p15).
At the conclusion of Phase One, Maher (2005a) determined that the “desired shift in focus from teaching study skills to guiding students through a reflective and potentially transforming experience on the process of learning” (p16) had occurred. Indications that the participants were “growing in their ability to assess their own metacognitive processes and self-regulate their approach” (p16) was noted, however “the broader goal of increasing responsibility and self-direction in learning was not as clearly evident” (p17). Maher recommended that this concern be addressed in subsequent studies.

Based on the promising results from Phase One, Maher (2005b) revised the curriculum the Advanced Learning Systems and Strategic Learning courses to increase focus on student autonomy and self-direction through the inclusion of Johnston’s (1998) Let Me Learn Process®. Undergraduates who enrolled in the Spring 2005 semester of Advanced Learning Systems were a convenience sample of 27 students. Differing from the initial study, the Phase Two population did not include first-time-in-college students and was not limited to first-year students. The study participants enrolled in two sections of Advanced Learning Systems and, as in Phase One, attended classes once weekly across the 15-week semester in two-hour sessions.

The Phase Two research method included revision of the reflective essay protocol, moving from short answer questions to structured questions that framed the reflection process to help participants focus responses. In addition, a content analysis rating rubric was developed using a five-point Likert scale indicators.
increasing strength of responses related to the themes that emerged from the Phase One data analysis. To provide additional clarity, the four Phase One themes were adapted to create the following five rating themes for the rubric: 1) Self Awareness, 2) Task Awareness, 3) Intentional Learning, 4) Autonomy/Responsibility, and 5) Increased Success. The content analysis rating rubric was used by three reviewers and results were triangulated to confirm inter-rater reliability.

As in Phase One, findings in Maher’s (2005b) subsequent study were reported in relation to analysis of LCI scores and reflection essays. A comparison of LCI scores across both studies revealed similar pattern trends with “the predominance of the Sequence and Technical patterns” (p. 8). Maher recommended additional study of this trend and investigation of possible relationships between patterns and the major area of study of student participants. Analysis of the reflection essays revealed students seemed to “consistently develop the ability to utilize the LML Process® to become more self-aware, to analyze learning tasks, and to intentionally select strategies accordingly” (p. 10). Of particular interest was evidence indicating “learner autonomy and responsibility was nearly as high as the other skills” (p. 10). These positive findings were in contrast to Phase One, in which little evidence of learner autonomy and responsibility was identified. Finally, a newly emerging theme was identified by all three reviewers from participant comments describing “increasing confidence to succeed in the present and future semesters” (p. 11). To further
investigate this theme, Maher (2005b) recommended that academic self-efficacy be explored in subsequent research.

Phase Two research concluded with Maher's (2005b) additional recommendations for future research. Suggestions included additional revision of the content analysis rating rubric; the collection of essay data at the onset of instruction for baseline comparison of participant skills and attitudes; and increasing the potential for essay evidence related to academic success by asking study participants “to identify a specific example(s) of improved academic success as a result of the development of new metacognitive skills” (p11) as part of the end-of-course course reflection essay.

At the conclusion of Phase Two, Maher (2005b) reported that groundwork for Phase Three had begun with the intention of using a convenience sample of students enrolled in future courses. However, to reduce population variables noted in the first two phases, collaboration with the director of the University of South Florida Freshman Summer Institute was required to create a more homogenous group of first-year, first-time college students, all attending a special pre-matriculation program, and coming from homes of similar socioeconomic levels. Additionally, a search for an instrument designed to measure self-directed learning in adult settings was initiated. Discussion of other appropriate pre-and post-test procedures had begun and strategies for collecting additional data from participants of Phases One and Two were under consideration.
In 2009, Hall (2011) assisted Maher (2005a, 2005b) in completing the preliminary work for Research Phase Three and finalized decisions regarding study population, instrumentation, and data collection. Through collaboration between USF Tutoring and Learning Services (TLS) and the Freshman Summer Institute (FSI), a plan was formalized for incoming first-year students with first-generation status to be enrolled in a one-credit hour Strategic Learning course. An instrument was selected to be used as a pre- and post-test measure of self-directed learning: Stockdale’s (2003) Personal Responsibility Orientation to Self-Direction in Learning Scale. Data collection plans included a variety of both quantitative and qualitative data.

Phase Three data collection was conducted during the USF 2009 Summer Semester B. As Director of USF Tutoring and Learning Services, Maher (2005a, 2005b) stored the collected data for future analysis.

**2011 Research by Hall**

Investigating the change in self-direction among first-year, first-generation college students, Hall (2011) conducted the first analysis of the Phase Three data collected in Maher’s (2005a, 2005b) ongoing study. Using a quantitative research design, Hall (2011) analyzed the secondary data that was provided in a coded format that included demographic information but no individual student identifiers. The purpose of the study was to determine if statistically significant differences existed in variables measured by pre- and post-test administrations.

Of the 224 students in the convenience sample, Hall (2011) limited analysis to a dataset of 110 (49.1%) participants who completed both pre- and post-tests and were categorized as black, Hispanic, or white. Hall reported the demographics as predominantly female (66.36%) with 33.64% male, and nearly equal representation among Hispanic (36.72%), Black (33.72%), and White (30.92%) study participants. The sample “was a homogenous group of traditional age (17-19), first-year college students who recently transitioned from the high school environment” (p. 119).

The study focused on six variables: college admissions GPA, ethnicity, gender, PRO-SDLS pre-test score, PRO-SDLS post-test score, and academic performance across three semesters at USF ending with Spring 2010 cumulative GPA. Hall (2011) completed a statistical analysis of the data using SAS software and reported “Descriptive statistics, such as appropriate measures of central tendency, variability, standard deviation, minimum/maximum values, skewness, and kurtosis for all variables” (p. 87). In addition, measures of reliability and internal consistency, and inferential tests addressing the research questions were conducted.

Hall (2011) reported three significant relationships between PRO-SDLS pre-test scores and admissions GPA. There was a positive correlation between PRO-SDLS pre-test total scores (r=.26, p<.01) and admissions GPA, but the low
magnitude of effect suggests that while the relationship is significant, it is not a strong relationship. Positive relationships were also found in admissions GPA and PRO-SDLS subcomponents of learner control (r=.26, p<.01) and self-efficacy (r=.29, p<.01), demonstrating that “participants with a higher score on the learner control and self-efficacy components…were found to have a higher admissions GPA” (p. 110), but again the effect sizes were low.

Analysis of the difference in scores between the pre- and post-test PRO-SDLS administration, resulted in a measured increase of 1.55, or 1.7%, but the change was not statistically significant.

Hall (2011) reported a significant, positive correlation between the PRO-SDLS post-test total score (r=.30, p<.01) and university GPA with a medium effect size indicating a moderately strong relationship. Additionally, the learner control (r=.42, p<.01) and self-efficacy (r=.30, p<.01) sub-components of the PRO-SDLS revealed significant, positive relationships to university GPA, “with learner control having the largest correlation coefficient in the study” (p. 112).

Results of a factorial ANOVA indicated no statistically significant relationship between gender, ethnicity, and PRO-SDL post-test scores, however, Hall (2011) noted that females had higher post-test scores than males; white students had the highest and Hispanics the lowest post-test scores; and mean scores based on the interaction of gender and ethnicity “varied from 87.93 for Hispanic males to 93.50 for white females” (p. 113).
The analysis of relationships between gender, ethnicity, and the change in PRO-SDLS scores between pre- and post-test administrations indicated that white females had a greater change in scores than males and black students had the highest change in scores while white participants had the lowest, but none of the results were statistically significant. In testing the interaction of gender and ethnicity with the change scores, even though Hall (2011) found the results showed a change of nearly five points that “varied from a positive change of 2.93 for black females to a decrease in mean of -1.50 for white males” (p. 114), there was no statistical significance.

While Hall (2011) reported limited statistical evidence of the direct impact of participation in the Strategic Learning course on self-directed learning, he observes that important correlations were identified. Most notably, “learner control was highly correlated to both previous (admissions GPA) and current (university GPA) academic achievement” (pp. 115-116), aligning closely with fundamental role that learner control plays in Brockett and Hiemstra’s (1991) Personal Responsibility Orientation Model and Long’s (2000) psychological conceptualization of self-directed learning. Also of importance was the significant, positive correlation of self-efficacy to both “previous (admissions GPA) and current (university GPA) academic achievement” (p. 118). Discussing self-efficacy in terms of psychology and education, Hall cited Graham and Weiner (1996) stating “that an individual’s confidence in his abilities serves as a strong indicator of ‘behavioral outcomes than any other motivational construct’” (p.118).
To enhance understanding of self-directed learning, Hall (2011) offered a number of recommendations for future research, including additional study of the various data collected for Phase Three of Maher's (2005a, 2005b) research. Specific suggestions include a comparison of the PRO-SDLS scores and Learning Connections Inventory (Johnston and Dainton, 1997) scores, and a comparison of the LCI scores and academic achievement. In addition to these and other recommendations for quantitative studies, Hall (2011) recommended the qualitative analysis of the reflective writing collected in Phase Three from the same 2009 population. This qualitative study examined the reflective essay data for evidence of self-directed learning to confirm or challenge Hall’s quantitative findings.

**First-Generation College Students**

For thirty-five years first-generation college students have been identified as a population differentiated from non-first-generation students by their parents’ education level (Saenz, Hurtado, Barrera, Wolf, & Yeung, 2007). From 1971 to the present, the Cooperative Institutional Research Program (CIRP) has collected freshman survey data asking students to identify the highest level of formal education attained by both their father and mother (Higher Education Research Institute, 2012; Saenz, et. al., 2007). Across the literature, college students most likely to be described as first-generation have reported that neither parent attained a four-year college degree or had post-secondary experiences (Choy, 2001; Hall, 2011; Horn & Nunez, 2000; Mehta, Newbold, & O’Rorke,
Similarly, for the purposes of this study, first-generation college students were defined as students who report on their college admission application that neither parent completed a baccalaureate degree. These definitions differ slightly from the U. S. Department of Education description of first-generation college students as “neither parent had more than a high school education” (Warburton et al., 2001, p. 5). However, since the USDOE serves all postsecondary institutions that grant a postsecondary credential, including 2-year degrees, a broader definition seems appropriate for their use.

First-generation college students are also identified as a subgroup of the at risk student population and tend to be minority students from lower-income families (Chen, 2005; Choy, 2001; Kuh, Kinzie, Buckley, Bridges, & Hayek, 2006; Warburton et al., 2001). When compared with non-first generation peers, statistics indicate 20% more first-generation college students (29% versus 9%) report coming from low-come families (Warburton et al., 2001) and are more likely to be Hispanic or African American (Chen, 2005; Horwedel, 2008; Saenz et al., 2007). However, regardless of minority and income status, first-generation status is an indicator of poor adjustment to college and academic success (Ishitani, 2003, 2006).
In the United States, the population of first-generation students represents between one quarter and one half of all college attendees (Berkner & Choy, 2008; Pascarella, et al., 2004; Staklis, Bersudskaya, & Horn, 2011). A closer look at first-year students at four-year, public institutions, indicates nearly one in six students are first-generation status (Saenz, et al., 2007). A review of the literature reveals that these students have difficulty adjusting to the demands of college (Choy, 2001; Riehl, 1994; Strayhorn, 2006; Ting 2003). Problems range from low self-efficacy to poor academic performance, making first-generation students more likely to drop out of college before the end of their first semester (Choi, 2005; Hellman, 1996; Horwedel, 2008; Strayhorn, 2006; Ting 2003).

Saenz, Hurtado, Barrera, Wolf, and Yeung, (2007) emphasize the challenges:

This is a critical population of students to study because of the general perception that, relative to their peers, such students have poorer academic preparation, different motivations for enrolling in college, varying levels of parental support and involvement, different expectations for their college experience, and significant obstacles in their path to retention and academic success. (p. 1)

The challenges faced by first-generation college students are not merely perceptions; a review of the literature provides evidence of their struggles. McMurray and Sorrell (2009) found that first-generation students “are largely unprepared for the drastic transition from high school's regimented school day to the perceived freedoms and responsibilities that accompany college life” (p. 211).
First-generation students often lack pre-college academic preparation, such as rigorous or advanced high school courses (Murphy and Hicks, 2006). They consistently report spending less time studying in high school than non-first-generation peers (25.3 hours weekly versus 33.4 hours) and display less confidence in their academic ability than peers (Saenz et al., 2007). This gap in academic confidence is about eight percentage points in self-rated math ability and even larger in self-rated writing ability, with a difference of more than twelve percentage points (Saenz et al., 2007). Saenz et al. summarize:

Taking into account that consistently more first-generation students than their peers report lower high school GPAs, report lower SAT scores, have lower expectations for the college GPAs, and rate themselves lower on intellectual self-confidence, math ability, and writing ability, it appears these students are coming into college more academically challenged than their counterparts.” (p. 32)

After entering college, first-generation students schedule fewer academic hours, have lower grade point averages, and are more likely to leave college during the first year, without completing a degree program (Chen, 2005; Choy, 2001; Nunez, Cuccaro-Alamin, & Carroll, 1998; Pascarella, 2004; Riehl, 1994; Strayhorn, 2006; Terenzini et al., 1996; Ting, 2003; Warbuton et al., 2001). These findings have prompted higher education institutions to discuss the challenges and adopt measures to increase the rates of persistence and
retention of first-generation students (Astin, 1993; Pascarella & Terenzini, 1998; Terenzini, Rendon, Upcraft, Millar, Allison, Gregg, & Jalomo, 1994; Tinto, 2004). Empirical evidence indicates the challenges faced by first-generation college students are not limited to differences in academic skills or intellectual abilities, but may be related to social status. First-generation students are more likely to come from low-income families (Warburton et al., 2001) and that status may represent the working-class with fewer financial resources than non-first-generation students who are more likely to be from a middle- or upper-class family (Horn & Nunez, 2000; Hossler, Schmit, & Vesper, 1999). Stephens et al. (2012) suggest “the gap in performance between first-generation and continuing –generation students is, at least in part, a product of the predominantly middle-class cultural norms of independence that are institutionalized in many American colleges and universities” (p. 1193). They explain that the culture of the working-class is one of interdependence that can be “characterized by limited economic capital, environmental constraints and uncertainty, and few opportunities for choice, control, and influence” (Stephens et al., 2012, p. 1180). Markus and Kitayama (1991, 2010) describe two cultural models of self, independent and interdependent, “that provide culture-specific norms for how to think, feel, and act” (as cited in Stephens et al., 2012, p. 1180). Stephens et al. (2012) explain:

The independent model of self assumes that the normatively appropriate person should influence the context, be separate or distinct from other people, and act freely based on personal motives, goals, and preferences.
In contrast, the interdependent model of self assumes that the normatively appropriate person should adjust to the conditions of the context, be connected to others, and respond to the needs, preferences, and interests of others. (p. 1180)

The policies and teaching practices at institutions of higher education promote an independent culture that values student autonomy and self-directed learning (Joint Task Force on Student Learning, 1998; Stephens et al., 2012; University of South Florida, 2010). Stephens et al. (2012) provide empirical evidence that unless steps are taken to create a cultural match between the interdependent norms of first-generation college students and the typical higher education norms of independence, a mismatch of cultural norms can “undermine first-generation students’ performance because they do not match the relatively interdependent norms to which many first-generation students are regularly exposed in their local working-class contexts prior to college” (p. 1192). In four investigations of cultural mismatch theory, Stephens et al. (2012) found that cultural norms of independence were widely promoted at first- and second-tier national and liberal arts universities and colleges. When first-generation college students, who tend to be culturally interdependent performed an academic task in an environment that focused on independent culture, the cultural mismatch resulted in less successful completion of the task than their non-first-generation peers. However, when cultural norms of interdependence were the focus and a cultural match with the first-generation students was made, the students were
more successful with academic tasks. Stephens et al. (2012) report “These effects held even after controlling for race and SAT scores, suggesting that the results were due to the experience of a cultural match or mismatch rather than preexisting differences in academic performance” (p. 1189). The findings of these investigations of cultural mismatch theory increase understanding of first-generation college students and potential challenges they face as college students.

Summary

The review of literature focused on topics germane to the purpose of this study. Beginning in the field of adult education, an overview of self-directed learning and current thinking was discussed. Next, self-directed learning and sub-processes of motivation, metacognition, and self-regulation were examined, followed by Johnston’s (1998, 2010) Let Me Learn Process®, and research by both Maher and Hall. The chapter concludes with a discussion of significant theories pertaining to first-generation college students.

Chapter Three discusses the research methods and procedures employed for the study, including the design, population, sampling, data collection, and informed consent. A detailed explanation of the researchers’ four-phase plan for data analysis is provided and specific strategies to assure high quality research are clarified.
CHAPTER THREE

METHODS

The purpose of this study was to examine the reflective essays of first-year, first-generation college students for evidence of self-directed learning at the conclusion of their first semester at the university. The research advances the field of adult education by adding phenomenological qualitative inquiry to Maher’s (2005a, 2005b) exploratory research of learner self-direction in first year college students and Hall’s (2011) study to quantify self-directed learning characteristics in the same population identified for this study: first-year, first-generation college students. This chapter describes the qualitative methods and research standards of the investigation. The research questions and design, the theoretical underpinnings and strategic framework of the research are discussed, including an explanation of the study population, sample, data collection, and informed consent. A four-phase process of data analysis is reviewed and a summary concludes the chapter.

Qualitative Research Standards

Rigorous research depends upon precise methods to assure that data are used to make valid inferences and communicate results that others can depend upon. To strengthen study results, qualitative researchers use strategies to increase credibility, dependability, transferability, and neutrality. Studies that are
quantitative in nature seek to strengthen the validity, reliability, generalizability, and objectivity of the findings. Regardless of terminology, the quality of research is improved through adherence to rigorous standards (Ary, Jacobs, & Razavieh, 2002; Creswell, 2009; Merriam & Simpson, 2000; Patton, 2002).

This study was strengthened by the use of six qualitative methods aligned to the standards of credibility, transferability, dependability, and neutrality. Table 1 describes the alignment of the standards, criterion, and the methods adopted for this study.

Table 1

Alignment of Standards of Rigor, Criterion, and Methods

<table>
<thead>
<tr>
<th>Standard</th>
<th>Criterion</th>
<th>Methods Selected</th>
</tr>
</thead>
<tbody>
<tr>
<td>Credibility</td>
<td>Accuracy and control of researcher bias</td>
<td>Audit trail; Code-recode method; Inter- and intra-rater comparisons; Triangulation</td>
</tr>
<tr>
<td>Dependability</td>
<td>Consistency in methods</td>
<td>Audit trail; Triangulation</td>
</tr>
<tr>
<td>Transferability</td>
<td>Applicability of study to other settings or populations</td>
<td>Low-inference descriptors; Thick, rich description</td>
</tr>
<tr>
<td>Neutrality</td>
<td>Objectivity of study</td>
<td>Audit trail; Triangulation</td>
</tr>
</tbody>
</table>

Credibility

Credibility, as a standard of rigorous qualitative research, requires the researcher to verify the accuracy of their findings through the use of clearly defined strategies or procedures that are consistent with other researchers and projects (Ary, Jacobs, & Razavieh, 2002; Creswell, 2009; Patton, 2002). There is no room for doubt if consumers are to trust qualitative research findings and
deem them credible; rigorous methods, transparency of bias, and systematic, accurate analysis are necessary (Creswell, 2009; Patton, 2002). Four strategies were identified and engaged to strengthen the credibility of this research. The audit trail, code-recode method, inter-rater comparisons, and triangulation were employed to provide transparency and rigor to the processes and procedures employed for data analysis and reporting of findings.

**Dependability**

Dependability refers to researcher consistency in explaining variations that may occur in a study in order to understand phenomena, not necessarily to replicate the study (Ary, Jacobs, Razavieh, 2002; Krefting, 1991; Patton, 2002). Variations are expected in qualitative research and the aim of the standard of dependability is to track or explain the variability (Ary, Jacobs, Razavieh, 2002; Krefting, 1991). This study employed two strategies to increase dependability: the audit trail and triangulation. In addition to providing a detailed record of procedures, the audit trail provided documentation of anomalies that occurred in the research and served to guide the researcher in further exploration of the phenomenon. In addition to the audit trail, two forms of triangulation were engaged to test the consistency and trustworthiness of findings that emerged during data analysis: multiple analyst triangulation compared data coding of the reviewers and the researcher; and methods triangulation compared study findings to Hall’s (2011) quantitative study of the same population. The strategy of triangulation not only enhanced credibility of the study, it also strengthened dependability and neutrality (Patton, 2002).
Transferability

The ability to generalize findings to other populations is a desirable outcome of statistical inquiry; however, the concept of generalizability is not directly comparable to the qualitative standard of transferability. One strength of qualitative inquiry is the ability to focus on unique settings which may have few controlling variables and therefore be less generalizable (Creswell, 2009; Krefting, 1991; Patton, 2002). Even so, if strategies that foster clear and descriptive communication of qualitative research findings are adhered to, consumers may find similarities in the study that may be applied to other contexts (Ary, Jacobs, & Razavieh, 2002). While readers may transfer or apply findings to similar people, places, or times, Krefting (1991) reminds us that the purpose of qualitative inquiry is, “to describe a particular phenomenon or experience, not to generalize to others” (p. 216). Through the process of describing the experiences of first-year, first-generation college students, this study increased the chance of the transferability by using low-inference descriptors and thick, rich description to illustrate the findings.

Objectivity

Researcher objectivity is paramount to the neutrality standard. Ary, Jacobs, and Razavieh (2002) describe neutrality as “the extent to which the research is free of bias in the procedures and the interpretation of results” (p. 456). In this study, the use of the audit trail strategy reduced the likelihood of bias by creating transparency in both the methods employed and the explanation of findings. Neutrality was also strengthened by the researcher’s detachment from
the data; the researcher was not involved in the 2009 Freshman Summer Institute, played no role in data collection or storage, and has no personal knowledge of any of the student participants.

Qualitative researchers often rely on data collection methods that require proximity and prolonged contact with study participants, such as in case studies, to strengthen the value of their findings. To address this threat to objectivity, Lincoln and Guba (1985) suggested in Krefting (1991), a different view of neutrality that “shifted the emphasis from the researcher to the data, so that rather than look at the neutrality of the investigator, the neutrality of the data was considered” (p. 217). In the context of this investigation, neutrality was strengthened by two rounds of data triangulation to confirm findings.

Specific strategies employed to strengthen the credibility, dependability, transferability, and neutrality of this study are discussed throughout this chapter in the research context in which they were used.

**Research Questions**

Research questions guide investigation by providing structure for the inquiry process and data analysis (Merriam & Simpson, 2000). In phenomenological qualitative studies, Creswell (2009) suggests that the questions “convey the language of emerging design” (p. 130) by focusing on the description a particular experience. The research questions in this study were based on the emergent themes identified by Maher (2005a, 2005b) in preliminary studies of self-directed learning experiences of first year college students. Qualitative methods were used to investigate the following questions:
1. To what extent did students identify and validate their personal learning profile in their reflective essays?
2. To what extent did students report their process for applying the learning system framework to the analysis of academic tasks?
3. To what extent did students report the purposeful adaptation of their personal learning profile and apply strategies appropriate to the academic task demand?
4. To what extent did students state examples of personal responsibility and accountability for their own learning?
5. To what extent did students report academic success?

**Research Design**

This phenomenological qualitative study of self-directed learning from the perspective of first-year, first-generation college students advances the field of adult education through the examination of personal reflections of students reaching the end of their first college semester. Phenomena of these students as adult learners was investigated in the context of the instructional practices they experienced.

Merriam and Simpson (2000), refer to phenomenology as part of philosophical inquiry “which examines the underlying opinions, beliefs, values, and assumptions to bring clarity to a field of practice” (p.84). Giorgi (1988) in Ary, Jacobs, and Razavieh (2002), explains that phenomenology “merely wants to understand how, through experience, all the events and objects of the world appear to the consciousness” (p. 447). This study increases understanding of the
personal experiences of participants as they reflect on themselves as learners and ascribe meaning to the phenomenon in their own voice through written essays.

For the purposes of this study, both deductive and inductive processes (Ary, Jacobs, & Razavieh, 2002; LeCompte & Schensul, 1999; Patton, 2002) were used to render meaning from the reflective essays of first-year, first-generation college students. Following the recommendations of Maher’s (2005a, 2005b) study of a similar population, this researcher used deductive analysis to render meaning using the essay protocol, content analysis rating rubric, and themes that emerged in Maher’s foundational work. However, analysis also featured inductive processes as the researcher observed and considered the possibility of new emergent themes.

**Population**

The population for this study was from the University of South Florida (USF), a large, metropolitan, multi-campus research university located in the Tampa Bay area of the state of Florida. Founded in 1956, USF has a current enrollment of more than 47,000 students and is one of four public universities classified by the Carnegie Foundation for the Advancement of Teaching as top-tier research universities in the state (University of South Florida, 2012a).

As part of ongoing, multi-phase research of self-directed learning among college students, this study was limited to participants of the 2009 Freshman Summer Institute (FSI), a summer bridge program. This population was a convenience sample resulting from collaboration between USF Tutoring and
Learning Services (TLS) and the Freshman Summer Institute (FSI) for the purpose of expanding Maher’s (2005a, 2005b) research by identifying a “fairly homogenous group of first-time-in-college freshmen, who are all attending a special pre-matriculation program” and who “come from similar socioeconomic levels” (p. 12). To that end, a large group of 224 incoming first-year students with first-generation status were enrolled in a one-credit hour Strategic Learning course during the 2009 Summer B Semester. The convenience sample of participants in the 2009 FSI was used to collect a variety of both quantitative and qualitative data.

In 2009, the FSI was designed to support first-year, first-generation college students (self-reported on the USF admissions application as neither parent completed a baccalaureate degree) of traditional age (17-19 years) who did not meet the university academic standards for fall admission (based on high school grade point average, SAT/ACT test score results). Each year since inception, the FSI program has served 150 to 250 students. FSI participants were identified during the university review of academic success predictors (high school grade point average, SAT/ACT test score results) provided in admission applications. The participants were required to complete nine credit hours of academic coursework during an intensive, six-week summer semester and maintain a GPA of 2.0.

In 2009, a total of 224 first-year, first-generation college students participated in the FSI at the USF Tampa campus during the six-week Summer B semester. This population was a convenience sample for collection of data. The
population was predominantly female and Black, Hispanic, and White students were the largest groups represented. Table 2 describes the demographics of the population.

Table 2

*Population Demographics*

<table>
<thead>
<tr>
<th>Description</th>
<th>Population</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<tr>
<td>Male</td>
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<tr>
<td>Female</td>
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<td>White, non-Hispanic</td>
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<td>6</td>
</tr>
<tr>
<td><strong>TOTALS</strong></td>
<td><strong>224</strong></td>
</tr>
</tbody>
</table>

Sample

Sample sizes are typically small in qualitative research, but should reflect the context and purpose of the inquiry, and provide ample opportunity for insight and understanding of the problem (Ary, Jacobs, & Razavieh, 2002; Creswell, 2009; Patton, 2002; Schensul, Schensul, & LeCompte, 1999). Patton (2002)
stated, “The validity, meaningfulness, and insights generated from qualitative inquiry have more to do with the information richness of the cases selected …than with sample size” (p. 245).

Identification of the sample in this study began with the population of 224 first-year, first-generation college students. As participants in the 2009 Freshman Summer Institute (FSI), each student was scheduled into a one-credit hour Strategic Learning course that met once weekly for a two hour class period. The course was offered in nine separate sections with approximately 25 students enrolled in each section. To fulfill the course requirements, students completed pre- and post-test administrations of a quantitative measure of self-direction, the Personal Responsibility Orientation to Self-Direction in Learning Scale (PRO-SDLS). In addition, students were asked to contemplate themselves as a learner and their personal academic experiences, and submit a reflective essay at the conclusion of the semester in August.

This study was limited to 157 FSI participants (70%) who completed both pre- and post-test PRO-SDLS administration and submitted a reflective essay at the end of the semester. The study sample was representative of the population demographics with minimal differences in gender and race/ethnicity; more than half the participants were female (62% in the population as compared to 64% in the sample). Primarily the race/ethnicity of both the population and the sample was self-reported as White, Black, or Hispanic. Table 3 describes the demographic composition of the representative sample.
The ambiguity often associated with qualitative research may be clarified by the use of purposeful strategies, especially in the sampling process (Patton, 2002). While a small, random sample may not offer wide opportunity for transferability, the value of in-depth inquiry into data representative of the personal voice of a research population should not be minimized, especially in cases where it advances the field of knowledge regarding previously under-represented populations (Ary, Jacobs, Razavieh, 2002; Patton, 2002).
For the purposes of this study, an online random integer generator (http://www.random.org/integers/) was employed for randomization of the data. Nine reflective essays were randomly selected from the pool of 157 as a pilot dataset for the researcher and three outside reviewers to confirm inter-rater reliability and validate the Content Analysis Rating Rubric (Appendix E). The research process resulted in significant changes in the rubric, themes, and research questions, necessitating the sampling of additional data from the 148 remaining essays. Successful inter-rater reliability was achieved with the second pilot of nine essays. Table 4 describes the demographics of the Pilot Datasets.

Table 4

Pilot Demographics

<table>
<thead>
<tr>
<th>Description</th>
<th>Pilot One</th>
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<th>Pilot Two</th>
<th></th>
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<tbody>
<tr>
<td></td>
<td>N</td>
<td>Percent</td>
<td>N</td>
<td>Percent</td>
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<td>Male</td>
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<td>11%</td>
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<tr>
<td>Female</td>
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<tr>
<td><strong>Totals</strong></td>
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<td><strong>9</strong></td>
<td><strong>100%</strong></td>
</tr>
<tr>
<td>Asian or Pacific Islander</td>
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<td>0%</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Black, non-Hispanic</td>
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<td>33%</td>
<td>3</td>
<td>33%</td>
</tr>
<tr>
<td>Hispanic</td>
<td>3</td>
<td>33%</td>
<td>2</td>
<td>22%</td>
</tr>
<tr>
<td>American Indian/Alaska Native</td>
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<td>0%</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>White, non-Hispanic</td>
<td>3</td>
<td>33%</td>
<td>3</td>
<td>33%</td>
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<tr>
<td>Undisclosed</td>
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<td>0%</td>
<td>1</td>
<td>11%</td>
</tr>
<tr>
<td><strong>TOTALS</strong></td>
<td><strong>9</strong></td>
<td><strong>100%</strong></td>
<td><strong>9</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>
Male and female participants varied across the two pilot groups with a
greater number of females than males represented in Pilot One and more males
than females in Pilot Two. Representation was balanced across Black, Hispanic,
and White race/ ethnicities; however, Asian/Pacific Islanders, American
Indian/Alaska Natives, and those with an undisclosed race/ethnicity were not
represented in the pilot datasets.

After piloting was completed, the 139 remaining essays were grouped into
eight course sections to facilitate the use of a stratified sampling strategy
(Schensul, Schensul, & LeCompte, 1999) and the avoidance of possible bias
resulting from differences in individual course instructors. The online random
integer generator was again utilized to identify participants and select three
reflective essays from each of the eight course sections resulting in a total of 24
reflective essays to complete Dataset One. Male and Female participants in
Dataset One were represented in nearly the same proportions as the population.
Black participants were equally represented in Dataset One and the population;
however, there were two percent (2%) fewer Whites and six percent (6%) fewer
Hispanics in Dataset One. Due to the limited number of participants in Dataset
One, the inclusion of three participants doubled the representation of Asian or
Pacific Islanders and American Indian/Alaska Natives. Table 5 describes the
demographics of Dataset One and the study population.
Table 5

Study Demographics

<table>
<thead>
<tr>
<th>Description</th>
<th>Dataset One</th>
<th>Population</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>Percent</td>
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<tr>
<td>Male</td>
<td>9</td>
<td>37%</td>
</tr>
<tr>
<td>Female</td>
<td>15</td>
<td>63%</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td>24</td>
<td>100%</td>
</tr>
<tr>
<td>Asian or Pacific Islander</td>
<td>2</td>
<td>8%</td>
</tr>
<tr>
<td>Black, non-Hispanic</td>
<td>7</td>
<td>29%</td>
</tr>
<tr>
<td>Hispanic</td>
<td>5</td>
<td>21%</td>
</tr>
<tr>
<td>American Indian/Alaska Native</td>
<td>1</td>
<td>4%</td>
</tr>
<tr>
<td>White, non-Hispanic</td>
<td>8</td>
<td>33%</td>
</tr>
<tr>
<td>Undisclosed</td>
<td>1</td>
<td>4%</td>
</tr>
<tr>
<td><strong>TOTALS</strong></td>
<td>24</td>
<td>100%</td>
</tr>
</tbody>
</table>

Dataset One was numbered from 1 to 24 and an online list randomizer (http://www.random.org/lists/) was used to randomly distribute the essays to the three outside reviewers who participated in pilot scoring. Each reviewer employed the Content Analysis Rating Rubric V2 (Appendix F) to independently rate eight reflective essays and the researcher rated all 24 essays in Dataset One. The initial sample size was adequate to fully illuminate the voice of the population of first-year, first-generation college students. Lincoln and Guba (1985) state that the “primary criterion of sample size is redundancy of
information” (p. 202). Therefore, because data saturation was achieved in Dataset One, no additional sampling was necessary.

Data Collection

This phenomenological study examined secondary data assembled by Tutoring and Learning Services (TLS) and the Freshman Summer Institute (FSI) at the University of South Florida. Planning collaboratively for the 2009 Summer B semester, the directors of TLS and FSI organized a one-credit hour course, Strategic Learning, to assist all FSI participants in transitioning to the academic rigor of college. The course provided a structure for a convenience sample in the ongoing research of Maher (2005a, 2005b), the Director of TLS. Both quantitative and qualitative data related to self-directed learning were collected from the 2009 FSI program participants with informed consent. An academic advisor for the study population coded the data so that individual students could not be identified. This study examined the qualitative data collected, and therefore, as component of Maher’s ongoing investigation, the use of secondary data was intentional. Qualitative standards of objectivity were strengthened by the researchers’ detachment from the data due to a lack of involvement in the 2009 FSI and data collection and storage. In addition, the researcher had no personal knowledge of any student participants.

The 2009 Freshman Summer Institute (FSI) registered 224 participants in nine Strategic Learning course sections taught by nine different instructors. To fulfill the course requirements, students were asked to complete pre- and post-test administrations of a quantitative measure of self-direction, the Personal
Responsibility Orientation to Self-Direction in Learning Scale (PRO-SDLS). Students who completed both PRO-SDLS administrations were given a numerical identification code by an academic advisor for the study population. The coded data and participant demographics were stored in a Microsoft Excel file for future analysis. Hall (2011) used the quantitative dataset for his investigation of self-directed learning characteristic of first-generation, first-year college students.

In addition to the PRO-SDLS administration, students were asked to contemplate themselves as a learner and their personal academic experiences, and submit a reflective essay at the conclusion of the semester in August. For the purposes of this study, only the reflective essay data were examined. The open-ended essay task allowed the participants to engage in reflective practice and respond in a way that may more accurately and thoroughly represent their understanding of cognitive learning processes. Patton (2002) explains, “The purpose of gathering responses to open-ended questions is to enable the researcher to understand and capture the points of view of other people without predetermining those points of view through prior selection of questionnaire categories” (p. 21). The framework of broad, open-ended essay questions and the focus on the individual viewpoint to construct meaning in a real-world setting are hallmarks of the social constructivist worldview philosophy and provide a qualitative research strategy related to phenomenology (Ary, Jacobs, & Razavieh, 2002; Creswell, 2009; Moran, 2001; Patton, 2002).
The 2009 Strategic Learning Reflective Essay Protocol (Appendix G) was designed by Maher (2005b) to provide an opportunity for first-year college students to reflect on themselves as a learner and their academic experiences. The Protocol guided the participants to respond to four structured, yet open-ended prompts. The structured format was selected to provide support to first-year, first-generation college students who may have less experience with the selection and organization of information required when responding to unstructured essay questions. While the structured essay format is somewhat more teacher-centered, Moran (2001) recommends it “for use with more dependent, less sophisticated learners to assess expression of what they recall, and to train them in the skills of selecting and organizing information” (p. 60).

As part of student evaluation in the Strategic Learning course, instructors used a 50-point scoring guide to assign a grade to each essay. Students earned a maximum of 30 points based on the content of their responses to the questions. A total of 15 points was allotted for grammar and language mechanics, and 5 points for formatting criteria. The reflective essay was assigned a minimal weight of 9% in the final end-of-course grade, making it was possible for a student to skip this assignment entirely and still earn a 91%, or letter grade of A, for the course.

Of the 224 students enrolled in Strategic Learning during the 2009 FSI, 185 students (83%) submitted a reflective essay at the conclusion of the course in August 2009. Electronic copies of the essays were collected and coded by an academic advisor for the study population. All student names and other
identifiers were removed during the coding process. Table 6 illustrates the number of reflective essays collected in each Strategic Learning course section and those available for analysis in this study.

Table 6

*Data Collection by Course Sections*

<table>
<thead>
<tr>
<th>Strategic Learning Course Section</th>
<th>Course Enrollment N</th>
<th>Reflective Essay N</th>
<th>Coded for Analysis N</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>26</td>
<td>26</td>
<td>25</td>
</tr>
<tr>
<td>B</td>
<td>21</td>
<td>19</td>
<td>9</td>
</tr>
<tr>
<td>C</td>
<td>25</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>D</td>
<td>25</td>
<td>24</td>
<td>24</td>
</tr>
<tr>
<td>E</td>
<td>25</td>
<td>22</td>
<td>15</td>
</tr>
<tr>
<td>F</td>
<td>27</td>
<td>27</td>
<td>22</td>
</tr>
<tr>
<td>G</td>
<td>26</td>
<td>24</td>
<td>24</td>
</tr>
<tr>
<td>H</td>
<td>25</td>
<td>21</td>
<td>17</td>
</tr>
<tr>
<td>J</td>
<td>24</td>
<td>22</td>
<td>21</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>224</strong></td>
<td><strong>185</strong></td>
<td><strong>157</strong></td>
</tr>
</tbody>
</table>

The nine course sections were randomly assigned alphabet codes A – J. (The letter “I” was not used to avoid confusion with the numeral “1”.) Individual student essays were coded with the corresponding course section code and participant identification number, and subsequently stored in a Microsoft Word (MSWord) file as companion to the MSExcel file of corresponding quantitative
and demographic. Due to a reporting error, data from course section C were not available for electronic storage. Additional essay data were removed due to lack of informed consent. A total of 157 reflective essays (70% of the FSI 2009 population) were stored for the purposes of future analysis and subsequently formed the data pool for analysis in this study.

Data Analysis

This phenomenological qualitative study of self-directed learning from the perspective of first-year, first-generation college students involved the examination of personal reflections of students reaching the end of their first college semester. From a population of 224 students enrolled in Strategic Learning during the 2009 FSI, qualitative data in the form of 157 student reflective essays formed the pool for analysis in this study.

The search for meaning in qualitative data is a recursive process of examination and reflection. However, as Giorgi (1988) cautions, in Ary, Jacobs, and Razavieh (2002), phenomenological data must be examined without “judgment with respect to the reality status of experiences” (p. 447). The researcher must become immersed in the experiences of the study participants, listening carefully for their voices to tell both the individual and collective story that makes sense out of the data and transforms it into findings. Patton (2002) tells us that “no formula exists for that transformation…Direction can and will be offered, but the final destination remains unique for each inquirer” (p. 432). The final destination, or goal, of data analysis in this study was to create a framework
to illuminate the voice of first-year, first-generation college students as they describe themselves as learners.

For the purposes of this study, both inductive and deductive analysis of the data were conducted. The primary analysis was deductive, based on an existing framework of themes established preliminary studies by Maher (2005a, 2005b, 2011). However, inductive analysis was employed during data analysis as the researcher remained open to the emergence of additional, previously unidentified patterns, themes, and categories in the data (Ary, Jacobs, & Razavieh, 2002; LeCompte & Schensul, 1999; Patton, 2002).

Data were examined by three outside reviewers and the study investigator using a Content Analysis Rating Rubric adapted from Mahers’ (2005a, 2005b) foundational research to assess the impact on college students of Johnston’s (1996, 1998) Interactive Learning Model on “students’ ability to utilize the processes of metacognition and intentional learning as tools to increase self-direction in learning” (p. 5). Maher’s’ rubric was constructed around five themes that emerged during data analysis: 1) Self Awareness, 2) Task Awareness, 3) Intentional Learning, 4) Autonomy/Responsibility, and 5) Increased Success. The content analysis tool was developed in a study of self-directed learning among first year college students and was structured around “a five-point Likert scale of increasing strength” (Maher, 2005b, p. 9), and included descriptive language to illuminate each of the five-scale indicators labeled: 1) No evidence of awareness; 2) Minimally aware; 3) Somewhat aware; 4) Reasonably aware; and 5) Highly aware.
For the purposes of this study, there were no changes in the focus of Maher's (2005b) five themes, only a minor revision to the Theme 5 label from *Proven Success* to *Academic Success*, and clarification in the language of the 5-point Likert scale descriptors. The adapted Content Analysis Rating Rubric (Appendix E) was aligned to the five research questions of this study: 1) Self Awareness (To what extent were students able to identify and validate their personal learning profile in their reflective essays?); 2) Task Analysis (To what extent did students report their process for applying the learning system framework to the analysis of academic tasks?); 3) Intentional Learning (To what extent did students report the intentional adaptation of their personal learning profile and apply strategies appropriate to the academic task demand?); 4) Autonomy/Responsibility (To what extent did students state examples of personal responsibility and accountability for their own learning?); and 5) Academic Success (To what extent did students report academic success?).

The analysis of data in this phenomenological qualitative study of self-directed learning from the perspective of first-year, first-generation college students was conducted in four phases: I) Organizing for Analysis, II) Coding and Analysis; III) Re-coding and Analysis; and IV) Synthesizing and Interpreting Findings.

**Phase I - Organizing for Analysis**

The first phase of research encompassed the establishment of an audit trail, preparation of data for analysis, recruitment of three outside data reviewers, and piloting of the Content Analysis Rating Rubric (Appendix E).
Phase I commenced with the selection of Microsoft Excel 2010 as an electronic platform for the systematic recording of detailed information to establish an audit trail. Guba and Lincoln (1981) introduced the term audit trail and characterized the strategy as one “which delineates all methodological steps and decision points and provides access to all data in their several raw and process stages” (p. 248). A thorough and well-organized audit trail provides detailed documentation of the accuracy of research activities and procedures related to data collection, sampling, and analysis. Consequently, the audit trail strategy strengthens the credibility as well as the dependability and neutrality of this study (Ary, Jacobs, & Razavieh, 2002; Guba & Lincoln, 1982; Krefting, 1991). For the purposes of this study, the audit trail was organized by research phases to record dates, action steps, and researcher reflection notes so that others could more easily follow the path to replicate the study. The cataloging of step by step procedures included the processes of random sampling; rating and discussing essay data; and, verifying rubric function and coding themes.

Once the audit trail was established, organization of the coded demographic data that was provided to the researcher in a Microsoft Excel (MSExcel) worksheet named All Data was initiated. The MSExcel file was expanded by the researcher to include four new data worksheets: Population, Sample, Pilot, and Dataset One. The All Data worksheet of 224 coded entries was copied onto the Population worksheet and reviewed. Participant entries were highlighted if deemed ineligible for this study due to incomplete data (i.e., no
essay data; deemed ineligible by Hall (2011) because of missing quantitative date).

The Population data were then transferred to the Sample worksheet and the ineligible participant data were removed, reducing the file to 157 participants. The Sample worksheet was organized in numerical order by the coded participant identifiers, and counted from 1-157 in a new column added for that purpose. Next, the Sample worksheet data were duplicated in the Pilot worksheet.

Following the transfer of the Sample worksheet data into the Pilot worksheet, an online random integer generator (http://www.random.org/integers/) was employed for randomization of the data. Nine participants were identified and highlighted on the worksheet. Electronic copies of the reflective essays written by the nine identified participants were retrieved from the MSWord storage file, copied into a new MSWord folder labeled Pilot Dataset, and stored electronically be the researcher for analysis.

Phase I continued with the selection of three outside data reviewers with two requisite qualifications: 1) Master’s degree, and 2) familiarity with the Let Me Learn Process®. To begin the selection process, the Director of Tutoring and Learning Services at the University of South Florida provided names of Strategic Learning course teachers who were added to the staff after 2009. As instructors of the Strategic Learning course, the candidates met the qualification criteria and had no association with the collection of the study data. Invitations to participate in the research were extended via an email that included a brief description of the
purpose of the study. Three individuals accepted the invitation to participate in the research process and served as an external scoring team to read and code data. The use of multiple reviewers for data analysis allowed the researcher to compare coding for themes and corroborate interpretations of the data (Ary, Jacobs, & Razavieh, 2002; Creswell, 2009; Merriam & Simpson, 2000; Patton, 2002).

Communication between the researcher and reviewers was established and preferences for scoring team meeting dates, times, and communication formats was discussed. A virtual meeting format was the preferred method for communication identified by the outside data reviewers, so the researcher investigated online meeting options. The online GoToMeeting® platform was selected for scoring team meetings based on its ability to share the presenter computer screen with participants; support live (real-time) video and audio connections; create session recordings; and provide a free trial account.

A calendar of meetings was established to provide ample opportunity for scoring team orientation to the study, coding of data, and discussion. Recordings of all meetings with scoring team members were created, with permission, as reference for audit trail accuracy. The initial scoring team virtual meeting agenda (Appendix H) focused discussion on the study, the Content Analysis Rating Rubric (Appendix E), and common rating errors described by Ary, Jacobs, and Razavieh (2002) as halo effect, generosity error, error of severity, and error of central tendency. A scoring team plan for data analysis, timeline, and compensation for time were also discussed during the first meeting. Following
the inaugural scoring team meeting, an electronic copy of the Content Analysis Rating Rubric and the pilot dataset of nine coded essays was emailed to each outside reviewer for independent scoring. The outside reviewers sent their ratings to the researcher by email for compilation in a MSExcel worksheet created for comparison purposes.

The second virtual meeting of the scoring team followed the independent coding of the Pilot Dataset. The MSEexcel chart of outside reviewer and researcher ratings of individual essay data were displayed during the meeting and reviewed by the scoring team. Themes with less than 100% rater agreement were discussed to facilitate team learning regarding the rating process. Text-based evidence was identified from the pilot essay data to foster common understanding, illuminate rating decisions, and build consensus. Addressing these inter-rater conditions assisted in controlling researcher bias and reinforced study credibility. In addition, by applying the research strategy of triangulation during the piloting process, the credibility and dependability of the study was strengthened. Patton (2002) explains that triangulation leads to “diverse ways of looking at the same phenomena…strengthening confidence in whatever conclusions are drawn” (p. 556).

During the analysis of pilot data, extensive discussion among members of the scoring team revealed the Content Analysis Rating Rubric (Appendix E) was not functioning as designed. During discussion for the purpose of achieving 100% rating consensus on Theme One, it was determined that some slight adjustments in the rating level descriptor language would clarify the rating
process. After similar discussion, slight revisions and additions were also made in the language of the rating descriptors Themes Four and Five. However, the use of the Rubric in the context of rating real-world data revealed the need to make significant changes in Theme Two (Task Analysis) and Theme Three (Intentional Learning). Across the board, the scoring team found it very difficult to differentiate between the two and was less confident in the ratings for Themes Two and Three. Discussion of text-based examples from the pilot essays led to consensus that these two themes were not functioning as intended and may not provide evidence to clearly address the research questions. The possibility of combining the two themes was discussed and suggestions for how to delineate the awareness levels of the rating criteria were shared. After the meeting ended, the researcher reviewed the current literature regarding the Let Me Learn Process® (LML Process®), the curriculum used in the Strategic Learning courses from which the data were collected. Expanding on earlier publications, Dawkins, Kottkamp, and Johnston (2010) discuss the ideas of task analysis and intentional learning under the umbrella term decoding and explain that decoding a learning task “requires that you determine the degree to which each Pattern must be used in order to complete a given task effectively” (p. 139). These findings validated the scoring team concerns regarding the evidence in the data and their frustration at not being able to rate it effectively. After thoughtful consideration of the literature and a review of the second scoring meeting recorded discussion, the researcher realized that through the inductive analysis of the Pilot Dataset, a new theme had emerged: Decoding and Pattern Fit. This new theme captured
the spirit of Themes Two and Three but more accurately depicted self-directed learning as characterized in the LML Process®. Rating level descriptors to differentiate evidence in the essay and reflect a range of awareness of the process of decoding, pattern matching, and intentional modification of patterns were created.

The research process of validating the rubric with pilot data resulted in significant changes in the rubric. The Content Analysis Rating Rubric was revised to reflect the emergent theme. The original Themes Two and Three were deleted and the new theme inserted after Theme One. The result was the Content Analysis Rating Rubric V2 (Appendix F) with a total of four themes. With the emergence of the new theme and the elimination of two original themes, the two research questions that were previously correlated to Themes Two and Three were deemed invalid. A question to guide the research related to the new theme was created. Table 7 describes the revision of the research questions and content analysis themes.

In addition to changes in themes and research questions, the descriptors for the identification of evidence in the essay data that would differentiate between ratings and reflect a range of awareness of the process of decoding, pattern matching, and intentional modification of patterns were added to the Content Analysis Rating Rubric V2 (Appendix F). Due to the extensive nature of the rubric revisions, new data were sampled and the pilot phase repeated.
Table 7

Revision and Alignment of Content Analysis Themes and Research Questions

<table>
<thead>
<tr>
<th>Theme</th>
<th>Research Question</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self Awareness</td>
<td>To what extent did students identify and validate their personal learning profile in their reflective essays?</td>
</tr>
<tr>
<td>Revision: No changes were required in Theme 1 or Question 1.</td>
<td></td>
</tr>
<tr>
<td>Task Analysis</td>
<td>To what extent did students report their process for applying the learning system framework to the analysis of academic tasks?</td>
</tr>
<tr>
<td>Revision: Theme 2 and Question 2 were deleted as a result of the piloting process which revealed they were untenable for this study.</td>
<td></td>
</tr>
<tr>
<td>Intentional Learning</td>
<td>To what extent did students report the intentional adaptation of their personal learning profile and apply strategies appropriate to the academic task demand?</td>
</tr>
<tr>
<td>Revision: Theme 3 and Question 3 were deleted as a result of the piloting process which revealed they were untenable for this study.</td>
<td></td>
</tr>
<tr>
<td>Decoding and Pattern Fit</td>
<td>To what extent did students report the degree to which use of their learning patterns would be required in order to successfully complete an academic task?</td>
</tr>
<tr>
<td>Revision: This new emergent theme and corresponding research question were inserted as Theme 2 and Question 2.</td>
<td></td>
</tr>
<tr>
<td>Autonomy/Responsibility</td>
<td>To what extent did students state examples of personal responsibility and accountability for their own learning?</td>
</tr>
<tr>
<td>Revision: Due to the deletion of previous themes and questions, these were moved up in the queue and renumbered Theme 3 and Question 3.</td>
<td></td>
</tr>
<tr>
<td>Academic Success</td>
<td>To what extent did students report academic success?</td>
</tr>
<tr>
<td>Revision: Due to the deletion of previous themes and questions, these were moved up in the queue and renumbered Theme 4 and Question 4.</td>
<td></td>
</tr>
</tbody>
</table>

Pilot Dataset Two was created in the MSExcel database and 157 data entries from Pilot Dataset One were imported to the new worksheet. The nine participants identified in the first pilot were deleted and the data renumbered to
reflect the change. An online random integer generator (http://www.random.org/integers/) was employed for randomization of the data and nine participants were selected from the pool of 148 remaining participants. Electronic copies of the reflective essays written by the nine identified participants were retrieved from the MSWord storage file and copied into a new MS Word folder to serve as Pilot Dataset Two. An electronic copy of the Content Analysis Rating Rubric V2 and Pilot Dataset Two were emailed to each outside reviewer for independent scoring. The outside reviewers sent their ratings to the researcher by email for compilation in a MSExcel chart for comparison purposes.

The third virtual meeting of the scoring team followed the independent coding of the nine essays in Pilot Dataset Two. A MSExcel chart of outside reviewers and researcher ratings for each theme by individual essay was reviewed. Themes with less than 100% agreement were discussed to illuminate rating decisions, build consensus, and to determine accuracy of theme identification and descriptors in the Content Analysis Rating Rubric V2. The revised rubric functioned well and no new themes emerged from Pilot Dataset Two. The confidence gained by scoring team from the additional rating and consensus building experience was noted in the audit trail by the researcher.

With the completion of the piloting process, the sample data were organized for randomization and analysis. Pilot Dataset Two was copied to the Dataset One worksheet in the MSExcel database. Pilot participants were deleted and the remaining 139 participants were sorted by course section codes to facilitate the use of a stratified sampling strategy (Schensul, Schensul, &
LeCompte, 1999) and reduce possible bias resulting from differences in individual course instructors. An online random integer generator (http://www.random.org/integers/) was utilized to select three participants from each of the eight course sections resulting in a total of 24 participants. Electronic copies of the reflective essays written by the 24 identified participants were copied into a new Microsoft Word folder to serve as Dataset One.

The essay data were randomly assigned to the three outside reviewers by copying the list of 24 identified participants into empty columns of the Dataset One worksheet and numbered from one to 24 for the purpose of randomization with an online list randomizer (http://www.random.org/lists/). The resulting random sequence was divided into three groups of eight and the corresponding essay data placed in three folders for assignment to the outside reviewers for independent rating.

**Phase II - Coding and Analysis**

Phase II was initiated with the distribution of eight randomized essays from Dataset One to each scoring team member. (Appendix I shows the random assignment of the data). Electronic copies of Dataset One and the Content Analysis Rating Rubric V2 were emailed to the outside reviewers for independent rating; the researcher rated the complete dataset of 24 essays. The outside reviewers sent their ratings to the researcher by email for compilation in a MSExcel chart for comparison purposes.

The researcher met with each scoring team member to discuss ratings, explore possible emergent themes, and reach consensus on any themes with
less than 100% agreement. The Content Analysis Rating Rubric V2 (Appendix F) continued to function well. No new themes emerged from Dataset One, indicating that the sample size was adequate to fully illuminate the voice of the population of first-year, first-generation college students. Lincoln and Guba (1985) state that the “primary criterion of sample size is redundancy of information” (p. 202). Therefore, because data saturation was achieved in Dataset One, no additional sampling of data was deemed necessary. Phase II concluded with the organization of all Dataset One rating results in a MSExcel file on a flash drive storage device. The flash drive was secured in a file drawer and remained undisturbed for a period of two weeks.

**Phase III - Recoding and Analysis**

In Phase III a code-recode method was employed to further control for researcher bias through a test of intra-rater agreement to increase credibility in the study. Ary, Jacobs, and Razavieh (2002) describe the process: “researcher codes the data, leaves the analysis for a period of time, then comes back and recodes the data and compares the two sets of coded materials” (p. 456).

For the purposes of this study, after a storage period of two weeks, the researcher retrieved the essay data and manually recoded Dataset One. A MSExcel file was created for summarizing and comparing the data. The results were triangulated through comparison of the coded and re-coded data (Ary, Jacobs, & Razavieh, 2002; Creswell, 2009; Patton, 2002). Although the researcher remained open to the possibility of new emergent themes that may
have been overlooked in the initial round of analysis, no new themes were identified during the code-recode process (Patton, 2002).

To test the consistency and trustworthiness of findings that emerged during data analysis, a multiple-method triangulation (Patton, 2002) was completed by comparing the results of this study to Hall’s (2011) analysis of quantitative data collected from the identical population. Data to support or challenge Hall’s findings were noted in the audit trail for further discussion in Chapters Four and Five. In addition, this critical comparison further illuminated findings and assisted in drawing conclusions regarding Phase Three of Maher’s (2005b) foundational research from the perspective of both quantitative and qualitative methods.

During Phase III reviews of data, examples of low-inference descriptors, in the form of explicit quotes that require little interpretation on the part of the reader, were captured in the research notes for possible inclusion in the discussion to support the study findings (Ary, Jacobs, & Razavieh, 2002; Creswell, 2009). Significant participant statements that exemplified themes or criteria in the rating scale were also identified and recorded. Ary, Jacobs, and Razavieh (2002) state that “verbatim or direct quotes help the reader experience the participants’ world” (p. 453). The communication of study findings that are clear, realistic, and describe the phenomena in the study participants own voice may increase the ability of the reader to apply to results to a similar setting, thereby increasing opportunities for transferability (Creswell (2009).
Phase IV – Synthesizing and Interpreting the Findings

In the final phase of data analysis, the audit trail was used to guide a step-by-step review of the research process. Participant verbatim quotes and researcher notes related to data analysis and findings were organized by themes for additional analysis and synthesis. The researcher conducted additional examination of the essay data and noted holistic impressions to increase the likelihood that the participant voices were heard and the phenomena of their first college experience was not limited to a tabulation of coded text. Findings were reported and conclusions, implications, and recommendations fleshed out and discussed in Chapters Four and Five.

Research credibility and transferability were strengthened through use of thick, rich descriptive language and low-inference, verbatim quotes to convey realistic context of the study phenomenon. Descriptions in the study participants own voice bring life to the narration of the story of self-directed learning among first-year, first-generation college students (Ary, Jacobs, & Razavieh, 2002; Creswell, 2009; Merriam & Simpson, 2000). Creswell (2009) asserts that such language has the power to “transport readers to the setting and give the discussion an element of shared experiences” (p. 191).

Summary

This phenomenological study was conducted through the examination of secondary data. Research questions guided the investigation leading to the analysis of reflective essays submitted by first-year, first-generation college students participating in the 2009 Freshmen Summer Institute at the University of
South Florida. The population, sampling process, and data collection procedures were described. Data analysis was discussed as it occurred in a four-phase process and rigorous standards of qualitative inquiry and specific strategies to assure high quality research were clarified.

Chapter Four presents the study findings related to the research questions and qualitative themes. In addition the results of code-recode and multiple method triangulation methods are discussed and the chapter concludes with a summary. Research conclusions, implications for practice and recommendations for further research are discussed in Chapter Five.
CHAPTER FOUR

FINDINGS

This phenomenological qualitative study of self-directed learning from the perspective of first-year, first-generation college students advances the field of adult education through the examination of personal reflections of students reaching the end of their first college semester. Four themes were identified through the process of investigating the phenomena of students as adult learners in the context of their initial experiences in college. Themes of Self Awareness, Decoding and Pattern Fit, Autonomy/Responsibility, and Academic Success were aligned to research questions and identified in the essay data as evidence of self-direction illuminated in the personal voice of the participants. These study findings add to Maher’s (2005a, 2005b) exploratory research of learner self-direction in first year college students and expand Hall’s (2011) research to quantify self-directed learning characteristics in the same population identified for this study: first-year, first-generation college students.

Research Questions

Research questions guided this investigation by providing structure for the inquiry process and data analysis (Merriam & Simpson, 2000). An initial five research questions were based on the emergent themes identified by Maher (2005a, 2005b), however, revisions made during the analysis of pilot data
resulted in four final questions to guide the study. Qualitative methods were used to investigate the following questions:

1. To what extent did students identify and validate their personal learning profile in their reflective essays?

2. To what extent did students report the degree to which use of their learning patterns would be required in order to successfully complete an academic task?

3. To what extent did students state examples of personal responsibility and accountability for their own learning?

4. To what extent did students report academic success?

Population

The population for this study was from the University of South Florida, a large, metropolitan, multi-campus research university located in the Tampa Bay area of the state of Florida. As part of ongoing, multi-phase research of self-directed learning among college students, the population was a convenience sample of 224 incoming first-year students with first-generation status who enrolled in a one-credit hour Strategic Learning course during 2009 Freshman Summer Institute (FSI), a summer bridge program. Self-reported demographic data describe the population as predominantly female (62%) and nearly balanced across ethnicities of White (35%), Black (29%), and Hispanic (27%) groups. Also represented were Asian or Pacific Islanders (4%) and American Indian/Alaska Natives (2%). The remaining three percent (3%) of the population did not disclose information regarding ethnicity.
The study was limited to 157 FSI participants (70%) who completed both pre- and post-test PRO-SDLS administration and submitted a reflective essay at the end of the semester. This sample was representative of the population demographics with minimal differences in gender and race/ethnicity; more than half the participants were female and primarily the race/ethnicity of both the population and the sample was self-reported as White, Black, or Hispanic.

Participants were randomly selected for two pilot datasets (Pilot One N=9, Pilot Two N=9). Male and female participants were almost equally represented across the two pilot groups. Representation was balanced across Black, Hispanic, and White ethnicities; however, the sampling process results for the pilot datasets did not include any representation of Asian/Pacific Islanders or American Indian/Alaska Natives. Upon completion of the piloting process, the 139 remaining essays were grouped into course sections to facilitate the use of a stratified sampling strategy (Schensul, Schensul, & LeCompte, 1999) and the avoidance of possible bias resulting from differences in individual course instructors. Three reflective essays were sampled from each of the eight course sections resulting in a total of 24 reflective essays to complete Dataset One. Male and female participants in Dataset One were represented in nearly the same proportions as the population. Black participants were equally represented in Dataset One and the population; however, there were two percent (2%) fewer Whites and six percent (6%) fewer Hispanics in Dataset One. The sampling process resulted in the inclusion of participants from race/ethnic groups who were not represented in the pilot data, specifically two participants identified as Asian.
or Pacific Islanders, one participant reporting American Indian/Alaska Native race/ethnicity, and one whose race/ethnicity was undisclosed. With 24 participants, Dataset One was deemed adequate to fully illuminate the voice of the population of first-year, first-generation college students. Lincoln and Guba (1985) state that the “primary criterion of sample size is redundancy of information” (p. 202). Therefore, because data saturation was achieved in Dataset One, no additional sampling of data was necessary.

**Pilot Study**

Data analysis commenced with the independent rating of nine, randomly selected essays by the scoring team using the Content Analysis Rating Rubric (Appendix E) with five identified themes: 1) Self Awareness; 2) Task Analysis; 3) Intentional Learning; 4) Autonomy/Responsibility; and 5) Academic Success. This initial rating of the pilot data revealed unanticipated problems with the Content Analysis Rating Rubric that resulted in a major revision of the rubric.

During the first meeting of the scoring team, independent ratings of the Pilot Dataset One were compared and discussed. Theme One rating comparisons indicated no agreement among all four raters, however, three of the four raters were in agreement on seven of the nine essays (78%). During discussion for the purpose of achieving 100% rating consensus, it was determined that some slight adjustments in the rating level descriptor language would clarify the rating process. For example, a Theme One rating of four indicated that evidence was identified in the essay data to represent a student who is *reasonably aware* of their personal learning profile as demonstrated by
reporting their Learning Connections Inventory (LCI) scores or levels, providing specific examples to validate all four learning patterns, and either articulated the pros and cons of the varied pattern levels or offered some discussion of the interaction of the patterns. A student who is *highly aware* would receive a rating of five if they reported their LCI scores or levels, provided specific examples to validate all four learning patterns, and articulated the pros and cons of the varied pattern levels and offered some discussion of the interaction of the patterns. After rating the nine pilot essays, the scoring team used Theme One evidence from the essays to argue that a *reasonably aware* student (rating of four) could articulate the pros and cons of two or three pattern levels, but not necessarily all four. A slight adjustment in the language was made in order to simplify the rating process by delineating a rating of four as *articulates the pros and cons of one or two pattern levels*, and a five rating as *articulates the pros and cons of three or four pattern levels*.

The scoring team experienced greater frustration with Themes Two and Three as a result of what was viewed as overlapping content. A review of the independent pilot data ratings indicated that, while there was 100% agreement on one of nine essays (11%) for both themes, there was agreement between three of the four raters only two additional times (22%). With little agreement among raters 67% percent of the time, it was evident that in the context of rating real-world data, the rubric was not functioning properly to identify evidence of self-directed learning. The outside reviewers explained that, from their perspective as instructors of the Strategic Learning course, learner decisions
related to *task analysis* (Theme Two) and *intentional learning* (Theme Three) go hand in hand as students apply the Let Me Learn Process© (LML Process©) in learning contexts. The ensuing discussion provided the researcher with a deeper understanding of typical college student development over the six-week Strategic Learning course. Guided by discussion of instructor experience with students across the spectrum of levels, from first-year to graduate school, the scoring team came to understand that it was not realistic to expect first-year college students in their first semester to readily make use of the specific LML Process© vocabulary to describe specific strategies related to task analysis and intentional learning as described in the rubric. Without exception, the scoring team found it very difficult to differentiate between the two themes and was less confident in their ratings for Themes Two and Three. After thoughtful consideration, the researcher realized that through the inductive analysis of the pilot data a new theme had emerged: Decoding and Pattern Fit. This new theme captured the spirit of Themes Two and Three but more accurately depicted self-directed learning as characterized in the LML Process©.

Discussion of pilot data ratings associated with Theme Four focused on the scoring teams’ individual interpretations of autonomy and responsibility. The pilot data revealed that some students voiced the criteria of rating scores of four and five, *specific personal examples of having taken responsibility to meet the demand of academic learning expectation*, while others provided examples of the strategies used to meet the demand. The scoring team decided that it was reasonable to expect college students who provide a specific example to explain
how they took responsibility or acted with autonomy by including their strategies. Consequently, the Theme Four descriptor language for ratings of four and five was adjusted to reflect the identification of strategies that were used.

Another outcome of the collaborative exchange among the scoring team related to Theme Four was an aha moment of clarity. Outside Reviewer Y voiced the realization that she had been projecting student behaviors demonstrated in classes she taught onto the essay data and admitted a new awareness of bias that led her to discount evidence in the data. Outside Reviewer Z expressed similar bias potential, contributing to understanding of the lack of agreement on six of the nine essays (67%). Furthermore, after recognizing bias potential, the scoring team expressed an awareness of the need to more closely rely on the rubric descriptors.

Theme Five independent ratings indicated that three of the four raters were in agreement on six of the nine essays (67%). During discussion for the purpose of achieving 100% rating consensus, it was determined that small clarifying changes to distinguish between ratings of levels four and five in would likely address the problem. Through collaborative discussion, recommendations surfaced that led to a slight adjustment in the descriptor language to expand the examples of academic success to include GPA and course grades.

The research process of validating the rubric with pilot data resulted in significant changes in both themes and research questions and consequently, a revised rubric was created. The Content Analysis Rating Rubric V2 (Appendix F) reflected the changes and included descriptors for the identification of evidence
in the essay data that would differentiate between rating levels and reflect a range of learner awareness. Due to the extensive nature of the rubric revisions, new data were sampled and the pilot phase repeated with nine additional essays. This repetition provided an opportunity to strengthen the credibility of the data analysis by improving inter-rater reliability.

The independent coding of the nine essays in Pilot Dataset Two revealed an increase in the occurrence of 100% rater agreement across all themes from 4% to 11% when compared to Pilot Dataset One. Additionally, improvement was demonstrated by the reduction of no agreement among raters from three times (7%) in pilot one to zero (0%) in pilot two. Discussion revealed unanimity regarding ease of use of Content Analysis Rating Rubric V2 and the confidence gained by the scoring team as a result of the consensus building experience was significant. Appendix J describes rater agreement between Pilot One and Two.

Themes with less than 100% agreement were discussed to facilitate team learning regarding the rating process and to illuminate rating decisions and build consensus. No new themes emerged from Pilot Dataset Two.

After piloting was completed, twenty four participants were randomly selected from the 139 remaining participants to create Dataset One. During data analysis the Content Analysis Rating Rubric V2 continued to function well. No new themes emerged from Dataset One, indicating that the sample size was adequate to fully illuminate the voice of the population of first-year, first-generation college students. Dataset One findings are discussed by individual themes in the remainder of Chapter Four.
Description of Themes

Four themes were identified to guide the research process of examining essay data for evidence of self-directed learning: 1) Self Awareness, 2) Decoding and Pattern Fit, 3) Autonomy/Responsibility, and 4) Academic Success. Themes One, Three, and Four were adapted from Mahers’ (2005a, 2005b) foundational research to assess the impact on college students of Johnston’s (1996, 1998) Interactive Learning Model on “students’ ability to utilize the processes of metacognition and intentional learning as tools to increase self-direction in learning” (p. 5). Theme Two emerged during the pilot research process as a consolidation of several of Maher’s original themes.

A scoring team of three outside reviewers and the researcher used the Content Analysis Rating Rubric V2 (Appendix F) to examine themes in the reflective essay data. Additionally, each essay was given careful consideration by the scoring team for the possibility of emergent, previously unidentified themes.

Theme One: Self Awareness

The first theme addressed research question one: To what extent were students able to identify and validate their personal learning profile in their reflective essays? For the purposes of this study, self awareness is associated with the Let Me Learn Process® (LML Process®), “an advanced learning system that provides learners with the means to articulate who they are as a learner” (Let Me Learn, n.d., n.p.). Because it forms the basis for the curriculum used in the 2009 Freshman Summer Institute Strategic Learning course, the LML Process® plays a central role in this study. All study participants began the Strategic
Learning course by completing the Learning Connections Inventory (LCI). This was a first step to better understanding of self in terms of the four operational patterns of Sequence, Precision, Technical Reasoning, and Confluence, which make up each learner’s brain-mind interface as described in the Interactive Learning Model (Johnston, 1996, 1998). Self awareness is a key component of the LML Process® and instructional activities provide experiences to increase understanding of individual learning patterns, culminating in the creation of a Personal Learning Profile (Dawkins, Kottkamp, & Johnston, 2010; Johnston, 2010; Johnston & Pawelski, 2010). With the Profile, the learner must synthesize what they know about their patterns and bring validity to their LCI scores, using their own words to describe their typical “thoughts, actions, and feelings when asked to complete a task that requires Sequence, Precision, Technical Reasoning, and Confluence” (Dawkins, Kottkamp, & Johnston, 2010, p. 15).

Dataset One was examined by the outside reviewers and the researcher for evidence of Theme One, Self Awareness using the Content Analysis Rating Rubric V2 (Appendix F) to rate the extent to which first-year, first-generation college students’ identified and validated their personal learning profile. Essay data were rated according to a five-point Likert scale with descriptive language delineating increasing levels of evidence. Agreement among the independent ratings was 100% on fifteen of twenty-four essays (63%) with the researcher rating mean for Theme One slightly higher than that of the outside reviewers (M=3.5 and 3.3 respectively). Discussion of evidence in the student writing led to consensus on the remaining nine essays. This triangulation of Theme One
ratings resulted in a final consensus mean within the range of *somewhat aware* ($M=3.4$). Measures of central tendency indicated a total mean that was slightly lower than the median and below the mode as well ($M=3.4$, $Mdn=3.5$, 4), therefore representing a nearly symmetrical distribution that was slightly negatively skewed at -0.353). Theme One ratings suggested that on average, first-year, first-generation college students reported LCI scores or use levels and offered specific examples to validate three or four personal learning patterns.

Theme One individual ratings ranged from a score of one (8%), reflecting *no evidence of awareness* of the theme, to a score of five for those who were rated as *highly aware* (21%). Evidence in the data revealed that more than half of the students were able to validate their personal learning profile and were rated *somewhat and reasonably aware* (25% and 29% respectively). The frequency of Theme One ratings is presented in Table 8.

*Table 8*

*Rating Frequency: Theme One - Self Awareness*

<table>
<thead>
<tr>
<th>Rating Levels</th>
<th>$N$</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1: No evidence of awareness</td>
<td>2</td>
<td>8%</td>
</tr>
<tr>
<td>2: Minimally aware</td>
<td>4</td>
<td>17%</td>
</tr>
<tr>
<td>3: Somewhat aware</td>
<td>6</td>
<td>25%</td>
</tr>
<tr>
<td>4: Reasonably aware</td>
<td>7</td>
<td>29%</td>
</tr>
<tr>
<td>5: Highly aware</td>
<td>5</td>
<td>21%</td>
</tr>
<tr>
<td><strong>TOTALS</strong></td>
<td><strong>24</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>
Students who provided *no evidence of awareness* (rating of 1) offered general information about their LCI scores or levels, but did not provide examples as evidence to validate their personal learning profile. For example, Student G105 said nothing more than, “Over the course I’ve learned a lot about myself as a learner. The main focus of the class was the LCI results. The Learning Connections Inventory (LCI) report identified me as a ‘Bridge Learner.’” The lack of specificity resulted in a rating of one.

Ratings of *minimally aware* (2) or *somewhat aware* (3) indicated that in addition to reporting LCI scores or levels, the essays included specific examples of personal learning pattern validation. Essays with one or two examples were rated a score of two (2), and those with three or four examples were rated three (3). To illustrate pattern validation, Student F148 wrote “I am definently [sic] a sequential learner. I plan out all my assignments and I carry around an organizer. I write down notes and put alarms and reminders in my phone. I use my sequential learning pattern to stay organized in school.” Student D44 validated the confluence pattern of confluence, stating, “For projects that require me to make visual presentations I rely on my Confluence for ideas. This allows me to think outside of the box and come up with new approaches to different assignments.” Confluence was also validated by Student J188 who explained:

> I see things every differently than others do and therefore sometimes turn in work that the teacher didn’t quite assign in that manor [sic]. I can’t help it though! Sometimes I feel the need to step out of my box and explore a little. The confluent side of me likes to do things my own way. (J188)
Students who were *reasonably aware* (4) provided evidence that was more thorough and include the required aspects for ratings of one, two, and three. In addition, evidence to support a rating of four (4) integrated the pros and cons of one or two pattern levels or referred to interaction between the patterns. For example, Student F150 provides evidence to validate learning patterns and address pattern interaction:

I am a dynamic learner and none of my LCI results are below seventeen so I use all of my learning styles. My highest is my technical which makes sense because I am an engineer major and typically I use this before any of my other learning style [sic]. This makes sense because I analyze everything very scientifically, I like to see how things work and I really like work by myself. With my precise at twenty three I use it in tandem technical learning and I often use this in combination with my technical. This means that in combo with my technical skills I also like to ask questions, and I like to be accurate and correct. (G150)

Students who were rated *highly aware* (5) provided thorough evidence that included the required aspects for ratings of one, two, and three; integrated the pros and cons of all four pattern levels; and referred to interaction between the patterns. For example, a thorough discussion of the pros and cons of the sequence and precision patterns were presented by Student D42:

I have really learned a lot about myself as a learner. Throughout the entire term, we have gone over how each aspect plays a role in my learning and I now have a greater understanding of how it has helped me succeed in
school. The sequence aspect is what helps me stay organized throughout each week. It helps me manage my time, it helps me receive all the information that I need and it provides me with a great foundation for success. On the other hand it also makes me spend a little too much time on things that normally are very quick. I get caught up in having things exactly right that I lose a lot of time. The precision aspect is what helps me stay accurate. I am constantly checking and rechecking my term papers for format to make sure that they are exactly right. Also when I am studying for tests, it helps make sure that I memorize the correct information and recall it. This is something that also can be burden for me because I thrive on perfection and sometimes get discouraged if I turn something in that is not 100% to my liking. All in all it is a good skill for me because it helps me focus on providing the best work possible. These two skills are the ones that I use for most of my learning, but the other two also play their parts when I need them to. (D42)

The importance of pattern interaction was explained by Student H205:

I am a confluent learner, which is not a great learning pattern for college. I tend to procrastinate, not read directions fully, or repeat things over again, and not organize. The characteristics [sic] of my learning pattern do not normally help me at the University. However I use my team of learning patterns, which consists of confluent first, precise second, technical third, and my use if needed pattern sequence. Together these patterns help me succeed here at the University of South Florida. (H205)
In an exemplar essay, Student H94 thoroughly discusses LCI scores, validates individual learning patterns, articulates the pros and cons of each pattern, and addresses pattern interaction, and as a result provided clear evidence of the highest level of self awareness.

I am a Dynamic learner… I’m predominately a sequential and precise learner, but I don’t tend to avoid the other two learning styles either, which are technical and confluent. I use all four learning skills, especially while in school and there are times when I need to use each and every one of them. My scores in the LCI test were 29 in sequence, 26 in precision, 23 in technical, and 21 in confluence.

My learning skills all have good qualities that apply to them and they aid me in school. Sequence plays a key part in my learning and is one of my dominant learning styles. I always write lists, take time to do my work neatly and correctly, and I always break things down and take them step-by-step. This allows me to gain a full understanding of my assignments, makes sure I don’t forget to do any assignments, and allows me to put a hundred percent and effort into all assignments that I do. Precision also assists my learning tremendously…I often go back and double check things and want to always know if my information is correct, I add a lot of details to my assignments…This learning skill allows me to assure all of my answers are right and detailed, and by doing this it usually results in good grades and success while in school. The technical aspect of my learning style helps as well…I prefer to work by myself on a lot of
things and constantly want to figure things out on my own… The confluent aspect of my learning is used the least, but when needed it allows me to think outside of the box and sometimes take different approaches to things. This quality helps often as well and teachers usually want to see new approaches to things, especially in projects or essays.

Despite the good qualities of my learning styles there are bad qualities as well. My high sequential learning pattern allows me to organize and fully plan how I will approach an assignment, but sometimes I feel like I take too long planning. This hurts me, especially in a timed assignment and sometimes wastes a lot of time… My high precision also has its negative qualities. I often focus on being correct in my assignments so much that it creates stress and I fear to get anything wrong. The technical quality in my learning style makes me want to constantly work alone and figure things out by myself. But, what if I have to do group work? I often find it difficult working with others and I don’t like using anyone else’s ideas but my own… Though I don’t use confluence that often, when I do I sometimes do the assignment wrong or have a bad idea in completing my assignment, which results in lower grades at times.

(H94)

Theme One evidence in the data revealed that more than half of the students were able to validate their personal learning profile and as a result, were rated somewhat and reasonably aware (25% and 29% respectively). The ratings of evidence identified in individual essays varied across demographic groups.
Individual ratings ranged from scores of two (2) to scores of five (5) for males.

The range of scores for females extended across the full spectrum of rating possibilities from one (1) to five (5). The median rating for males was higher than females (Mdn=4 and 3 respectively). Table 9 describes the Theme One rating frequency by gender.

*Table 9*

*Rating Frequency by Gender: Theme One - Self Awareness*

<table>
<thead>
<tr>
<th>Description</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>9</td>
<td>1</td>
<td>11%</td>
<td>2</td>
<td>22%</td>
</tr>
<tr>
<td>Female</td>
<td>15</td>
<td>2</td>
<td>13%</td>
<td>3</td>
<td>20%</td>
</tr>
<tr>
<td>Totals</td>
<td>24</td>
<td>2</td>
<td>4</td>
<td>6</td>
<td>7</td>
</tr>
</tbody>
</table>

Theme One rating frequencies by race/ethnicity revealed the highest median scores in a single representative from the American Indian/Alaska Native group and one representative whose race/ethnicity was undisclosed (Mdn=5).

This was followed by Asian/Pacific Islander, Hispanic, and White participants with a median rating of four (Mdn=4). The least amount of evidence related to Theme One was identified among essays submitted by participants of Black, non-Hispanic race/ethnicity with a median rating of two (Mdn=2). Table 10 further describes the Theme One rating frequency by race/ethnicity.
Table 10

*Rating Frequency by Race/Ethnicity: Theme One - Self Awareness*

<table>
<thead>
<tr>
<th>Description</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asian or Pacific Islander</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>50%</td>
<td>1</td>
<td>50%</td>
</tr>
<tr>
<td>Black, non-Hispanic</td>
<td>7</td>
<td>1</td>
<td>14%</td>
<td>3</td>
<td>43%</td>
<td>2</td>
<td>29%</td>
</tr>
<tr>
<td>Hispanic</td>
<td>5</td>
<td>-</td>
<td>-</td>
<td>2</td>
<td>40%</td>
<td>2</td>
<td>40%</td>
</tr>
<tr>
<td>American Indian/Alaska Native</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>White, non-Hispanic</td>
<td>8</td>
<td>1</td>
<td>13%</td>
<td>1</td>
<td>13%</td>
<td>1</td>
<td>13%</td>
</tr>
<tr>
<td>Undisclosed</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>24</td>
<td>2</td>
<td>4</td>
<td>6</td>
<td>7</td>
<td>5</td>
<td></td>
</tr>
</tbody>
</table>

**Theme Two: Decoding and Pattern Fit**

Research question two, “To what extent did students report the degree to which use of their learning patterns would be required in order to successfully complete an academic task?” was addressed by Theme Two. As the learner validated their four operational patterns of Sequence, Precision, Technical Reasoning, and Confluence, they could then apply the Let Me Learn Process© (LML Process©) in learning contexts by analyzing academic tasks or assignments to determine the levels of pattern use required for successful completion. This decoding process empowers the learner to match their individual patterns with
the task and increase self-direction by intentionally adjusting pattern levels of use to meet the demands of the task. In the Strategic Learning textbook used by study participants, Johnston (2008) states

> When a person understands the way that their mind translates data collected by their brain (learning patterns) they can identify and decode the challenges that confront them, then balance and apply their learning patterns to overcome that challenge. In order to be successful in any endeavor we need to understand our individual learning, the system we are working in, the learning patterns of the people we work with, and the task at hand. Use this understanding of yourself … to understand the learning patterns of your instructors and decode their assignments. (p. 11)

The essay data were examined by the outside reviewers and the researcher for evidence of Theme Two, Decoding and Pattern Fit using the Content Analysis Rating Rubric V2 (Appendix F) to rate the extent to which first-year, first-generation college students’ reported use of their learning patterns to successfully complete an academic task. Essay data were rated according to a five-point Likert scale with descriptive language delineating increasing levels of evidence. Agreement among the independent ratings was 100% on eleven of twenty-four essays (46%) with the researcher rating mean for Theme Two higher than that of the outside reviewers ($M=3.9$ and 3.2 respectively). Discussion of evidence in the student writing rendered consensus ratings on the thirteen remaining essays. This triangulation of Theme Two data resulted in a final consensus mean at the high end of the range of somewhat aware ($M=3.7$).
Measures of central tendency determined the mean was lower than both the median and mode (\(M=3.7, Mdn=4, 5\)), representing a distribution that had the greatest negative skew of all the themes (skewness= -0.511). Theme Two ratings suggested that on average, first-year, first-generation college students were rated at the top range of somewhat aware (3) and very close to rating reasonably aware (4).

Theme Two ratings ranged from a score of one (8%), reflecting \textit{no evidence of awareness} of the theme, to a score of five for those who were rated as \textit{highly aware} (46%). Evidence in the data revealed that nearly half of the students provided at least one specific example of decoding, matching their learning profile to academic task demands, and modifying their learning profile to successfully complete the task. Table 11 presents a summary of the Theme Two rating frequencies.

\textit{Table 11}

\textit{Rating Frequency: Theme Two – Decoding and Pattern Fit}

<table>
<thead>
<tr>
<th>Rating Levels</th>
<th>(N)</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1: No evidence of awareness</td>
<td>2</td>
<td>8%</td>
</tr>
<tr>
<td>2: Minimally aware</td>
<td>4</td>
<td>17%</td>
</tr>
<tr>
<td>3: Somewhat aware</td>
<td>5</td>
<td>21%</td>
</tr>
<tr>
<td>4: Reasonably aware</td>
<td>2</td>
<td>8%</td>
</tr>
<tr>
<td>5: Highly aware</td>
<td>11</td>
<td>46%</td>
</tr>
<tr>
<td>\textbf{TOTALS}</td>
<td>24</td>
<td>\textbf{100%}</td>
</tr>
</tbody>
</table>
Students who provided *no evidence of awareness* (rating of 1) did not provide specific examples of decoding or pattern matching. Essays rated *minimally aware* (2) included evidence supporting a general understanding. For example, Student E3 hinted at matching sequence and precision patterns to learning demands in a specific class, “…I was participating constantly in class, doing all my assignments on time, paying attention to the class and taking notes, and been [sic] polite with the teachers and classmates opinions.”

Ratings of *somewhat aware* (3) included at least one specific example of decoding and matching their learning profile to academic task demands. In a discussion of success on a critical thinking assignment, Student J178 offered this evidence, “Everyone but six people failed that assignment because they did not follow directions. Luckily by me being a sequential learner I followed the directions to the T and it paid off.”

Students who were *reasonably aware* (4) included the criteria for ratings of one, two, and three, and also identified modifications of patterns to successfully complete an academic task. Student G118 explains the need for pattern modifications:

> When I do need to use precision and sequence, which are my two weaker areas, I need to focus and put a lot of effort to make it correct. This can be difficult when I have to write research papers, because sequence and precision are the skills one needs to write a research paper. (G118)

Student H94 met the criteria for a rating of *highly aware* (5), by both identifying and using pattern modifications to succeed:
The test was very detailed and there was so much information that was covered on the test and I wondered where I would begin. At first I panicked and didn’t know what to do…I began to think about how I would study. I then remembered my learning patterns and based my approach off of that. I used sequence and planned out a plan. I would study for about twenty minutes each and take small breaks in between to relax my mind. Then, I went through and studied my notes and made sure that all of the information was accurate and import [sic] using my precision and technical skills. After I went through my notes I skimmed through my textbook and tried to find any more relevant information that I did not use in my notes. For the more difficult information such as the lakes and rivers I made acronyms and songs to help me to remember them using my confluence. Putting all of these things into effect I took the test and was extremely confident that I would do well. (H94)

Theme Two evidence in the data revealed that nearly half of the students provided at least one specific example of decoding, matching their learning profile to academic task demands, and modifying their learning profile to successfully complete the task and as a result were rating highly aware (46%). The ratings of evidence identified in individual essays varied across demographic groups. Individual ratings ranged from scores of two (2) to scores of five (5) for males, however no ratings of four (4) occurred among males. The range of scores for females extended across the full spectrum of rating possibilities from one (1) to five (5). The median rating Theme Two among females was higher
than males ($Mdn=4$ and $3$ respectively). Table 12 describes the Theme Two rating frequency by gender.

*Table 12*

*Rating Frequency by Gender: Theme Two - Decoding and Pattern Fit*

<table>
<thead>
<tr>
<th>Description</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>9</td>
<td>-</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Female</td>
<td>15</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>7</td>
</tr>
<tr>
<td>Totals</td>
<td>24</td>
<td>2</td>
<td>4</td>
<td>5</td>
<td>11</td>
</tr>
</tbody>
</table>

Theme Two rating frequencies varied by race/ethnic groups and revealed the highest median scores in participants identified as White, as well as a single representative from the American Indian/Alaska Native group and one representative whose race/ethnicity was undisclosed ($Mdn=5$). This was followed by participants of Hispanic and Black, non-Hispanic race/ethnicity ($Mdn=4$ and $3$ respectively). Study participants identified as Asian/Pacific Islanders provided no Theme Two evidence meeting the criteria for ratings of *reasonably* (4) or *highly aware* (5); this fact contributed to the resulting median rating of 2.5 for the demographic group. Table 13 further describes the Theme Two rating frequency by race/ethnicity.
Table 13

Rating Frequency by Race/Ethnicity: Theme Two - Decoding and Pattern Fit

<table>
<thead>
<tr>
<th>Description</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>N</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>N %</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asian or Pacific Islander</td>
<td>2</td>
<td>-</td>
<td>1</td>
<td>50%</td>
<td>-</td>
</tr>
<tr>
<td>Black, non-Hispanic</td>
<td>7</td>
<td>1</td>
<td>14%</td>
<td>-</td>
<td>4</td>
</tr>
<tr>
<td>Hispanic</td>
<td>5</td>
<td>-</td>
<td>2</td>
<td>40%</td>
<td>-</td>
</tr>
<tr>
<td>American Indian/Alaska Native</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>White, non-Hispanic</td>
<td>8</td>
<td>1</td>
<td>13%</td>
<td>1</td>
<td>13%</td>
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<tr>
<td>Undisclosed</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>24</td>
<td>2</td>
<td>4</td>
<td>5</td>
<td>2</td>
</tr>
</tbody>
</table>

Theme Three: Autonomy/Responsibility

Research question three, “To what extent did students state examples of personal responsibility and accountability for their own learning?” was addressed by Theme Three. The LML Process® is aligned with the sociological and psychological conceptualizations of self-directed learning (Long, 2000b). Autonomy is an important element in identifying the self-directed learner. Autonomy can be defined as choosing for oneself the norms one will respect, and refers to having the ability to choose what has value, and make choices in harmony with self-realization (Brockett & Hiemstra, 1991). Responsibility is one
hallmark of the LML Process® as Dawkins, Kottkamp, and Johnston (2010) describe the “advanced learning system that prepares all learners to be accountable for their learning outcomes” (p.141).

Dataset One was examined by the outside reviewers and the researcher for evidence of Theme Three, Autonomy/Responsibility using the Content Analysis Rating Rubric V2 (Appendix F) to rate the extent to which first-year, first-generation college students’ stated examples of personal responsibility and accountability for their own learning. Essay data were rated according to a five-point Likert scale with descriptive language delineating increasing levels of evidence. Agreement among the independent ratings was 100% on seven of the twenty-four essays (29%) however, discussion with scoring team members provided partial explanation for the low percentage of agreement; several outside reviewers acknowledged that they fell into a pattern of looking for the themes in a chronological manner and missed opportunities to identify Theme Three when strategies were scattered across individual essays. The researcher rating mean was nearly one point higher than that of the outside reviewers (M=4.2 and 3.6 respectively), but after additional discussion of evidence in the student writing consensus on the seventeen essays without initial agreement was reached. Triangulation of Theme Three ratings resulted in the highest consensus mean of all the themes at 4.0, reasonably aware.

Measures of central tendency revealed a normal curve with (M=4.0, Mdn=4, Mode=4) with a negligible negative skewness of -0.069. Theme Three ratings suggested that on average, first-year, first-generation college students
were *reasonably aware* and provided at least one specific example of using strategies to take responsibility and be more accountable to meet the demands of academic learning expectations.

Theme Three was the only theme to have all the evidence identified in the essays clustered in the three highest rating levels resulting in a ratings range from a score of three (25%), reflecting one quarter of the students were *somewhat aware* of the theme, to a score of five for those who were rated as *highly aware* (29%). Evidence was identified in all essay data (100%) reflecting student recognition of strategies needed or used to meet the demands of academic learning expectations. Table 14 summarizes the Theme Three ratings.

*Table 14*

**Rating Frequency: Theme Three – Autonomy/Responsibility**

<table>
<thead>
<tr>
<th>Rating Levels</th>
<th>N</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1: No evidence of awareness</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>2: Minimally aware</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>3: Somewhat aware</td>
<td>6</td>
<td>25%</td>
</tr>
<tr>
<td>4: Reasonably aware</td>
<td>11</td>
<td>46%</td>
</tr>
<tr>
<td>5: Highly aware</td>
<td>7</td>
<td>29%</td>
</tr>
<tr>
<td><strong>TOTALS</strong></td>
<td><strong>24</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

Essays rated *somewhat aware* (rating of 3) described the need to take more responsibility and be more accountable and discussed possible strategies to accomplish this. Some essays referred to time management rather than their
learning patterns as the key to taking responsibility. For example, Student F150 said:

Staying up till 3 in the morning the night before a paper is due is not very fun and do it enough times and you will learn to control it. I plan to change my ways for all by getting an agenda and planning my week out ahead of time so I say on task. (F150)

Through reflection, Student E3 also demonstrated being somewhat aware (3) of their responsibility for learning and explained:

From my Strategic Learning class activities I could probably have use the learning and time management skills I learned to improve my results in the my Comp. class. But from this experience I learned that I have to focus on classes and work hard since the first day because if I wait until I feel the class effects to take action it would be too late. Next time I would take control of my time better, organize myself better, and start taking action on time to achieve the highest scores possible in every class. (E3)

Students who were reasonably aware (4) provided at least one specific example of taking responsibility and describe the use of strategies to meet the demand of academic learning expectations. The successful completion of an English essay by remaining autonomous in the college setting was noted by Student H91 who stated, “I focused so hard on that paper. I didn’t let anything or anybody distract me from what I knew what had to be done.” Student D208 recognized the need to balance academic coursework and social activities in order to succeed at the university:
My top three concerns coming into the university was that the work load might overwhelm me, that I would become engulfed in the party life...Through careful management of my time I have been able to balance my work load. In addition, through the entire month and a half of this semester I have only went [sic] to three parties. With limited partying I am better suited to succeed here at the university...I have proven to myself that I am able capable of handling all of my work as well as social issues.

(D208)

Students who were highly aware (5) provided two or more specific examples to describe the use of strategies to meet the demand of academic learning expectations. A preponderance of such evidence was recognized in the exemplar essay of Student H94, who expressed autonomy by deciding what was important and then taking responsibility for learning outcomes.

As I entered college I had multiple concerns. I wondered if I would be able to get all of my work done, whether I would be able to study all the material for tests, and how I would write the long essays that I’m not used to. I [sic] order to resolve these problems I also took multiple approaches. This was especially easy after taking the LCI test and I realized my strengths and weaknesses and used my learning skills to my advantage. For example, to make sure that I had enough time to complete all of my assignments I used my sequential learning skills. I wrote lists of all of my assignments and checked them off as I completed them. I also used my sequential learning skills in writing outlines for my essay and making plans...
to approach my essay...In order to study for tests I would usually use all four. I used sequence to devise a plan to study, precision to make sure my notes were detailed and accurate, technical to skim through the textbook and find relevant information, and confluence to relate difficult things to each other making it easier to remember....The most regretful academic situation from this semester was my first in-class writing assignment for English class... I got the prompt and instead of utilizing the proper skills to complete the assignments successfully I decided to use the wrong type of skills. I had a negative attitude and my source of motivation was to just hurry up and write the essay so I could leave and go home. I used my confluence and technical skills, which isn’t one of my strongest qualities and I used the negative aspects of them. I wrote down arguments and did not finish them, I didn’t try very hard because I saw no point to the assignment, and I just jumped into the topic without planning and thinking out what I would write about first. What I could have done differently that I now realize due to the LCI test is, I could have used several different approaches that would have increased my chances for success tremendously. For example I could have used my confluence and first brainstormed what I would write about. Then utilize my sequence pattern and write a brief outline of what I would talk about. After that I could have used precision and re-read all of my information making sure it makes sense and all of my information is correct. By taking this approach I would
have almost been ensured to have success and would have had a lot more confidence and success then [sic] I did. (H94)

Theme Three evidence in the data revealed that all study participants (100%) identified strategies they needed or those that were actually used to meet the demands of academic learning expectations. The ratings of evidence identified in individual essays varied across demographic groups; however, Individual ratings were clustered in a range from scores of three (3) to scores of five (5) for both male and female participants. The majority of the evidence (76%) was identified in essays with ratings in the highest two levels of reasonably (4) and highly aware (5). The median was identical for both genders (Mdn=4). Table 15 describes the Theme Three rating frequency by gender.

Table 15

Rating Frequency by Gender: Theme Three – Autonomy/Responsibility

<table>
<thead>
<tr>
<th>Description</th>
<th>Rating</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td>Male</td>
<td>N</td>
<td>N</td>
<td>%</td>
<td>N</td>
<td>%</td>
<td>N</td>
<td>%</td>
<td>N</td>
</tr>
<tr>
<td>Female</td>
<td>N</td>
<td>N</td>
<td>%</td>
<td>N</td>
<td>%</td>
<td>N</td>
<td>%</td>
<td>N</td>
</tr>
<tr>
<td>Totals</td>
<td>24</td>
<td>0</td>
<td>0</td>
<td>6</td>
<td>11</td>
<td>7</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Theme Three rating frequencies varied by race/ethnic groups and revealed the highest median scores in a single representative from the American Indian/Alaska Native group and one representative whose race/ethnicity was
undisclosed ($Mdn=5$). With all the ratings clustered in the highest three levels of *somewhat* (3), *reasonably* (4) and *highly aware* (5), there was no difference in the median score for participants of all other race/ethnic groups ($Mdn=4$). Table 16 further describes the Theme Three rating frequency by race/ethnicity.

*Table 16*

*Rating Frequency by Race/Ethnicity: Theme Three – Autonomy/Responsibility*

<table>
<thead>
<tr>
<th>Description</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asian or Pacific Islander</td>
<td>2</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>2</td>
</tr>
<tr>
<td>Black, non-Hispanic</td>
<td>7</td>
<td>-</td>
<td>-</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Hispanic</td>
<td>5</td>
<td>-</td>
<td>-</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>American Indian/ Alaska Native</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>White, non-Hispanic</td>
<td>8</td>
<td>-</td>
<td>-</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Undisclosed</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>24</td>
<td>0</td>
<td>0</td>
<td>6</td>
<td>11</td>
</tr>
</tbody>
</table>

Additional essay evidence related to learner autonomy and responsibility was identified by the researcher during analysis and synthesis of data. In one-half of the essay data, first-generation students referenced time management as an issue during their first semester of college, with 83% listing it as one of their top three concerns. The evidence was predominantly from female students.
(58%) and provided nearly equal representation of White, Black, and Hispanic ethnicities (33%, 33%, and 25% respectively). While some described the challenges they faced managing their time, others provided evidence of taking responsibility that led to a sense of control and success.

Procrastination was identified as a component of time management issues in seven of the twelve essays (58%) and was mentioned independent of time management in three additional essays. Half the essays referencing procrastination were submitted by White students and more females than males (70% as compared to 30%). Evidence of taking responsibility was seen in comments such as, “I know that I definitely procrastinated on a few assignments and I’m working on that” (G124), and “I will not put off my work until the last minute, because I have seen the consequences” (G118).

The issues related to time management and procrastination identified in the essay data offer additional evidence of first-year, first-generation college students’ taking personal responsibility and accountability for their own learning.

**Theme Four: Academic Success**

The final theme addressed research question four: To what extent did students report academic success? Theme Four reflects a shift in learner actions towards evaluative thinking; students measure their work against the criteria of a challenge, face themselves and review their work, asking if it represents their best effort. Reflection is an important step toward becoming more self-directed as students think about what they learned in a challenge and what action will be taken in the future if they face a similar task. In the LML Process®, as teachers
and students begin to openly discuss metacognitive practices, especially those related to judgment, reflection, application of skills in new settings, there is potential for growth in self-directed learning capacity.

Dataset One was examined by the outside reviewers and the researcher for evidence of Theme Four, Academic Success using the Content Analysis Rating Rubric V2 (Appendix F) to rate the extent to which first-year, first-generation college students’ reported academic success related to the LML Process®. Essay data were rated according to a five-point Likert scale with descriptive language delineating increasing levels of evidence. Agreement among the independent ratings was 100% on seventeen of the twenty-four essays (71%) and the difference between the researcher rating mean and that of the outside reviewers was negligible (M=3.8 and 3.7 respectively). Discussion of evidence in the student writing led to consensus on the remaining seven essays and this triangulation of Theme Four ratings resulted in a consensus mean at the high end range of somewhat aware (M=3.8).

Measures of central tendency revealed a nearly symmetrical distribution with the mean only slightly lower than the median and mode (M=3.8, Mdn=4, 4) creating a small negative skewness of -0.382. Theme Four ratings suggested that on average, first-year, first-generation college students were reasonably aware as evidenced in the essay data with at least one specific example of using strategies to take responsibility and be more accountable to meet the demands of academic success related to the LML Process®.
Evidence of academic success was found in all essay data in varying levels. Theme Four ratings ranged from a score of two (8%), reflecting a couple of students were minimally aware of the theme, to a score of five for those who were rated as highly aware (21%). The highest rating levels of four (4) and five (5) were obtained by two-thirds of the participants (67%). Table 17 summarizes the Theme Four ratings.

Table 17

Rating Frequency: Theme Four – Academic Success

<table>
<thead>
<tr>
<th>Rating Levels</th>
<th>N</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1: No evidence of awareness</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>2: Minimally aware</td>
<td>2</td>
<td>8%</td>
</tr>
<tr>
<td>3: Somewhat aware</td>
<td>6</td>
<td>25%</td>
</tr>
<tr>
<td>4: Reasonably aware</td>
<td>11</td>
<td>46%</td>
</tr>
<tr>
<td>5: Highly aware</td>
<td>5</td>
<td>21%</td>
</tr>
<tr>
<td><strong>TOTALS</strong></td>
<td><strong>24</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

Ratings of minimally aware (2) or somewhat aware (3) indicated evidence of vague references or general discussion of academic success was identified by the scoring team. For example, Student E26 referred to success without providing explanation, “My most successful academic situation this semester was when I got an eighty, on a really hard grammar test in composition one.” Other students provided general discussion without specific details to illustrate their success, such as:
My most successful academic situation would have to be my success in my Composition 1 class. I believe that I produced some of my best work in this class and by working hard and staying determined I was able to do well in this course. (A208)

I think that the source of my motivation was watching me achieving high scores on my first college course. Every time I got in ‘Blackboard’ I felt happy when looking at my grades and that just motivated me to keep going on. (E3)

Study participants who provided more evidence of reflection in their essays, providing at least one specific example of academic success related to the Let Me Learn Process®, garnered ratings of reasonably aware (4). For example, recognition of the sequential pattern in the course instructor allowed Student B9 to match her learning profile to the expectations:

My most successful academic situation this semester was when I got a B for an essay…What really helped me do well was my teacher. By observing, I became aware that her learning profile is sequential. She did very well at explaining her expectations. I was able to accomplish this assignment by taking it step by step... (B9)

Student H96 was cognizant of the role their sequence pattern played in their academic success:

One successful event that happened in the summer semester has to do with my Composition 1 class. This is because at first, I could not receive anything higher than an eighty on any of my papers. So, I applied myself
and I found that I had become more organized (Sequence) and I had to find out what it was that my teacher wanted me to do. I figured it out and now I am receiving higher grades. (H96)

Essays with at least two or more specific examples of academic success related to the Let Me Learn Process© garnered ratings of highly aware (5).

Evidence to illustrate the highest level of awareness was identified in the exemplar essay of Student H94:

The most successful academic situation from this semester is getting a “B” on my first college exam. The exam was in my Introduction to the Black experience class and I was so worried about it. The test was very detailed and there was so much information that was covered on the test and I wondered where I would begin…I then remembered my learning patterns and based my approach off of that. I used sequence and planned out a plan. I would study for about twenty minutes each and take small breaks in between to relax my mind. Then, I went through and studied my notes and made sure that all of the information was accurate and import using my precision and technical skills. After I went through my notes I skimmed through my textbook and tried to find any more relevant information that I did not use in my notes. For the more difficult information such as the lakes and rivers I made acronyms and songs to help me to remember them using my confluence. Putting all of these things into effect I took the test and was extremely confident that I would do well. As I got my result I was very pleased receiving a grade of a “B,” while many others received
bad grades. I felt so good and accomplished at my results and from there on out I made sure to use my learning patterns to my advantage. (H94)

Theme Four evidence in the data revealed that two-thirds of the study participants (67%) provided at least one specific example of using strategies to take responsibility and be more accountable to meet the demands of academic expectations. The ratings of evidence identified in individual essays varied across demographic groups and ranged from scores of two (2) to scores of five (5) for both male and female participants. The median was identical for both genders ($Mdn=4.0$). Table 18 describes the Theme Four rating frequency by gender.

Table 18

<table>
<thead>
<tr>
<th>Rating Frequency by Gender: Theme Four – Autonomy/Responsibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
</tr>
<tr>
<td>N</td>
</tr>
<tr>
<td>Male</td>
</tr>
<tr>
<td>Female</td>
</tr>
<tr>
<td>Totals</td>
</tr>
</tbody>
</table>

Theme Four rating frequencies varied by race/ethnic groups and revealed the highest median scores in a single representative from the American Indian/Alaska Native group and one representative whose race/ethnicity was undisclosed ($Mdn=5$). This was followed by Asian/Pacific Islander participants with a median score of 4.5. There was no difference in the median score for
participants of all other race/ethnic groups (Mdn=4). Table 19 further describes the Theme Four rating frequency by race/ethnicity.

Table 19

Rating Frequency by Race/Ethnicity: Theme Four – Autonomy/Responsibility

<table>
<thead>
<tr>
<th>Description</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Asian or Pacific Islander</td>
<td>N</td>
</tr>
<tr>
<td>Black, non-Hispanic</td>
<td>7</td>
</tr>
<tr>
<td>Hispanic</td>
<td>5</td>
</tr>
<tr>
<td>American Indian/Alaska Native</td>
<td>1</td>
</tr>
<tr>
<td>White, non-Hispanic</td>
<td>8</td>
</tr>
<tr>
<td>Undisclosed</td>
<td>1</td>
</tr>
<tr>
<td>TOTAL</td>
<td>24</td>
</tr>
</tbody>
</table>

Additional essay evidence related to the reporting of academic success was identified by the researcher during analysis and synthesis of data.

Characteristics of self-efficacy were present in more than one half of the essay data (58%). The evidence was predominantly from female students (64%) and the group with the largest representation was Black students, followed by White and Hispanic students (36%, 29%, and 21% respectively). The self-efficacy evidence was chiefly limited to side-bar comments that lacked deeper
explanation or discussion. Using phrases such as, “I think that I will do just fine,” “That boost [sic] up my confidence,” “confident I can do well on the next one,” “I know I can do better,” “I feel like next year will go as successful as this term,” “I know deep down that I am smart…I will not let my fears hold me back,” and “I have proven to myself that I am able capable of handling all of my work,” study participants voiced confidence in their own abilities as learners.

**Correlation Between Themes**

A Pearson Product Moment Correlation was conducted to analyze the relationship between the four themes. Across all four themes the correlation coefficients reflected positive relationships with statistical significance evident in four of the six correlations.

Analysis revealed a moderately strong, positive relationship between Theme One, *Self-Awareness*, and Theme Two, *Decoding and Pattern Fit*, that was statistically significant at the 0.05 level ($r=.487, p<.05$). According to Cohen (1988), $r$ values between .30 and .49 represent a moderate effect size between the correlates. Theme One was also positively related to Themes Three and Four, but effect sizes were small with no statistical significance (Cohen, 2008).

Theme Two, *Decoding and Pattern Fit*, was also positively correlated to all other themes. There was statistically significant evidence that the relationship between Theme Two and Theme Four, *Academic Success*, was one of the strongest in the study according to Cohen’s (2008) scale ($r=.595, p<.01$). The relationship between Themes Two and Three, *Autonomy/Responsibility*, was
also shown to be statistically significant with a moderate effect size ($r=.458$, $p<.05$).

Theme Three, *Autonomy/Responsibility*, was positively correlated to all other themes, and the relationship identified between Theme Three and Theme Four, *Academic Success*, had the strongest positive relationship of the study ($r=.669$, $p<.01$) based on Cohen’s scale (2008).

The correlation values presented in Table 20 indicate all six correlations between the four themes identified in the essay data were positive with moderate to strong effect sizes. Two of the relationships were statistically significant at the 0.01 level and two statistically significant at the 0.05 level.

*Table 20*

*Correlation Between the Four Themes*

<table>
<thead>
<tr>
<th>Measure</th>
<th>Theme One</th>
<th>Theme Two</th>
<th>Theme Three</th>
<th>Theme Four</th>
</tr>
</thead>
<tbody>
<tr>
<td>Theme One, Self-Awareness</td>
<td>Pearson $r$</td>
<td>$.487^*$</td>
<td>.262</td>
<td>.232</td>
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<tr>
<td></td>
<td>$p$ value</td>
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<td>.217</td>
<td>.275</td>
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<tr>
<td>Theme Two, Decoding and Pattern Fit</td>
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<td>.458$^*$</td>
<td>.595$^{**}$</td>
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<tr>
<td></td>
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<td>.025</td>
<td>.002</td>
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<td>.458$^*$</td>
<td>.669$^{**}$</td>
</tr>
<tr>
<td></td>
<td>$p$ value</td>
<td>.217</td>
<td>.025</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Theme Four, Academic Success</td>
<td>Pearson $r$</td>
<td>.232</td>
<td>.595$^{**}$</td>
<td>.669$^{**}$</td>
</tr>
<tr>
<td></td>
<td>$p$ value</td>
<td>.275</td>
<td>.002</td>
<td>&lt;.001</td>
</tr>
</tbody>
</table>

*$^p < .05$.

$^{**}p < .01$.
Findings Across Themes

An analysis of the essay data rating frequencies was conducted across all four themes by Strategic Learning course section. This analysis was possible due to methods utilized early in the study to identify data through a stratified sampling strategy (Schensul, Schensul, & LeCompte, 1999) resulting in the random selection of three reflective essays from each of the eight course sections.

The essay protocol used for data collection in each Strategic Learning course section did not specify a minimum or maximum word count. The essay data randomly sampled for this study ranged in length from 394 to 1833 words; however, no patterns were identified between length of essay and total mean rating, Strategic Learning course section, gender, or ethnicity.

Rating frequencies across all themes indicated five of the eight Strategic Learning course sections had more than half the ratings occur at the reasonably (4) and highly aware (5) levels. Course sections A and H had the greatest percentage of evidence (84% each) at the highest two rating levels, followed by section D (75%). These three sections had no ratings occur at the lowest levels of no evidence (1) and minimally aware (2), indicating that 100% of the essay data collected in course sections A, H, and D provided evidence at the somewhat (3), reasonably (4), and highly aware (5) levels. Two other sections had more than half the ratings occur at the reasonably (4) and highly aware (5) level: course sections B and J (66% each). However, sections B and J also had several ratings occur at the no evidence (1) and/or minimally aware (2) rating levels.
In course sections F, G, and E, more than half the ratings occurred across the top three levels of somewhat (3), reasonably (4), and highly aware (5).

Sections F and G had 75% at the top three levels, followed by section E with 67%. Table 21 reports the occurrence of essay ratings by course section.

Table 21

*Rating Frequency by Strategic Learning Course Section*

<table>
<thead>
<tr>
<th>Course Section Code</th>
<th>Total Possible Ratings</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>A</td>
<td>3</td>
<td>12</td>
</tr>
<tr>
<td>B</td>
<td>3</td>
<td>12</td>
</tr>
<tr>
<td>D</td>
<td>3</td>
<td>12</td>
</tr>
<tr>
<td>E</td>
<td>3</td>
<td>12</td>
</tr>
<tr>
<td>F</td>
<td>3</td>
<td>12</td>
</tr>
<tr>
<td>G</td>
<td>3</td>
<td>12</td>
</tr>
<tr>
<td>H</td>
<td>3</td>
<td>12</td>
</tr>
<tr>
<td>J</td>
<td>3</td>
<td>12</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>24</strong></td>
<td><strong>96</strong></td>
</tr>
</tbody>
</table>

*Note.* Essays received a single rating on each of four themes; therefore three essays would produce a total of twelve possible ratings. Percentages represent the number of ratings out of a total of 12 possible ratings per course section. No data were available from course section C due to a reporting error. The letter I was not used to avoid possible confusion with the numeral one.
Measures of central tendency were examined by themes and demographic groups. Ratings of evidence identified in the essay data for Themes One, Three, and Four appear to be represented in approximately symmetrical distributions (Bulmer, 1979) with some negative skewness in each (skewness= -0.353, -0.069, and -0.382 respectively). Based on Bulmer’s (1979) guidelines for interpreting skewness, Theme Two ratings had a moderately skewed distribution based on a negative skewness between -1.0 and –0.5 (skewness= -0.511) indicating some observations were pulled into the left tail of the curve making it a little longer.

An analysis of total means ratings was conducted by demographic groups. The aggregate data revealed both genders in the mid- to upper ranges of the *somewhat aware* level (3) with males, on average, rating slightly higher than females ($M=3.94, SD=1.07$; $M=3.58, SD=1.14$ respectively). Race/ethnicity means also showed most of the participants in the mid- to upper ranges of *somewhat aware* (3). Study participants in the race/ethnicity group identified as Asian or Pacific Islander rated at the top of the range ($M=3.75, SD=1.04$), followed by White ($M=3.58, SD=1.25$), Hispanic ($M=3.48, 1.25$), and Black ($M=3.43, SD=.94$) participants. The least amount of rating variability was identified among Black participants. Two outlier mean ratings of 5.0 occurred at the top of the scale, *highly aware*, for an individual identified as American Indian/Alaska native and one person whose ethnicity was not disclosed.

Table 22 displays the demographic essay means disaggregated by gender and ethnicity.
Table 22

Disaggregated Demographic Means

<table>
<thead>
<tr>
<th>Description</th>
<th>N</th>
<th>Group Mean</th>
<th>Standard Deviation</th>
<th>Consensus Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>9</td>
<td>3.94</td>
<td>1.07</td>
<td>3.75</td>
</tr>
<tr>
<td>Female</td>
<td>15</td>
<td>3.58</td>
<td>1.14</td>
<td>3.75</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>24</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asian or Pacific Islander</td>
<td>2</td>
<td>3.75</td>
<td>1.04</td>
<td>3.75</td>
</tr>
<tr>
<td>Black, non-Hispanic</td>
<td>7</td>
<td>3.43</td>
<td>0.94</td>
<td>3.75</td>
</tr>
<tr>
<td>Hispanic</td>
<td>5</td>
<td>3.48</td>
<td>1.25</td>
<td>3.75</td>
</tr>
<tr>
<td>American Indian/Alaska Native</td>
<td>1</td>
<td>5.0</td>
<td></td>
<td>3.75</td>
</tr>
<tr>
<td>White, non-Hispanic</td>
<td>8</td>
<td>3.58</td>
<td>1.24</td>
<td>3.75</td>
</tr>
<tr>
<td>Undisclosed</td>
<td>1</td>
<td>5.0</td>
<td></td>
<td>3.75</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>24</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asian or Pacific Islander Male</td>
<td>1</td>
<td>4.0</td>
<td></td>
<td>3.75</td>
</tr>
<tr>
<td>Asian or Pacific Islander</td>
<td>1</td>
<td>3.5</td>
<td></td>
<td>3.75</td>
</tr>
<tr>
<td>Black, non-Hispanic Male</td>
<td>2</td>
<td>3.5</td>
<td>0.95</td>
<td>3.75</td>
</tr>
<tr>
<td>Black, non-Hispanic Female</td>
<td>5</td>
<td>3.24</td>
<td>1.28</td>
<td>3.75</td>
</tr>
<tr>
<td>Hispanic Male</td>
<td>3</td>
<td>3.15</td>
<td>1.38</td>
<td>3.75</td>
</tr>
<tr>
<td>Hispanic Female</td>
<td>2</td>
<td>3.56</td>
<td>1.29</td>
<td>3.75</td>
</tr>
<tr>
<td>American Indian/Alaska Native Male</td>
<td>1</td>
<td>5.0</td>
<td></td>
<td>3.75</td>
</tr>
<tr>
<td>White, non-Hispanic Male</td>
<td>1</td>
<td>4.25</td>
<td></td>
<td>3.75</td>
</tr>
<tr>
<td>White, non-Hispanic Female</td>
<td>7</td>
<td>3.61</td>
<td>1.11</td>
<td>3.75</td>
</tr>
<tr>
<td>Undisclosed Male</td>
<td>1</td>
<td>5.0</td>
<td></td>
<td>3.75</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>24</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Demographic data were further disaggregated by gender combined with race/ethnicity, revealing that on average, Hispanic females ($M=3.56$, $SD=1.29$) rated higher than males of the same race/ethnic group ($M=3.15$, $SD=1.38$). Among all other groups with $N>1$, males on average rated higher with less deviation from the mean score than females in the study. The exception was Hispanic males, whose ratings had the widest variability of all groups ($SD=1.38$); however, it is important to note that only three Hispanic males provided essay data used in the study ($n=3$). Similarly, Black males had the least amount of variability in ratings disaggregated by gender and race/ethnicity (0.95), but the data represents only two study participants. Two outlier mean ratings of 5.0 occurred at the top of the scale, highly aware, for two males identified as American Indian/Alaska native and undisclosed race/ethnicity.

**Code-Recode Findings**

A code-recode method was used to confirm the data analysis and strengthen the credibility and dependability of the findings. After storing the data and initial analysis results for a period of 14 days, the researcher extracted the 24 essays sampled for Dataset One and recoded each essay. In the initial analysis of the coded data the researcher independent ratings were higher than those of the outside reviewers across all four themes, but recode agreement was stronger. Theme Two code-recode rating agreement was the highest of all themes followed by Theme Four (96% and 92% respectively). The rating agreement for both Themes One and Three was 83%. Table 23 describes the Code-recode rating agreement by theme.
Table 23

Code-Recode Rating Agreement by Theme

<table>
<thead>
<tr>
<th>Code Rating</th>
<th>Recode Rating</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
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<tr>
<td>4</td>
<td></td>
<td>-</td>
<td>2</td>
<td>-</td>
<td>6</td>
<td>-</td>
</tr>
<tr>
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<td>-</td>
<td>-</td>
<td>5</td>
</tr>
<tr>
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<td>2</td>
<td>4</td>
<td>5</td>
<td>8</td>
<td>5</td>
<td>5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Theme Two: Decoding and Pattern Fit</th>
<th>1</th>
<th>1</th>
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<th>-</th>
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<tbody>
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<tr>
<td>4</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>2</td>
<td>-</td>
</tr>
<tr>
<td>5</td>
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<td>-</td>
<td>-</td>
<td>-</td>
<td>11</td>
</tr>
<tr>
<td>Total</td>
<td>1</td>
<td>5</td>
<td>5</td>
<td>2</td>
<td>11</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Theme Three: Autonomy/Responsibility</th>
<th>1</th>
<th>-</th>
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<th>-</th>
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<tbody>
<tr>
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<tr>
<td>4</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>11</td>
<td>-</td>
</tr>
<tr>
<td>5</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Total</td>
<td>2</td>
<td>5</td>
<td>12</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Theme Four: Academic Success</th>
<th>1</th>
<th>-</th>
<th>-</th>
<th>-</th>
<th>-</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>-</td>
<td>1</td>
<td>1</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>3</td>
<td>-</td>
<td>-</td>
<td>5</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>4</td>
<td>-</td>
<td>-</td>
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<td>11</td>
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</tr>
<tr>
<td>5</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>5</td>
</tr>
<tr>
<td>Total</td>
<td>1</td>
<td>6</td>
<td>12</td>
<td>5</td>
<td>5</td>
</tr>
</tbody>
</table>

Note. N=24.
A comparison of code consensus and recode means was conducted indicating negligible difference between the two. In Themes One and Two the consensus and recode means were equal ($M=3.4$ and $3.7$ respectively). The Theme Three recode rating was slightly lower than that of the consensus score (Code $M=4.1$, Recode $M=4.0$); however, a rating error was discovered during the recode process, indicating the consensus score should have been lower. To explain, essay B15 received a rating of five, *highly aware*, for Theme Three by outside reviewer and researcher. During the recode, the essay was found to only provide the criteria necessary for a rating of four, *reasonably aware*; there were two examples of taking responsibility and being more accountable in the essay. However, in one example the strategies for success identified by the student were not actually used in the situation. This rating error remained undiscovered in the initial scoring team meeting because there was 100% agreement on Theme Three and therefore no discussion for the purpose of reaching consensus was deemed necessary. The recode mean for Theme Four was slightly higher than the consensus mean (Code $M=3.8$, Recode $M=3.9$).

**Multiple-Method Triangulation Findings**

To test the consistency and trustworthiness of these findings a multiple-method triangulation (Patton, 2002) was completed by comparing the results of this study to Hall’s (2011) analysis of quantitative data collected from the identical population: first-generation, first-year college student participants in the 2009 Freshman Summer Institute at the University of South Florida. Overall, evidence identified in the reflective essay data provided support for Hall’s (2011) findings in
four of five research questions. Additionally, the qualitative evidence compliments
the statistical analysis conducted by Hall, framing the experience of first-
generation, first-year students at the end of their first semester of college in their
own words as they reflected on themselves as learners.

Additional Findings

No additional themes related to self-directed learning emerged during data
analysis. However, some evidence of common student concerns did appear in
essay data discussions of apprehensions regarding the college experience.
Financial worries were noted in almost half the essay data (42%), primarily by
Females (78%). White and Hispanic ethnic groups each accounted for 33% of
the essay evidence and data provided by a single Black student accounted for
another 11%. The evidence fell equally into two categories: money and jobs.
Statements regarding money included “financial aid” and “being able to pay for
college when my dad does not have a job.” Student D44 discussed the second in
a list of three top concerns for fall semester, saying

the cost of books is another concern I have. How is my financial aid going
to cover everything? Is it going to be enough? The books in the book store
are very expensive and I have about eight of them to buy. I think that this
semester I am going to run out of money and not be able to afford them.
(D44)

Other students mentioned having to juggle work and school. A few specifically
named the “work study program” as a critical component of their financial aid.
Additional evidence came to light during data analysis related to student concerns regarding their social life. Half the essay data (50%) contained references to making friends, fitting in, or campus life, and was submitted primarily by Females (67%). Hispanic, White, and Black ethnic groups were nearly equal in representation. While much of the evidence was related to friends and roommates, several students had a larger view, for example:

I’m worried about missing out on campus life because I will be commuting during the fall…Living on campus was different but I got use to it after a while. Since I will not be living on campus during fall there is a chance that I might miss out on the college experience. (B15)

A few students felt overwhelmed by being away from home and the expectation of a large population on campus for fall semester, such as Student H96 who wants to keep in touch with friends but also worries “about how much longer the semester is rather than the summer. I hope I can deal with being away from home for that long.” Student B6 was feeling concerned about too many people on campus, saying “Next semester I’m just worried about all the people that are going to be here and how much different it is going to be with so many more students and faculty here.”

Overall, the essay data revealed that nearly half the students carried some of their concerns from their first college semester forward to the upcoming fall semester, while 71% expressed new worries. One quarter of the study population reported putting their summer semester concerns to rest, explaining “Over the term I’ve conquered all these concerns” (G118); “So my concerns have
disappeared somewhat being that I have proven to myself that I am able capable of handling all of my work as well as social issues” (D208); and “I can proudly say that those two things are no longer concerns or problems with my school work”(A81).

**Summary**

This phenomenological qualitative study of self-directed learning was conducted through examination of personal reflections of first-generation college students reaching the end of their first college semester. A Content Analysis Rating Rubric was piloted and four themes were confirmed to guide the review of essay data: Self Awareness, Decoding and Pattern Fit, Autonomy/Responsibility, and Academic Success. The themes were aligned to the research questions and identified in the essay data as evidence of self-direction explained in the personal voice of the study participants.

A scoring team of three outside reviewers and the researcher used the Content Analysis Rating Rubric V2 during the examination of essay data. A dataset of twenty-four essays were independently coded and any ratings with less than 100% agreement were discussed to achieve consensus. An overall essay rating mean of 3.75 indicated that in general, first-generation, first-year college students were able to voice characteristics of self-directed learners in a range indicating they were somewhat to reasonably aware of themselves as learners.

An analysis of mean ratings for each essay across all four themes was conducted and reported by demographic groups. The aggregate data revealed
both genders in the mid- to upper ranges of somewhat aware with males rated slightly higher than females ($M=3.94$, $M=3.58$ respectively). Disaggregated ethnicity means showed the Asian or Pacific Islanders at the top of the range ($M=3.75$) of somewhat aware, followed by Whites ($M=3.69$), Hispanics ($M=3.65$), and Blacks ($M=3.43$). Two outlier means of 5.0 occurred at the top of the scale, highly aware, for an individual identified as American Indian/Alaska native and one person whose ethnicity was not disclosed. The disaggregated demographic data also revealed means for Hispanic Females ($M=4.0$) and Asian/Pacific Islander Females ($M=4.0$) were higher than Males of the same ethnicity groups ($M=3.42$ and $M=3.5$ respectively). Among White and Black students, Males ($M=4.25$, $M=3.5$) were rated higher than Females ($M=3.61$, $M=3.4$). The American Indian/Alaska native and the student with undisclosed ethnicity were both Males with the highest earned mean ratings of 5.0, followed by a White Male ($M=4.25$).

No additional themes emerged during data analysis. However, some evidence of common student concerns did appear in essay data discussions of apprehensions regarding college. Shared concerns noted in less than half the data were time management, procrastination, college rigor, and social issues related to friends and roommates. Some evidence of confidence and self-efficacy was also present in 58% of the essay data.

Chapter five presents discussion and researcher interpretation of these findings, and concludes with implications for practice and recommendations for further study.
CHAPTER FIVE

SUMMARY, CONCLUSIONS, IMPLICATIONS, AND RECOMMENDATIONS

The purpose of this study was to examine the reflective essays of first-year, first-generation college students for evidence of self-directed learning at the conclusion of their first semester at the university. The research advances the field of adult education by adding phenomenological qualitative inquiry to Maher’s (2005a, 2005b) exploratory research of learner self-direction in first year college students and Hall’s (2011) study to quantify self-directed learning characteristics in the same population identified for this study: first-year, first-generation college students.

The concept of self-directed learning is well-established in the field of adult education, however little research exists to expand the understanding of self-directed learning as it relates to first-year, first-generation college students. Across the United States, first-generation college students face unique challenges as they strive to succeed academically and adjust to the demands of post-secondary education (Choy, 2001; Riehl, 1994; Strayhorn, 2006; Ting 2003). Problems range from low self-efficacy to poor academic performance, making first-generation students more likely to drop out of college before the end of their first semester (Choi, 2005; Hellman, 1996; Horwedel, 2008; Strayhorn, 2006; Ting 2003). Often identified as a subgroup of the at risk student population,
first-generation college students tend to be minority students of Hispanic or African American ethnicities and from lower income, working class families (Chen, 2005; Choy, 2001; Horn & Nunez, 2000; Horwedel, 2008; Hossler et al., 1999; Kuh et al., 2006; Saenz et al., 2007; Warburton et al., 2001). However, regardless of minority and income status, first-generation status remains an indicator of poor adjustment to college and academic success (Ishitani, 2003, 2006). Adding to the body of research related to first-generation college students, this investigation focused on increasing the understanding of their first college experience through the lens of self-directed learning.

This chapter offers a summary of the study, research method, and primary findings. A discussion of researcher interpretations and conclusions related to study findings is included. The chapter closes with implications for practice, recommendations for further research, and final thoughts.

**Research Questions**

The inquiry process was guided by the following research questions.

1. To what extent did students identify and validate their personal learning profile in their reflective essays?
2. To what extend did students report the degree to which use of their learning patterns would be required in order to successfully complete an academic task?
3. To what extent did students state examples of personal responsibility and accountability for their own learning?
4. To what extent did students report academic success?
Summary of Method and Findings

This study was initiated to advance the understanding of self-directed learning through the phenomenon of first-generation students participating in their first college experience. As a companion study to the quantitative research of Hall (2011), this study was designed to illuminate the personal voice of the identical study population as they described themselves as learners. Specifically, the purpose of this study was to determine if first-generation students expressed characteristics consistent with self-directed learning in reflective essays written at the conclusion of their first semester of college experience.

The phenomenological study examined secondary data assembled in 2009 by Tutoring and Learning Services and the Freshman Summer Institute at the University of South Florida. A random sample of 24 reflective essays was identified from those submitted by 157 participants in a one-credit hour Strategic Learning course designed to develop learner autonomy and foster attributes of self-directed learners.

The essay data were examined for evidence of self-directed learning by three outside reviewers and the researcher using the Content Analysis Rating Rubric V2 (Appendix F) that was piloted in the initial phase of data analysis. Four themes guided the analysis (Self Awareness, Decoding and Pattern Fit, Autonomy/Responsibility, Academic Success) and no additional themes emerged during the examination of data. Data were coded on a “five-point Likert scale of increasing strength” (Maher, 2005b, p. 9). A code-recode method was used to
confirm the data analysis and strengthen the credibility and dependability of the findings.

Results indicated that in general, first-generation, first-year college students were able to voice characteristics of self-directed learners in a range indicating they were somewhat (3) to reasonably aware (4) of themselves as learners ($M=3.75$). Data revealed that males were slightly more aware of themselves as learners than females ($M=3.94$ and 3.58 respectively); however Hispanic and Asian/Pacific Islander females were more self-aware than their male counterparts. Two male participants, an American Indian/Alaska native and a student with undisclosed ethnicity, earned the highest possible mean ratings of 5.0, indicating they were highly aware of individual learning characteristics deemed consistent with self-directed learners.

To test the consistency and trustworthiness of these findings a multiple-method triangulation (Patton, 2002) was completed by comparing the results of this study to Hall’s (2011) analysis of quantitative data collected from the identical population in the 2009 Freshman Summer Institute at the University of South Florida. Overall, evidence identified in the reflective essay data provided support for Hall’s (2011) findings. A strength of the qualitative evidence was its power to reach beyond quantifiable measures and open the door to the personal perspective of how study participants saw themselves as learners. The findings in this study compliment the statistical analysis conducted by Hall, framing the experience of first-generation, first-year students at the end of their first semester of college in their own words.
Conclusions

The transition from the familiar setting of high school and home to the highly independent environment of the university can be a daunting experience. Terenzini, Rendon, Upcraft, Millar, Allison, Gregg, and Jalomo (1994) describe “a highly interrelated, web-like series of family, interpersonal, academic, and organizational pulls and pushes that shape student learning (broadly conceived) and persistence” (p. 61). In addition, students must unravel the culture of academia and discern the similarities and differences between their past learning experiences and those yet to come. Can the first year of college really be likened to the thirteenth grade? Or will students be challenged to stretch the fabric of their high school experience to become more independent, self-directed learners? Evidence revealed in this study supports the premise that first-year college students are indeed moving along the pathway towards becoming more self-directed.

The reflective essay provided a platform for first-generation students to respond to a protocol of four distinct writing prompts that asked them to focus on themselves as learners, concerns about college, and both a successful and regretful academic situation they experienced during their first semester. The following discussion of researcher interpretations and conclusions related to evidence of self-directed learning gleaned from the essay data study is arranged according to the research questions and themes. Additional observations follow the discussion of research findings.
Research Question One: To what extent did students identify and validate their personal learning profile in their reflective essays? (Theme One: SelfAwareness)

For the purposes of this study, self awareness was associated with the Let Me Learn Process® (LML Process®), “an advanced learning system that provides learners with the means to articulate who they are as a learner” (Let Me Learn, n.d.). This learning system formed the basis of the curriculum used to guide instruction for the study population and provided a framework for better understanding of self in terms of four operational patterns (Sequence, Precision, Technical Reasoning, and Confluence) that make up each learner’s brain-mind interface as described in the Interactive Learning Model (Johnston, 1996, 1998). Self awareness is a key component of the LML Process® as learners synthesize what they know about their individual patterns, and use their own words to describe their typical “thoughts, actions, and feelings when asked to complete a task that requires Sequence, Precision, Technical Reasoning, and Confluence” (Dawkins, Kottkamp, & Johnston, 2010, p. 15).

Essay data revealed that nearly all of the students were able to express awareness and basic understanding of their individual learning pattern profile after participation in a six-week Strategic Learning course. Seventy-five percent of the students (75%) validated the patterns and provided some level of discussion as to how they played out in their academic life by presenting actual patterns scores or discussing their patterns in terms of which they use first, use as needed, or avoid. Half the study population received ratings in the highest two
awareness levels. In spite of moderately strong evidence, Theme One had the lowest mean consensus rating of all the themes for females and students of Black and White ethnicities. This result may be related to the LML Process® curriculum content that was an integral component in the rating rubric for Theme One. In order to demonstrate the highest levels of awareness, students had to communicate the course content and demonstrate a thorough understanding of the four patterns and their role in learning; as a result there was less opportunity for students to “fake it” in their written responses. Interestingly, the mean rating for Hispanic students stood in contrast to the other groups and was the highest of all the other themes except Theme Three, which mirrored the high Theme One rating.

As the Theme One evidence of self-directed learning was identified in the essay data, a sense of empowerment was apparent in many essays as students recognized aspects of the learning patterns in themselves. For example, Student A81 seemed to appreciate a new sense of self awareness, explaining

I never knew there were different learning patterns, and know that I am informed, it has helped me through my first semester. I have learned how to balance my learning patterns, and not let some of them take over what I do. It helps, me stay organized, focused, and on top of my work. (A81)

The preponderance of evidence suggested students were understanding themselves as learners and indicates metacognition, a primary dimension of cognition and the psychological conceptualization of self-directed learning (Long,
2000b). As Student B6 created a personal pattern profile, metacognition guided the process:

According to my [sic] LCI interview I am a precise learner and that is what I use first…I never noticed these things before but now that I think back I believe this to be true…I do need to have all the information before I start my paper or assignments. (B6)

This kind of knowledge provides a foundation of self awareness from which students may become cognizant of opportunities intentional pattern use and self-direction.

According to the findings, most students had a clear understanding of the distinct characteristics associated with each pattern, but the brevity of the six-week Strategic Learning course may have limited the development of a deeper understanding. Some confusion regarding characteristics associated across patterns was evident in isolated cases. For example, Student D208 stated “my sequential style suggests I took quality and detailed notes,” when in fact the Precision pattern is associated with taking detailed notes. Additional confusion was evident as some students discussed the pros and cons associated with their individual patterns; what the writing prompt called “the benefits…as well as the difficulties or challenges.” A small percentage of students (17%) described pattern qualities that have the potential to create challenges as “bad” or “harmful.” Limiting the understanding of pattern qualities in this way suggests that the learner has no control over pattern use and may suggest, “There’s nothing I can do about it; it’s just the way I am.” This negative view of patterns is contrary
to the LML Process® that emphasizes the importance of using patterns with intention. As Johnston (2010) explains

Patterns talk to one another in your mind, pulling and tugging you in different directions…take charge and talk back to them, employing strategies that help you use one or more of your Patterns successfully to complete the assignment or task you have been given. (p. 61)

The hope is that as students increase self awareness as learners, the potential to take control of their learning patterns and act with more self-direction also increases.

Confusion about pattern qualities was also evident with two students who referred to the Technical pattern in terms of typing or technology use and a few others who linked topics like time management, procrastination, and perfectionism to a single pattern identity. Similarly, some students referred to learning patterns as learning styles, but these occurrences were also limited in the data. The greatest confusion surrounding patterns was related to the Confluence pattern, with one-third of the students (33%) discussing Confluence as a synonym for creativity, using phrases such as “good to be confluent because people enjoy creativity,” “I really enjoy being creative,” “the benefits of my patterns are that I’m very creative,” and “confluent learners tend to be very artistic.” Additional time for students to fully develop an understanding of individual learning patterns may have reduced the evidence of confusion.

The five descriptors in the Content Analysis Rating Rubric were generally sufficient to rate Theme One evidence in the essay data; however the rating
process was not flawless. Because the Content Analysis Rating Rubric was based on a five-point Likert scale, the descriptors may have been interpreted as a measure of self awareness in terms of a continuum of development; building blocks to show increasing self awareness. To this way of thinking, as a student becomes more self aware they might increase the quantity of evidence in their writing. This use of the Likert scale to quantify a process that in reality was more recursive than linear created a dilemma for the scoring team. The conflict occurred when the scoring team agreed that an essay reflected Theme One in language that demonstrated a student was indeed more self aware than allowed for in the descriptor quantity guidelines. If the raters remained true to the letter of the law and strictly followed the precise criteria in the descriptor (e.g., number of examples required), the spirit of the law may have been sacrificed. While the raters may have agreed that the student provided evidence related to the spirit of the Theme One law, because the quantity of elements required for a score indicative of greater self awareness were not present in the essay, the consensus score reflected the letter of the law and resulted in a lower rating. For example, because Student J183 only validated one pattern, albeit their strongest pattern, a rating of minimally aware (2) was warranted; however, the scoring team agreed that the student expressed the nature of being a sequential learner in a manner that would indicate a higher level of awareness:

Knowing now that I was a sequential learner I knew what I needed to do while I was in school which was buying a planner. In my planner I would write all my work for each of my five classes I had to do for a week. The
good thing about that was that when it came down to remembering what I had to do for each class and when each assignment was due all I had to do is look in my planner. Also, by writing down all my work I was able to complete all my work and have it turned in on the day or even before it was due. Even though being a sequential learner helped me at the same time it hurts me too. So times I spend just as much time it takes me to do an assignment, to write a list. Before I do any work I have to make a list so I make sure that I don’t leave anything out. I cannot begin my work until I feel like everything on the list that’s need to be there is there. If I feel I something missing I sit there and think about each class, after that check online, ask a friend then create a new list with all the work I forgot to place on the old list. As you can see this takes up a lot of time. Even though my learning pattern has it down side, the good side outweighs it. (J183)

The scoring team decision to rate evidence according to the letter of the law also resulted in a lower Theme One rating for Student G124 who did not provide sufficient discussion of pattern validation or pros and cons to warrant a rating higher than minimally aware (2). However, the essay included a thorough explanation of learning pattern interaction which is indicative of ratings of four (4) or five (5):

With learning, there is a team of learning patterns. They are sequence, precision, technical, and confluence. Everyone incorporates these patterns into how they learn. Some are used more than others depending on what kind of learner you are. You may try to avoid some of these
patters or maybe you want to use some of them every chance you get. It just depends. Some people are bridge learners like me or some people are dynamic learners…. When I used these patterns, I use them as needed. That’s what bridge learner means. (G124)

As the scoring team discussed evidence in the essays for the purpose of building a consensus rating, it sometimes felt as if the criteria in the rubric descriptors became the law used to convict the essay and sentence the evidence to a discrete score that underrepresented a students’ self awareness. But after much discussion, all agreed that by allowing the restrictions of the descriptor criteria as stated in the rubric to guide consensus, consistency would be maintained in the rating results. Consequently, it is possible that students were more self aware as learners than accounted for in the findings.

Research Question Two: To what extent did students report the degree to which use of their learning patterns would be required in order to successfully complete an academic task? (Theme Two: Decoding and Pattern Fit)

Essay data suggested that a majority of first-year, first-generation college students (75%) were able to provide at least one example of decoding and matching their learning patterns to academic tasks. This demonstrated their ability to apply what they knew about themselves as learners to specific contexts by analyzing academic tasks or assignments to determine the levels of pattern use required for successful completion of the task. Theme Two mean consensus ratings were lower than all other themes for both male and female groups and all
racial/ethnic groups with the exception of White students whose mean rating for Theme Two was highest, above all other themes. Explanations for this anomaly in the data remain nebulous.

Evidence of Theme Two was primarily illuminated as essay data revealed situations where patterns matched the task, however some students recognized when their learning patterns were mis-matched with an academic task. Such was the case with Student J183:

While attending the summer term I have also learned that I am a confluent learner that does things my own way…That could be a good thing because I take risk….on my very first paper… I decided that I didn’t like how the teacher wanted me to write the paper. Instead of doing the paragraph breaks that the teacher had wanted us to do, I wanted to do my paper how I felt best comfortable. I did my paper in three big paragraphs like I did in high school. I didn’t plan for the paper like she had wanted; I just started to write whatever had came [sic] to mind. When I turned in the paper, she gave me a C, not because the paper was bad but because I didn’t do what she had told me to. (J178)

Nearly half of the study participants (46%) provided evidence of going beyond decoding a task to demonstrating a high level of Theme Two awareness. By discussing situations in which they modified their learning profile to successfully complete a task, these students provided evidence of learner control, a characteristic of self-directed learning (Long, 2000b). For example, Student D42 described success on their first college exam, explaining “I was
able to combine my most effective skills, sequence and precision, to help me prepare. I organized my notes…allowed myself enough time to study…made sure to copy everything verbatim when I was taking notes.”

The evidence of pattern modification through intentional and intensified focus was strong, but interestingly, none of the essay evidence described pattern modification using the specific vernacular of the LML Process© FIT strategy: Forge an avoid pattern, Intensify a use as needed pattern, and Tether a use first pattern. Although the essay protocol did provide a hint by saying intentionally shift gears in your approach in order to improve your results, the terms modification, forge, intensify, or tether were not used. This may be an indication that students were unable to make the connection between the LML Process© terminology and the writing prompt, or that this feature of the LML Process© was not fully explored during the summer semester Strategic Learning course. Regardless, in many cases evidence related to pattern modification was not easily identified. For example, Student F150 described success on a paper, saying “I made a [sic] outline for what I wanted to get done on the paper and I stuck to it and got a 90.” The scoring team had to recognize that making the outline was related to the sequence pattern; then to determine if this was an example of pattern fit or pattern modification, a review of other portions of the essay was necessary to ascertain that sequence was the students’ lowest pattern, and with a score of nineteen, pattern modification had indeed occurred – Student F150 did intensify a use as needed pattern.
Identifying evidence of Theme Two was especially challenging in cases where students did not reveal their Learning Connection Inventory (LCI) scores. Such was the case with the essay of Student B15, who stated “I had to use precision in order to make sure that I was obtaining the right information and that is was accurate.” Because the student did not provide the LCI scores, there was no way to determine if the example was intensification of a use as needed pattern or forging of an avoid pattern, but the scoring team decided that because precision was identified as the lowest pattern, it was reasonable to assume that some modification had occurred.

The process of digging deeper for Theme Two evidence did require close examination of the essay data by the scoring team. Unfortunately, the effort was fruitless when students did not provide enough discussion to fully illuminate their understanding of decoding and pattern fit. The scoring team did consider that students with use first technical reasoning patterns may have been at a disadvantage due the pattern conflict inherent in between their pattern and tasks based on written communication. Writing tasks in particular have been shown to “contain systemic Pattern bias advantaging learners on the dimensions of Sequence and Precision while disadvantaging learners high in Technical Reasoning and Confluence” (Dawkins et al., 2010).

In addition to recognizing that the task may have been biased, the scoring team also recognized the potential for rater bias towards learners with high Technical Reasoning patterns. For example, a lengthy discussion of the essay submitted by Student F150 illustrated the recognition of possible rater bias as the
scoring team debated the strength of the evidence related to Theme Two. A review of the audio recording of the scoring team conversation revealed:

Researcher: The pattern and actions are connected; they are just not describing it as thoroughly as I would like them to.

Outside Reviewer Z: Right. Exactly. This may be my technical bias again. (pause) But in paragraph four they do say this required a lot of sequence learning which I scored the lowest in. So if we look across the paragraphs (pause) the evidence is kind of fragmented.

Researcher: Both of us are sensing that the student really does mean more in that third paragraph; we’re just not sure. I think we are recognizing that our bias is keeping us from giving them the benefit of the doubt.

Outside Reviewer Z: So if we look at paragraph two and interpret it as if the student were saying “I’m a highly technical person, I have relatively low sequence, but I went out and I rented the movie right away, you know I didn’t delay, I made an outline,” I think that actually that could count and make it a four in my head.

Researcher: Okay, that I can see. Definitely.

It is important to note that because the study design focused on the essay data, no discussion of actual student LCI scores was included in the scoring team analysis or rating decisions except in cases where the scores were included in the essay text.

Another challenge faced by the scoring team was the fragmented evidence. The essays had to be read multiple times to pull together a holistic
view before making a rating decision for a single theme because information was scattered throughout the essay. Rather than assume this was the result of poor writing skills in terms of essay organization, it may have been the result of the Reflective Essay Protocol (Appendix G) directions which suggested the essay could be segmented into four sections that responded to the separate prompts. Interestingly, Student H91 actually included the prompt text in their essay submission, addressing each individual prompt before moving on to the next. That said, even though evidence of the study themes was widely dispersed, most students did address all aspects of the prompts and still produce a traditional essay that was organized to include appropriate introductory information, thorough discussion, and a strong conclusion.

**Research Question Three: To what extent did students state examples of personal responsibility and accountability for their own learning? (Theme Three: Autonomy/Responsibility)**

Autonomy and responsibility are behaviors that are associated with the sociological and psychological conceptualizations of self-directed learning (Long, 2000b) and are important elements in identifying the self-directed learner. Brockett and Hiemstra (1991) define autonomy as choosing for oneself the norms one will respect and personal responsibility as “the ability and/or willingness of individuals to take control of their own learning” (p.26).

The study findings provide the strong evidence of autonomy and responsibility, thereby supporting the conclusion that self-directed leaning was evident among first-generation, first-year college students. The essay data
revealed that all participants (100%) provided evidence within the range from *somewhat* to *highly aware* with 75% rating in the two highest awareness levels. Consensus mean ratings for Theme Three were the highest of all themes for both genders as well as Black, White, and Hispanic race/ethnicities, with the Hispanic mean rating mirrored in Theme One. This evidence is especially strong in view of the fact that Theme Three was the only theme not specifically addressed in the essay protocol. The prompts asked students to focus responses on the actions that led to successful or regretful situations, but nothing in the language alluded to characteristics of autonomy or responsibility.

Using metacognitive processes, study participants described connections between their actions and academic outcomes. For example, Student B6 claimed ownership of learning and expressed pride in her accomplishments:

…just because it was my hardest class it did not mean I had to settle for low grades and not doing my best on my assignments. What I made myself do was start my work for the class early therefore I did not wait until the last minute and I had more time to go back and look and see what needed to be worked on and changed. When I preceded [sic] to do this…my essay grades began to improve by a whole letter grade. As of right now I have an “A” in English Composition II, and I say it is because of my change in work habits. (B6)

The choice to take ownership of or personal responsibility for one’s learning is associated with the dimension of learner control within the psychological conceptualization of self-directed learning (Long 2000b). Theme
Three evidence in the essay data indicated that first-generation, first-year college students have both the ability and the willingness to take control of their own learning and therefore have potential for self-direction (Brockett and Hiemstra, 1991). The findings particularly add support to Hall’s (2011) quantitative findings related to learner control. For example, characteristics of learner control, autonomy and responsibility were identified in the reflective essay of Student A67 as he describes the decisions to ignore advice from classmates and approach classwork by focusing on his learning profile even during a travel event:

My most successful academic situation from this semester has been from my Intro to the Black Experience class, where I decided to read my book thoroughly before taking my first exam and not listen to my classmates. I used my sequential skills to write all my homework down on a sheet of paper...I had to read these 3 chapters inside and out even though I had to fly out to Pennsylvania to go to a family reunion. I also used my precision skills where I had to ask the teacher if I would be wise to just go over my notes from class which everyone assumed weren’t going to be on the test. With all of this going on I still managed to read those 3 long chapters and pull off an 84... mine was one of the best. (A26)

Student A81 conveyed the use of the sequence pattern, demonstrating learner control and responsibility across the entire semester:

My most successful academic situation for this year would have to be making sure everything was handed in on time. I never had papers that I didn’t turn in, and I was always completing assignments. This was a big
deal for me because all through high school, I didn't turn in some assignments, thinking they wouldn't affect my grade. The thing that helped me the most was my sequential learning patterns. Every night before going to bed, I glance up at my list of things to do, and see how much I accomplished for the day. Nothing would go un-highlighted; it would just bug me if it did. (A81)

Taking responsibility to assure success on their first college exam, Student D42 explained the specific strategies used:

I organized my notes in order of relevance to the exam, I allowed myself enough time to study and review, I made sure to copy everything verbatim off of the white boards when I was taking notes and I memorized just enough information to help me obtain the grade I received. Now looking back on it, I can reflect on what was most effective and how excited I was to have done so well, and use it as motivation for the many assignments to come. (D42)

Phenomena that were related to time management created a large response. As another indicator of autonomy, half of the study participants addressed their use of time in ways that demonstrated the selection of a personal norm deemed necessary for success in college. Some essay data described the challenges the students had already faced, such as this example provided by Student A205, “this semester I would get my homework done over the weekend for my Monday classes, and not start on my Thursday homework till Wednesday. This was a poor decision, and a bad choice of time management.” Student G124
recognized the important role time management played in balancing academic and social life:

The only problem that I really had was time management because I wanted to do everything. I wanted to go out with my friends. I wanted to sit in the lobby and play spades. And most of all, I wanted to sleep. I did all these things and I still had to make time to do homework…This summer has shown me what I should do and what I shouldn't do. (G124)

Other students were concerned that time management would continue to be a problem in the upcoming fall semester, as Student D42 explains:

Now that I am heading into my second semester I feel that it will be just as big of an issue if not bigger. In the fall I am going to be taking twelve credits, working a part time job so that I can receive financial aid and doing my best to spend time with my family. (D42)

While most of the evidence was related to concerns, several students expressed their success at managing time, saying “Through careful management of my time I have been able to balance my work load” (D208), and “I have greatly improved my time management skills” (D44).

More than half the students who referenced time management in their essays discussed procrastination as both a concern and an opportunity for lessons learned. A few students indicated their struggle with procrastination was likely to continue. Student F148 elaborated:

In the beginning of this semester my main concern was procrastination. I always wait until the last minute to complete my work. Procrastination is
still a big concern for the fall semester because this summer I didn’t really have time to procrastinate, but I know that in the fall I will. (F148)

Other students anticipated challenges related to procrastination, recognized the need to exercise control, but never really made the commitment to take ownership of the problem. One example was in the essay of Student J178:

Procrastination forced itself on me less than I thought it would, and was never a major factor in my academics this semester....These concerns are still the same one’s I have for the next semester because I am going to have a lot more time on my hands. Hopefully I use the time to benefit my academics, but I know procrastination is going to rear its ugly face with the extra time I am allotted. (J178)

While exploration of time management and procrastination are not a focus of the LML Process®, they are discussed in the Strategic Learning course required of all study participants during their first semester at the university. Hall (2011) explained, “Strategic Learning is a seminar style course based on a model of developing autonomous learners through their understanding of concepts related to motivation, attitude, goal planning, and the process of learning” (p. 46). The fact that a majority of the study population referred to time management and procrastination in their final essay indicates that many students made a personal connection with the topics as they relate to both academic success and challenges. Brost and Payne (2011) noted that first-generation students were more likely than non-first generation students to refer to time management and procrastination as factors in their academic dismissal. The connection made by
students in this study may be the result of discussion during the Strategic Learning course, however there was no data to specify the amount of emphasis each instructor placed on the topics. Regardless, as the study participants expressed an understanding of the role of time management to either foster or hinder college success, they provided evidence of self-direction as learners.

**Research Question Four: To what extent did students report academic success? (Theme Four: Academic Success)**

Evidence of Theme Four was easily identified in the essay data with a majority of the essay data (67%) providing evidence that first-generation, first year college students could relate academic success to the LML Process©. The mean consensus ratings revealed the highest theme rating, above all other themes for Asian/Pacific Islanders. One explanation for this anomaly may be the pressure that is commonly experienced by Asian students to excel academically to bring honor to the family (Dundes, Cho, & Kwak, 2009), possibly resulting in a greater emphasis on a more thorough discussion of academic success in the essay.

The study participants responded to a prompt asking them to reflect on their most successful academic situation from their first semester in college. They were asked to discuss the experience in terms of their individual learning patterns, the task expectations, and what they did to accomplish it; the source of their motivation, and how they felt as a result of their success. In doing so, they demonstrated the ability to measure the quality of their work and determine if it represented their best effort. The open discussion of what they learned and what
action might be taken in the future if faced with a similar task represented metacognitive practices, especially those related to judgment, reflection, and application of skills in new settings. These metacognitive practices reveal potential for growth in self-directed learning capacity. For example, the process of reflection provided an opportunity for self-discovery as Student F148 described how the interaction of learning patterns influenced an academic outcome:

My most successful academic situation this semester was getting through Composition 1. The class wasn't a hard one, but I learned early that my teacher had a lot of high expectations for us. I will admit that in this class my confluent pattern stood out more than my sequential. I didn’t want to follow what the teacher said when she critiqued my papers. I wanted to write my papers my way. At first I thought this class would be a struggle, but once my sequential senses kicked in and I followed the rules of my teachers [sic], I began to progress in this class. I never use my technical patterns, but I had to use precision when creating details for my essays. I started to pay attention to my teacher’s advice…I tried my hardest in this class and although I didn’t get an A I worked hard for my B. (F148)

Student A205 connected her learning profile and success on a paper for English class, resulting in increased self-efficacy:

I received a 94, which made me a very proud college student. What made me so successful on this paper was my confluent learning pattern. This paper was a creative assignment, which I had no problem completing because my use first pattern is confluent. My confluent pattern helped a lot
on this paper because I see things differently than others do, and I have big ideas; having this pattern this summer helped me so much in my English class, and helped to make me a more confident writer. (A205)

Oliveria and Simões (2006) state that personal confidence can also impact a learner’s ability to be self-directed. Although the term confidence appeared in the essay data, self-efficacy is preferred (Bandura, 1977), particularly when discussed an indicator of self-directed learning (Stockdale, 2003). Bandura (1977) defined self-efficacy as “people’s judgments of their capacities to organize and execute courses of action required to attain designated types of performances” (p. 391). Although not a major theme in the essay data, study participants voiced characteristics of self-efficacy, adding support to Hall’s (2011) quantitative findings related to self-efficacy and self-directed learning. Much of the evidence was identified in side-bar comments, such as “I felt so good and accomplished at my results,” “I am very proud of myself,” and “I have become ready to take on the college life.” A few students offered more elaborate descriptions, such as this one by Student J178:

Everyone but six people failed that assignment because they did not follow directions…Receiving my paper that day without an F on it made me extremely happy, and gave me confidence when writing papers in that class for the rest of the semester. (J178)

Student E3 also provided more thorough evidence of self-efficacy:

There was a moment in which I realized that in college I can be very successful if I take the right decisions towards my classes…I was
participating constantly in class, doing all my assignments on time, paying attention to the class and taking notes, and been [sic] polite with the teachers and classmates opinions. I think that the source of my motivation was watching me achieving high scores on my first college course. Every time I got in ‘Blackboard’ I felt happy when looking at my grades and that just motivated me to keep going on. At the end of the semester I saw that I had a perfect percentage in class and 5 extra credit points which made me feel successful. (E3)

Self-efficacy is also associated with motivation, one of three primary dimensions within the psychological conceptualization of self-directed learning (Long 2000b), and the self-system, that “appears to underlie the development of the metacognitive system and helps to determine the quality of academic achievement” (Borkowski, Carr, & Rellinger, 1990, p. 59). Motivation to succeed was evident in the essay data. Long (2000b) describes motivation as “energy, drive, or desire that encourages, impels, stimulates, or sustains an individual to accomplish a goal or task” (p. 16). He goes on to explain, “when someone engages in intrinsically motivated learning, self-direction will be more intense, be of a higher quality, and be more persistent” (Long, 2000b, p.17). Similarly, Dole and Sinatra (1998) found that “motivation can influence an individual’s willingness to struggle with a complex or confusing message” (p. 122).

Evidence of motivation was limited in the essay data, but most often identified in relation to Theme Four discussions of academic success. For example, Student D44 was motivated by a good grade on the only exam given in
her Introduction to the Black Experience course, saying, “When I got my grade back I felt so happy and motivated to keep taking the class and do good on the reset [sic] of the work that I would have to do in the class.” Student G118 described her decision to put extra effort in to course work after receiving a low grade on the first assignment:

I knew I would have to work really hard to bring my grade up. Ever since that paper, I have kept myself really motivated and worked hard to bring up my grade. I was rewarded for my hard work, and brought my grade up to an A. (118)

Evidence of self-efficacy and motivation were not limited to a single successful academic situation for Student D42; instead these elements emerged as he gave voice to fears for the upcoming fall semester:

I fear that I might not be able to handle the tougher schedule. I know deep down that I am smart, but other people don’t know that if I do not get the grades to match…Regardless of my worries, I plan on working very hard theses next four years and I will not let my fears hold me back. I will use them to help motivate me to do my best and to never give up. (D42)

While the identification of self-efficacy characteristics in the essay data offers additional evidence of academic success, the reporting of academic success and comments related to self-efficacy may have been limited by student concerns about college academic rigor. A majority of the study participants (83%) addressed rigor in terms of workload, difficulty of classes, stress related to academic performance, and personal grades. Many students shared concerns,
such as “I was never hit with such a workload all at once” (A67); “concerns coming into this semester were…the work load that comes with college” (E15); “concerns coming into the university was that the workload might overwhelm me” (D208); and “I was worried that the work load was going to be too heavy and I would fall behind” (G124). Some students explained their fears in terms of the stress, for example

I know there will be more difficult tests, and I know that teachers will be less tolerant of mistakes….I often focus on being correct in my assignments so much that it creates stress and fear to get anything wrong. (H94)

In a discussion of concerns regarding the upcoming fall semester, Student D42 tempers self-efficacy with fear

I believe that I have done a great job this summer, but as I said before the fall is a totally different story. I will now be taking more credit hours, as well as more challenging and demanding courses. I tend to stress out when I do not perform well in the classroom and I fear that I might not be able to handle the tougher schedule. I know deep down that I am smart, but other people don’t know that if I do not get the grades to match. (D42)

Half the students who addressed academic rigor discussed grades. Common phrases were “fall behind,” getting good grades,” “maintain a B+ average,” and “concerned about my GPA.” All of the concerns discussed by Student E26 were related to academic performance.
My top three concerns for next semester are that I don’t know if I am going to be able to keep a 3.0, or if I am going to be able to study more out of class, and if I am going to do maintain my grades for sixteen weeks. They are different from this semester because in the fall the classes are going to be sixteen weeks instead of six weeks. I am going to have to maintain my grades for a longer period of time. My classes in the fall are going to be much harder than the classes I take now in the summer. (E26)

These issues related to college rigor identified in the essay data may have limited the reporting of first-year, first-generation college students’ academic success.

**Additional Observations**

This study was initiated to advance the understanding of self-directed learning through the phenomenon of first-generation students participating in their first college experience. As a companion study to the quantitative research of Hall (2011), this study of the identical population illuminated the personal voice of participants as they described themselves as learners. The research design included a multiple-method triangulation (Patton, 2002) to compare findings to Hall’s (2011) study. Discussion of the comparison results includes study demographics and the triangulation of findings structured around Hall’s (2011) five research questions. Additional study observations follow with researcher interpretations of rater agreement and data outliers. Finally, unanticipated observations gleaned from the essay data are explored in terms of the evidence of participant vulnerability and fear, and the quality of participant writing.
Triangulation with Hall (2011)

To test the consistency and trustworthiness of these findings a multiple-method triangulation (Patton, 2002) was completed by comparing the results of this study to Hall’s (2011) analysis of quantitative data collected from the identical population: first-generation, first-year college student participants in the 2009 Freshman Summer Institute at the University of South Florida. This population was a convenience sample for the collection of both quantitative and qualitative data related to self-directed learning. Hall employed a quantitative research design guided by five questions to determine if statistically significant differences existed in variables measured by pre- and post-test administrations of Stockdale’s (2003) Personal Responsibility Orientation to Self-Direction in Learning Scale (PRO-SDLS). This study examined qualitative data in the form of reflective essays for evidence of self-directed learning.

Overall, evidence identified in the reflective essay data provided support for Hall’s (2011) findings in four of five research questions. Additionally, the qualitative evidence compliments the statistical analysis conducted by Hall, framing the experience of first-generation, first-year students at the end of their first semester of college in their own words as they reflected on themselves as learners.

Drawn from the same population, the demographic composition of Hall’s (2011) study sample is comparable to this study. Both samples were predominantly female with nearly equal representation among Black, Hispanic,
and White study participants. Table 24 presents a comparison of demographic data between Hall (2011) and this study.

Table 24  
Comparison of Demographic Data: Linder (2013) and Hall (2011)

<table>
<thead>
<tr>
<th>Description</th>
<th>Linder (2013)</th>
<th>Hall (2011)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>Percent</td>
</tr>
<tr>
<td>Male</td>
<td>9</td>
<td>37%</td>
</tr>
<tr>
<td>Female</td>
<td>15</td>
<td>63%</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td>24</td>
<td>100%</td>
</tr>
<tr>
<td>Asian or Pacific Islander</td>
<td>2</td>
<td>8%</td>
</tr>
<tr>
<td>Black, non-Hispanic</td>
<td>7</td>
<td>29%</td>
</tr>
<tr>
<td>Hispanic</td>
<td>5</td>
<td>21%</td>
</tr>
<tr>
<td>American Indian/Alaska Native</td>
<td>1</td>
<td>4%</td>
</tr>
<tr>
<td>White, non-Hispanic</td>
<td>8</td>
<td>33%</td>
</tr>
<tr>
<td>Undisclosed</td>
<td>1</td>
<td>4%</td>
</tr>
<tr>
<td><strong>TOTALS</strong></td>
<td>24</td>
<td>100%</td>
</tr>
</tbody>
</table>

Hall limited his study to the larger race/ethnic groups and therefore had no representation from the Asian/Pacific Islander, American Indian/Alaska Native, or undisclosed groups.

For the purposes of this study, the triangulation of findings was structured around Hall’s (2011) five research questions: 1) What is the relationship between pre-test scores of the Personal Responsibility Orientation to Self-Direction in
Learning Scale and previous academic achievement as measured by university admissions grade point average? 2) What differences in scores were measured between pre-test (given July, 2009) and post-test (given January, 2010) administration of the Personal Responsibility Orientation to Self-Direction in Learning Scale? 3) What is the relationship between post-test scores of the Personal Responsibility Orientation to Self-Direction in Learning Scale and academic achievement as measured by university grade point average at the end of the third full semester? 4) How are participants' levels of self-direction following involvement in a summer bridge program, as indicated by post-test scores of the Personal Responsibility Orientation to Self-Direction in Learning Scale, different for participants' based on gender and ethnicity? and 5) How is the impact of a summer bridge program, as indicated by a change in self-direction scores on the Personal Responsibility Orientation to Self-Direction in Learning Scale, different for participants' based on gender and ethnicity?

Hall's (2011) first question focused on the relationship between previous academic achievement and pre-test scores on the PRO-SDLS. Three significant, positive relationships with university admissions grade point average (GPA) were identified by Hall: PRO-SDLS pre-test Total score (r=.26, p<.01); PRO-SDLS pre-test subcomponent learner control (r=.26, p<.01); and, PRO-SDLS pre-test subcomponent self-efficacy (r=.29, p<.01). While significant, all three relationships were found to have low effect sizes on Cohen’s (1988) scale, indicating they were not strong relationships.
Comparison of Hall’s (2011) question one results to this study was limited by the data collection timeframe. Hall examined admissions grade point averages (GPA) and PRO-SDLS pre-test scores collected at the beginning of 2009 Summer Semester. This study examined reflective essays written at the end of 2009 Summer Semester, approximately six-weeks after the PRO-SDLS pre-test administration. With these limitations acknowledged, support for Hall’s findings related to learner control and self-efficacy was found in the essay data.

Learner control is illuminated by Brockett and Hiemstra’s (1991) assertion that personal responsibility is “the ability and/or willingness of individuals to take control of their own learning that determines their potential for self-direction” (p. 26). Evidence of learner control was identified in essay data in all four themes. In Theme One, Self Awareness, learner control was addressed when study participants expressed awareness of their individual learning patterns and described how those patterns influence their learning. Theme Two, Decoding and Pattern Fit, revealed learner control as study participants discussed the process of analyzing academic tasks, matching individual patterns with the task, and intentionally adjusting pattern levels of use to meet the demands of the task. Evidence identified in Theme Three, Autonomy/Responsibility, may be more closely aligned to learner control than the other themes because in Theme Three the study participants explained learning decisions about how to manage their learning choices and provided examples of taking responsibility for the outcomes of those decisions. In Theme Four, Academic Success, learner control was supported when study participants measured their work against the criteria of an
academic challenge or assignment and made a connection between their success and specific actions. Essay data also revealed participant feelings of confidence as learners and positive attitudes about abilities to succeed in college.

Hall’s (2011) second question focused on describing any differences in PRO-SDLS at the beginning of study participants first semester in college and after their second semester. Although an increase of 1.55 (1.7%) existed between the PRO-SDLS pre-test and post-test mean scores ($M=89.62$, $M=91.17$), the difference was not statistically significant. No qualitative essay data were collected beyond participants first semester in college, therefore no data were examined in this study to either support or challenge Hall’s findings related to research question two.

The academic success of study participants over time was investigated by Hall (2011) in question three. Hall found three statistically significant, positive relationships ($p<.05$) between the PRO-SDLS post-test scores collected in January, 2010, and study participants’ university GPA in May, 2010: PRO-SDLS post-test Total score ($r=.30$, $p<.01$); PRO-SDLS post-test subcomponent learner control ($r=.42$, $p<.01$); and, PRO-SDLS post-test subcomponent self-efficacy ($r=.30$, $p<.01$). All three relationships were found to have a medium effect sizes using Cohen’s (1988) scale, indicating moderately strong relationships. Hall noted that the learner control subcomponent of the PRO-SDLS showed the largest correlation coefficient in the study and summarized that “participants with
a higher score on the learner control component…were found to have a higher university GPA” (p. 112).

Comparison of Hall’s (2011) question three results to this study was limited by the data collection timeframe. Hall examined PRO-SDLS post-test scores collected in January 2010 and university grade point averages (GPA) from May 2010. No qualitative essay data were collected beyond summer semester 2009. However, with these limitations acknowledged, support for Hall’s findings of statistically significant, moderately strong, positive relationships related to learner control and self-efficacy was found in the essay data.

As a component of self-directed learning, evidence of learner control was identified in all four themes of the essay data. Throughout Theme One, Self Awareness, study participants expressed their ability to take control of their learning through understanding of themselves as learners. For example, statements such as these were common in the essay data, “I have come to realize when I do use these two forms of learning my work becomes that much better” (J178), “I felt the need to be precise because it was important for me to have correct information in order to succeed” (B9), and “When I study I like to make a list of what to study and I go by that. Being that I am a sequence learner I like doing everything in order” (E26).

Evidence from the analysis of essay data related to Theme Two, Decoding and Pattern Fit, supported learner control as participants voiced the ability to use knowledge of themselves as learners to guide responses to academic demands. In addition, characteristics of self-efficacy, or confidence in their own abilities,
were evident in 58% of the essays. For instance, study participants confirmed, “I have demolished both of these problems, and I have been successful” (A81); “I think that I will do just fine” (B6); “I feel more confident as a learner” (D42); “I have proven to myself that I am able capable [sic] of handling all of my work” (D208); and “I feel like next year will go as successful as this term went for me” (J183).

Ample support for Hall’s (2011) findings was evident in the Theme Three, Autonomy/Responsibility, essay data. With a focus on personal responsibility and accountability for learning, Theme Three was well aligned with the learner control component of self-directed learning and the highest essay rating mean of all the themes was established. Essay data ratings resulted in a consensus mean within the range of reasonably aware ($M = 4.1$). Study participants voiced accountability for their learning in both successful and disappointing situations. For example, Student D42 confessed:

For this assignment I neglected all of my learning skills completely….If [I] would have just used my precision skills to line up the margins properly and made short enough to fit the page requirement, I would have passed. Ever since I was sure to double check my format according to my teacher’s expectations and the end result is B+ for the class. (D42)

Student B9 voiced a lesson learned and the resulting self-efficacy:

I should have paid more attention to the essay. I ran a little bit out of time, I let it slide and I shouldn’t have. I should have followed the last comments from my teacher and made sure it was how she suggested. I learned that
it is very important to make sure the final essays are good enough to get a good grade. Even though I did a poor job, I’m still confident I can do well on the next one. I know I can do better. (B9)

Additional support for Hall’s findings related to learner control was the result of correlation measures. The strongest relationship between variables in Hall’s (2011) study was between learner control and university GPA. Similarly, the largest, statistically significant correlation coefficients of this study were found between themes representing learner control and academic success. The strongest relationship, statistically significant at a 0.01 level, was between Themes Three and Four: Autonomy/Responsibility and Academic Success ($r=.669$, $p<.01$). A second strong relationship, statistically significant at a 0.01 level, was identified between Themes Two and Four: Decoding and Pattern Fit, and Academic Success ($r=.595$, $p<.01$). Also confirming Hall’s (2011) findings, a positive, statistically significant relationship was found between Themes Two and Three: Decoding and Pattern Fit, and Autonomy/Responsibility ($r=.487$, $p<.05$). Although identified as a relationship of moderate strength according to Cohen’s (1988) scale of effect sizes, the relationship between Themes Two and Three was within 0.013 points of being described as strong.

Hall’s (2011) findings were also supported by some evidence of self-efficacy present in 58% of the essays. Although this evidence was chiefly limited to side-bar comments that lacked deeper explanation or discussion, students did reveal boosts in confidence in their ability to succeed academically at the university.
The impact of a summer bridge program on self-directed learning was investigated by Hall (2011) in an examination of the relationship between gender, ethnicity, and post-test scores of the PRO-SDLS in question four. In the analysis of post-test PRO=SDLS means by demographics, no findings of statistical significance emerged, however, Hall noted that “females were more self-directed than males, with white females the most self-directed among all groups. Hispanics were the least self-directed, with Hispanic males as the least self-directed among all groups” (p. 120).

Triangulation of Hall’s (2011) question four findings to this study was limited. Hall examined PRO-SDLS post-test scores collected in January 2010 and the reflective essay data analyzed in this study were collected at the end of 2009 Summer Semester, one semester prior to the PRO-SDLS post-test administration. Additionally, there were some differences in Hall’s study demographics. With these limitations acknowledged, some support for Hall’s findings was found in the essay data.

For the purpose of triangulation, the comparison essay data examined in this study was limited to the largest ethnic groups represented in both studies: Black, White, and Hispanic participants. To that end, four participants were removed from the reflective essay means reported in Table 25, resulting in a change in the total male and female rating means. All other rating means remain unchanged from those reported previously in Chapter Four.
Table 25
Comparison of Multiple Method Means

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>6</td>
<td>3.94</td>
<td>37</td>
<td>89.35</td>
</tr>
<tr>
<td>Female</td>
<td>14</td>
<td>3.53</td>
<td>73</td>
<td>92.10</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td><strong>20</strong></td>
<td><strong>110</strong></td>
<td><strong>110</strong></td>
<td></td>
</tr>
<tr>
<td>Black</td>
<td>7</td>
<td>3.43</td>
<td>36</td>
<td>91.97</td>
</tr>
<tr>
<td>Hispanic</td>
<td>5</td>
<td>3.48</td>
<td>40</td>
<td>89.40</td>
</tr>
<tr>
<td>White</td>
<td>8</td>
<td>3.58</td>
<td>34</td>
<td>92.41</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td><strong>20</strong></td>
<td><strong>110</strong></td>
<td><strong>110</strong></td>
<td></td>
</tr>
<tr>
<td>Black Males</td>
<td>2</td>
<td>3.5</td>
<td>9</td>
<td>90.44</td>
</tr>
<tr>
<td>Black Females</td>
<td>5</td>
<td>3.24</td>
<td>27</td>
<td>92.48</td>
</tr>
<tr>
<td>Hispanic Males</td>
<td>3</td>
<td>3.15</td>
<td>16</td>
<td>87.94</td>
</tr>
<tr>
<td>Hispanic Females</td>
<td>2</td>
<td>3.56</td>
<td>24</td>
<td>90.38</td>
</tr>
<tr>
<td>White Males</td>
<td>1</td>
<td>4.25</td>
<td>12</td>
<td>90.42</td>
</tr>
<tr>
<td>White Females</td>
<td>7</td>
<td>3.61</td>
<td>22</td>
<td>93.50</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td><strong>20</strong></td>
<td><strong>110</strong></td>
<td><strong>110</strong></td>
<td></td>
</tr>
</tbody>
</table>

*Note.* For comparison purposes, findings in Table 25 are limited to Black, Hispanic and White race/ethnicities.

After controlling for the four participants representing Asian or Pacific Islanders, American Indian/Alaska Natives, and Undisclosed ethnicity, results of the disaggregated essay means data challenge Hall's (2011) finding that females were more self-directed than males. However, in both studies, White participants...
appeared to be more self-directed, with the essay data suggesting that White males were the most self-directed of all the groups. A difference between study results was identified in the performance of Hispanic participants. While Hall’s findings suggest that Hispanics were the least self-directed, essay data rating means for Hispanic participants were slightly larger than for Black participants.

Hall’s (2011) final research question focused on the relationship between gender, ethnicity, and change in PRO-SDLS scores between pre- and post-test administrations. Hall (2011) reported no results of statistically significance but noted that females showed greater change in mean score than males ($M=2.14$ versus $M=.41$), black students had the highest change in mean ($+2.53$), and white students had the lowest change score ($+.82$).

No qualitative essay data were collected to measure change in self-directed learning of the study participants, however, essay data were evident to support the premise that positive change did occur as a result of participation in the summer bridge program. For example, Student G118 generalized about the summer semester and explained:

Looking back on my first semester of college, I have learned a lot of useful lessons. I will take these lessons into the fall semester, and possibly even my future careers. Being in the summer session and taking these courses has inspired me to become a better student and I know I will be very successful in the fall. (G118)
Student J188 also refers to the semester in a positive light:

Overall I have loved my semester here at USF... All my classes have helped me grow in this short time I have been here into the college student that I am right now. And I can honestly say that I have never been more grateful for anything as much as I am for the oppurtunity [sic] given to me right now. (J188)

Evidence of the impact of the required Strategic Learning course was identified through positive remarks of participants, such as Student A206s reflection, “Knowing my learning patterns has helped me greatly this summer, because I now know how to address my concerns with my study, and work habits.” Other students mirrored this sentiment with statements like “Taking this course has been very beneficial to me and I will always consider my learning style in and out of the academic forum” (D208); “The LCI introduced us to our own learning patterns and this summer it has helped us to know more about ourselves as learners” (F148); and “In class I had the chance to learn exactly how each pattern works and how they affect me as a learner” (B15). In addition, participants voiced confidence in their ability to transfer the understanding of their individual learning profile and apply that knowledge in the future for academic success. For example, Student H94 considered the positive impact on the upcoming Fall semester:

Because, these strategies worked for this semester and even though the fall is much different, the LCI test and my experience of putting them to
use this semester has given me confidence and I really believe that I can use them to have another successful semester. (H94)

A positive impact was also described by Student D42:

This class was helpful to me because it gave me a guide to my mist [sic] effective learning styles and how to use them. I feel more confident as a learner and better prepared as a student going into my fall semester.

(D42)

Student A81 remarked:

Overall, I think this class has helped me TREMENDOUSLY. I never knew there were different learning patterns, and know [sic] that I am informed, it has helped me through my first semester. I have learned how to balance my learning patterns, and not let some of them take over what I do. It helps, me stay organized, focused, and on top of my work. I am very grateful I was able to take this course, and not only will it help me in school, but in my life as well. (A81)

Overall, evidence identified in the reflective essay data provided support for Hall’s (2011) findings in four of five research questions. Of particular interest was the evidence in both studies illuminating a relationship between learning control and academic success. Additionally, the qualitative evidence compliments the statistical analysis conducted by Hall, framing the experience of first-generation, first-year students at the end of their first semester of college in their own words as they reflected on themselves as learners.
Rater Agreement

The methods guiding this phenomenological study were implemented with fidelity. In particular, the use of a scoring team to examine the essay data was vital to the reliability of the findings. The team functioned well and members were committed to discussing evidence in the essay data until consensus was satisfactorily reached. Rater agreement and recode procedures confirmed the reliability of the findings. The expertise of the outside reviewers was invaluable in understanding the student perspective and identifying viable evidence of self-direction in the data. For example, when the researcher questioned the fact that none of the essays used the specific vernacular of the Let Me L earn Process© (LML Process©) FIT strategy, the outside reviewers immediately indicated that they would be surprised if first-year college students participating in a six-week course were able to use the FIT language with ease. They went on to explain that the first-year student typically has a more limited context for the understanding of the LML Process©, especially in the short semester timeframe. Their experience as instructors for the Strategic Learning course with all levels of college students has shown that exposure to the varied teaching-learning environments at the university seems to provide a broader context for comprehending the nuances of the LML Process©.

Candid discussion among the scoring team also led to the acknowledgement of potential rating errors. During the initial individual rating process errors of generosity and severity may have occurred. Outside Reviewer Z mentioned that they may have been “stretching” for a higher rating and “being
too nice” as they interpreted evidence to support their individual rating. This common rating error may also account for the fact that the researcher had a tendency to return higher individual ratings than the experienced Strategic Learning instructors who served as outside reviewers. As the comparison of individual ratings progressed, Outside Reviewer Y realized a tendency to be overly critical, and a potential severity error was noted. A rich discussion regarding professional teacher practices and the challenge of remaining objective during assessment of student work ensued. The scoring team recognized the strength of multiple rater methods and rubric guidelines to reduce bias and common errors. All agreed that experience as an outside reviewer provided motivation for re-evaluation of individual teacher assessment practices.

Data Outliers

The examination of first person essay data written by first-generation, first-year college students revealed self-directed learning characteristics in most of the study participants. While ample evidence was identified in the essay data, it should be noted that student knowledge, skill, and experience may have extended beyond their discussion in the reflective essay, resulting in underreporting. Of the twenty-four student essays analyzed, three were somewhat unique. Two essays received the maximum rating of five, highly aware, in all four themes. These exemplar essays provided evidence that the two male students were highly self aware as learners and were able to fully explain essential behaviors associated with self-directed learning. It is of particular interest that the two individuals were single representatives of their reported
ethnic groups: Native American/Alaskan and Undisclosed. Not only do their perfect ratings on the reflective essays establish a data outlier status, they are an anomaly in the demographic pool as well. A third essay received a rating of four, reasonably aware, in all four themes, provided consistent evidence self-direction. This solo example was submitted by a Hispanic female. No other essays received the same rating across all four themes; however one additional outlier essay was examined. A nearly unscorable essay received a rating mean of 1.75, as a result of not addressing the prompts provided in the reflective essay protocol. The paper rambled through 1258 words of academic and personal trials and tribulations beginning in the Kindergarten year. Although the final 230 words related to first college experiences, there was minimal evidence of self-direction. The scoring team postulated that the paper was composed by a student with a use first confluence pattern; however that was not the case.

**Evidence of Participant Vulnerability and Fear**

As recent high school graduates, the population in this study was admitted into a summer bridge program designed to provide support for the process of acclimating to the university setting. The reflective essays these first-generation college students submitted at the end of that first semester in college offered insight into their personal journey towards becoming self-directed learners.

McMurray and Sorrells (2009) found that first-generation students “are largely unprepared for the drastic transition from high school’s regimented school day to the perceived freedoms and responsibilities that accompany college life” (p. 211). This was supported in the findings of this study when first-generation
students discussed the worries they brought into their first college experience, such as “living on my own for the first time” (B15), becoming “engulfed in the party life” (D208), “the dreaded freshman fifteen” (F132), and “such a big change from high school...I was not going to be able to get used to the atmosphere and the people” (H96). Student J183 captured the essence of uncertainty:

Being pre freshmen on campus I didn't know what to expect. I didn't know if the way I was taught in high school will [sic] help me or hurt me in the long run. I soon found out that some things I did in high school wouldn’t cut it in college. The teachers wanted everything to be submitted through the computer, some classes were large so you had to make sure you stay [sic] focus, and being that I was now an adult no one made me get up in the morning to make sure I went to class. (J183)

As first-generation college students, the study participants were not as likely to have come from the culture of the middle- or upper-class family where so often attending college is expected, not as an option, but a necessary rite of passage towards “the ultimate symbol of independence” (Stephens, Fryberg, Markus, Johnson, & Covarrubias, 2012, p. 1179). Stephens et al (2012) explain that in the thinking of those raised in a middle-class environment, university life maybe natural or intuitive:

When transitioning from one’s home to the university, students are led to believe that they will finally be able to separate and distinguish themselves from their parents and to realize their individual potential – to find
themselves, to develop their voices, to follow their passions, and to influence the world. (p. 1179)

In contrast, first-generation college students are more likely to have grown up in working-class homes as part of an interdependent model rather than an independent model. This interdependence is “characterized by limited economic capital, environmental constraints and uncertainty, and few opportunities for choice, control, and influence” (Stephens et al., 2012, p. 1180). The family must pull together to make ends meet; rarely are emergency funds available. Choices are limited by circumstances and decisions are often based on what is best for the whole group, not individual desires (Stephens et al., 2012).

As first-generation students arrive at the university with its typical norms of independence, a mismatch of cultural norms may occur. Stephens et al (2012) explain that this may “undermine first-generation students’ performance because they [the university or college] do not match the relatively interdependent norms to which many first-generation students are regularly exposed in their local working-class contexts prior to college” (p. 1192). Evidence in the essay data may support this perception of a mismatch as study participants voiced values related to interdependence, such as strong family ties, financial worries, and being away from home (Colyar, 2003; Stephens et al, 2012).

In general, the essay data reflected unexpected student vulnerability as the personal narrative writing mode opened the door for honest reflection. Students shared concerns about making friends, big classes, college expenses, and making poor choices, to name a few. Interestingly, the concerns were
distributed across all ethnic groups with both genders, offering particularly transparent views of interdependent norms. For example, familial connectedness was key to Student H94 as he faced the challenge of his first college exam:

The test was very detailed and there was so much information that was covered on the test and I wondered where I would begin. At first I panicked and didn't know what to do, so I called my mother to relieve anxiety. She told me I would be fine and I was sure to do good. I used her as a sense of motivation and after I got off the phone I began to think about how I would study. (D94)

The financial responsibility of paying for college led to worries for Student B6 as she recognized the need to respond to the interest of family:

I am also not sure if all of my financial aide [sic] has came [sic] through, and if it doesn't I will have to find a way to pay for it because my family does not have those types of resources. (B6)

Cognizant of the financial sacrifice his family was making, Student B15 expressed a sense of pressure to succeed in college:

I believe the reason I did fairly well on this was me knowing [sic] that it was going to be the only exam I took in the class so it was a one shot deal. If I did badly, it would have hurt my grade tremendously. I also put in consideration that my parents were paying a lot of money for me to have this opportunity so I couldn't mess it up. (B15)

A harsh critic of her own performance, Student F148 also articulated academic pressure that may be indicative of family expectations to succeed:
I didn’t give my all and I acted lazy because I didn’t do an assignment, and I had no reason not to. I felt ashamed of myself for missing this assignment. I could have just did [sic] the assignment and not waited until the last minute when I was tired and sleepy. I learned to not wait until the last minute, and even though I’m tired I should try my hardest to complete every assignment. (F148)

Moving away from home with worries of being overwhelmed by a large student population was also a concern for a few students. This anxiety has been observed in first-generation students from rural communities as they transition to college (Schutz, 2003) and may play a role in this study population. Student D42 conveyed apprehension about the upcoming semester:

Now, I am worried about being accepted into the large community known as the fall semester. This summer I had no problem making friends because we were all in the same program, the same classes and we live together. Once the fall comes I am worried that people might not be as accepting, give [sic] the fact that there will be around 46,000 students here, as compared to the 1,000 or more students this summer. I went from having to adjust from being away from home to adjusting to my very crowded new home. I now must wait and see what happens. (D42)

According to Merriam and Clark (2006), “reflection and experience are concepts that are fundamentally intertwined” (p. 39) and therefore “central to understanding the connection between learning and development in adulthood” (p.38). In this study, participants had the opportunity to use reflective essays to
make sense of their own learning and evidence in the data suggests that this use of metacognitive processes helped them make powerful connections between their first college experience and characteristics of self-directed learning. This kind of learning opportunity is recommended by Dawkins, Kottkamp, and Johnston (2010) in a discussion of the implementation of the Let Me Learn Process®:

  Acknowledge affectation’s powerful role in learning…The learners are beginning to make powerful personal connections to their work and their lives…They need to be granted the sanctuary to talk about how their learning makes them feel, given the classroom context and school realities. (p. 58)

The “sanctuary” described above was provided in the Strategic Learning course in which the study participants were enrolled. The reflective essays submitted at the end of the course revealed unexpected student vulnerability. It is likely that the personal narrative writing mode opened the door for honest reflection. With few exceptions, the first-year, first-generation college students submitted reflective essays that communicated authentic phenomena representing honest learning experiences, as opposed to insincere, teacher-pleasing responses. They voiced fears and hopes with a nearly innocent transparency and vulnerability, occasionally surprising the scoring team with their candor. For example, male Student F150 offered candid remarks about body image:
In the beginning of first semester I was worried about the dreaded the [sic] freshman fifteen, but I learned about the gym and I made a regiment to go running during the week to stay in shape….I am still worried…and I'm concerned that in the fall I won’t stick to my regiment, so I am going to put it in my agenda to go to the gym to help me. (F150)

The fears, stress, and concerns revealed in the essay data could be attributed to immaturity or lack of experience in the college milieu, however the challenges faced by first-generation college students are not merely perceptions; relevant literature provides evidence of their struggles. First-generation students often lack pre-college academic preparation, such as rigorous or advanced high school courses (Murphy and Hicks, 2006) and they display less confidence in their academic ability than peers. Saenz et al. (2007) state that more first-generation students than their peers consistently “report lower high school GPAs, lower SAT scores, have lower expectations for the college GPAs, and rate themselves lower on intellectual self-confidence” (p. 32). Although levels of intellectual self-confidence have risen among first-generation students over the past 30 years (Saenz et al., 2007), this vulnerability was evident in the sample identified for purposes of this study; the first-generation, first-year college students did not meet the academic criteria for admissions at the University of South Florida for Fall 2009 (based on high school grade point average, SAT/ACT test score results) and were conditionally admitted to the summer bridge program. In personal essays written at the end of Summer 2009, more than half of the study sample (63%) expressed concerns about academic success at the
university. Students indicated “worries” in terms of “making it” or “falling behind” in the more challenging and demanding courses. One student was very clear, saying “college seemed so terrifying and scary,” while others feared the “work load,” or “intensity of my classes,” and some were uncertain their work would be “good enough” to maintain a grade-point-average that would allow them to continue their studies at the university. About one-quarter of the students described their academic concerns as stressful, for example, “I tend to stress out when I do not perform well in the classroom;” “I get super stressed out when I have a lot of homework hanging over my head;” and “Just thinking about all of that stresses me out.”

The worries and fears expressed in the essays were often tempered by glimpses of self-efficacy. Although self-efficacy was not an emergent theme, more than half the study participants (58%) alluded to self-confidence. Those promising results may reflect an upward trend in self-efficacy among first-generation college students. Saenz, Hurtado, Barrera, Wolf, and Yeung (2007) report the academic confidence of first-generation students as measured by self-rated expectation to make at least a “B” average in college increased more than thirty-two percentage points between 1971 and 2005, but still lags behind their non-first generation peers. In addition to self-ratings on academic confidence that fall below their non-first-generation peers, first-generation college students rate their math and writing abilities below that of peers as well (Saenz, Hurtado, Barrera, Wolf, & Yeung, 2007). Compared to a gap of about eight percentage points between the two groups in self-rated math ability, Saenz et al. (2007)
found that first-generation students express a greater lack of confidence in their writing ability as demonstrated by an even larger disparity of twelve percentage points below their non-first-generation peers. Evidence in the student essays provided little support for this lack of confidence in writing ability, with only a few expressing the view that they were “not good at writing” or were concerned about the college demands of “longer essays.” Interestingly, when asked to describe their most successful and most regretful academic situation from the summer 2009 semester, nearly half (46%) identified their English Composition course as source of their most successful academic situation; conversely, the composition course was also cited 50% of the time as the most regretful situation. Some students actually noted improvement or an increase in confidence in their writing ability during their first semester of college and a majority of the essay data provided evidence of competent writers with skills that could be developed to support increasing demands of college writing.

**Quality of Participant Writing**

The essay evidence regarding confidence or lack of confidence in academic abilities represents metacognitive knowledge (Flavell, 1981; Flavell et al, 2002). Metacognitive knowledge is what a person knows or believes about their own cognitive abilities; recognizing both strengths and weaknesses (Schwartz & Perfect, 2002). Additionally, influences of learner feelings and motivation are also components of metacognitive knowledge, impacting learner choices regarding the amount of effort they expend on a task (Borkowski, Carr, & Rellinger, 1990). Since the role of metacognition is of primary importance in
understanding self-direction in learning (Long, 2000b), the essay data related to writing ability perceptions serves as another indicator that study participants display characteristics of self-directed learners. For example, “I got the highest grade in the class on the project due to being aware of my strengths and weaknesses as a learner” (G105).

Although a few students expressed concern about the rigor of writing lengthy college essays, the reflective essay protocol used for data collection in this study offered no minimum or maximum word guidelines. However, most student responses were of appropriate length to thoroughly address the prompts. A word count analysis described a range of 394 to 1833 words used in the twenty-four essays, with a mean of 874 words and median of 779 words.

Based on criteria set forth by the Council of Writing Program Administrators (CWPA, 2008), the overall quality of writing produced by this study sample provided evidence of a solid foundation of skills sufficient to support growth towards meeting the challenges of more rigorous college demands. The CWPA (2008) established outcomes expected of college students by the end of first year composition in five categories: Rhetorical Knowledge; Critical Thinking, Reading, and Writing; Processes; Knowledge of Conventions; and Composing in Electronic Environments (pp. 2-3). A majority of essay data, 23 of 24 essays, provided evidence of Rhetorical Knowledge outcomes as students presented writing that was appropriate for the rhetorical mode of personal narrative, infused with elements of description, exemplification, cause and effect, and comparison and contrast. With one exception, the essays
addressed the prompt and maintained a clear focus; used language and tone appropriate to the audience, purpose, and specific requirements of the prompt; and demonstrated word choices that illuminated individual voice. For example, phrases like, “I demolished both of these problems;” “This was a big deal for me;” “I saw the class as a pain in the head;” “I need to step up to the plate and ask more questions;” “I am ridiculously organized;” “Wow, a whole semester of college under my belt. It went by so fast” and “College life washes over a freshman like tsunami,” aligned with the CWPA (2008) outcomes. Elements of Critical Thinking, Reading, and Writing outcomes were evidenced when students communicated well-developed responses that included appropriate and sufficient details to support the focus and provide thorough discussion, demonstrating synthesis of their learning and thinking. Evidence of Processes outcomes was undeterminable as students were not asked to report their strategies for revision, editing, and proof-reading. However, it was assumed that the simple errors occurring in varying degrees in every essay would have been corrected with more attention to the writing process. Because all the essay data were submitted electronically, outcomes related to Composing in Electronic Environments were demonstrated.

Knowledge of Conventions outcomes were observed the least of all CWPA (2008) outcomes in the essay data. Although most student essays maintained an appropriate organizational structure to address the specific requirements of the prompt, fewer essays demonstrated a command of standard English conventions. Exceptions did exist, but much of the essay data lacked
evidence of the writers' control of syntax, grammar, punctuation, and spelling. There was no way to determine if these errors were the result of carelessness, indifference, or a lack of knowledge and skill. In several cases, the errors were consistent with common writing mistakes of English Language Learners, such as “all this time I have learn;” “that made many classmates frustrate;” “I was more concern about,” or “I tried to demonstrate him in every class that I could pass his class.” A lack of English language proficiency may create challenges but does not necessarily interfere with a student’s desire to succeed in college (Dundes, Cho, & Kwak, 2009; Olive, 2010). Evidence of themes related to self-directed learning did not appear to be limited due to limited English language learning.

The quality of the writing examined in the essay data was one indicator that this population of first-generation students possessed a readiness to succeed in college. The University of South Florida (2010) demonstrated its’ commitment to enhancing student success in writing by establishing enrollment limits in lower level English composition classes with the expectation that opportunities for interaction and feedback between students, their professors and classmates would be increased with “no more than twenty-two students per course section” (p. 38). The Council of Writing Program Administrators, National Council of Teachers of English, and National Writing Project (CWPA/NCTE/NWP, 2011) take the position, “The ability to write well is basic to student success in college and beyond,” but remind educators that “Writing development takes place over time as students encounter different context, tasks, audiences, and purposes” (p. 2). In their Framework for Success in
Postsecondary Writing, the CWPA et al. (2011) identify eight essential habits of mind that position students “to meet the writing challenges in the full spectrum of academic courses and later in their careers” (p. 1). These habits of mind are explained as “ways of approaching learning that are both intellectual and practical and that will support students’ success in a variety of fields and disciplines” (p. 1). Evidence of the eight habits of mind was identified in the essay data examined for purposes of this study and serves as another indicator of college readiness. Examples of Curiosity, “I wanted to know why…what was the purpose,” “I didn’t know what to expect;” Creativity, “This allows me to think outside the box and come up with new approaches to different assignments;” and Flexibility, “I learned how to deal with change and handle certain situations” were noted. The first-generation, first-year college students expressed fairly significant evidence of Openness in phrases such as, “I never noticed these things before but now that I think back I believe this to be true;” “I have really learned a lot about myself as a learner;” and “So far my experience at USF has opened up my eyes to a different perspective of school.” The students demonstrated Engagement saying, "I fought through my problem of getting distracted;" “I organized my notes…allowed myself enough time to study…made sure to copy everything verbatim;” “I talked to the teacher;” and “Now that I learned what to do and what not to do I think I have become ready to take on the college life.” Persistence was evident in phrases like “Throughout the entire term;” “by working hard and staying determined I was able to do well;” and “I kept myself really motivated and worked hard to bring up my grade.” With close alignment to the
characteristics of self-directed learners, there was considerable evidence of 
Responsibility and Metacognition, for example, “If I could have done something
different I would;” “I should have made the effort and I didn’t;” “I revisited my list
of concerns and I have really changed;” “As I get ready to wrap up my first
semester in college, I’ve realize [sic] a few different things;” and “Looking back on
my first semester of college, I have learned a lot of useful lessons.”

Overall, the essay data submitted by first-generation, first-year college
students for analysis in this study pervasively represented skills and habits of
mind appropriate for entrance into the postsecondary writing arena, and
demonstrated a level of readiness for further development of those skills to meet
the demands of technical writing in university coursework.

Implications for Practice

The purpose of this study was to determine if first-generation students
expressed characteristics consistent with self-directed learning in reflective
essays written at the conclusion of their first semester of college experience. The
essay data revealed ample evidence of self-direction among the study
participants.

First-generation students typically encounter more obstacles in college
than their peers (Ramos-Sanches & Nichols, 2007), nonetheless this study
showed that they enter the university prepared to face challenges and committed
to success. The primary implication of this research is the knowledge that first-
year, first-generation college students do have the capacity to take ownership of
their learning in ways exemplified by self-directed learners. However, a support
system, including coursework that facilitates understanding of individual learner characteristics, emphasizes strategies to maximize learner efforts that lead to successful outcomes, and empowers students to become more self-directed, is of critical importance.

The essay data examined for this study were a product of the Strategic Learning course imbedded in the Freshman Summer Institute, a summer bridge program designed to “provide access to a university education for promising students from first generation and/or limited income families” (University of South Florida, 2010, p.40). This support system provided a strong foundation for success and, in spite of the potential limitations of a one credit hour course compressed into a six-week semester, the study participants demonstrated a capacity for deep reflection and metacognition that is atypical among college students. Their essays revealed unexpected student vulnerability and with few exceptions, communicated authentic phenomena representing honest learning experiences, as opposed to insincere, teacher-pleasing responses. They voiced fears and hopes with a nearly innocent transparency and vulnerability, occasionally surprising the scoring team with their candor. The uncharacteristic depth of the self-reflection in the first-year students may have been the result of the Strategic Learning course and the curriculum of the Let Me Learn Process© (Johnston, 1998, 2008, 2010), which provided students with a toolbox of strategies to activate self-direction as learners, including a step-by-step metacognitive process; the Metacognitive Drill (Dawkins, Kottkamp, & Johnston, 2010; Johnston, 1998, 2008, 2010; Johnston & Pawelski, 2010; Ostermann &
Kottkamp, 2004). As course instructors and students openly discussed metacognitive practices, especially those related to judgment, reflection, and application of skills in new settings, there was potential for growth in self-directed learning capacity. Johnston (2010) states “revisiting metacognitive decisions serves to reinforce the specific strategies that led to success and reconsider those that led to failure. Revisiting grows metacognitive capacity and personal insight” (p. 71). The value of the Strategic Learning course as a conduit to self-directed learning was evident and it should be noted that the positive evidence identified in this study may not have surfaced had the students not been exposed to a process that fostered self awareness and a provided a set of tools that empowered them to both apply and discuss knowledge of themselves as learners.

These findings hold promise for institutions of higher education who serve at-risk populations, but sustainability of the success shown in this study is of concern. The first-year, first-generation college students studied here embraced the opportunity to learn about themselves and reported academic success as participants of the summer bridge program, however Hall’s (2011) findings show that positive effects of the summer semester may have waned by the end of their first year of college. One semester of university coursework may be insufficient for students to sustain growth in the process of becoming more self-directed as learners (Hall, 2011; Strickland, 2010). This holds true in findings from studies of first-generation students based on abbreviated six-week semesters (Hall, 2011) as well as standard, sixteen week semesters (Strickland, 2010). In order to
sustain the early progress students often make as participants in programs designed to support their success, expansion to a system of ongoing support that reaches beyond the first two years of college may be called for. If opportunities can be identified that allow students to reinforce the habits of mind (processes and strategies) that are associated with self-directed learning and academic success, institutions may see increases in the sustainability of early, positive gains. In addition, sustainability efforts may have a positive impact on lifelong learning. Instructors of adults often strive to facilitate learning that reaches beyond immediate needs, to the broader goal of fostering personal development (Merriam & Clark, 2006). Preparing students for life beyond the academe is a valuable goal for institutions of higher learning. As successful citizens and lifelong learners, it continues to be important for individuals to understand how to tap into the reserves of their cognitive learning resources. Clinical psychologist and wellness coach Lula Drewes (2007) asserts that everyone can “Achieve greater peace and power by learning to reach deeper within yourself for greater self awareness, self control, and self direction” (n. p.).

Results from this study also expand the field of adult education by providing evidence that learner control is a key component of self-direction and is positively correlated to academic success. Long (2000b) asserted that self-directed learning is most likely a psychological construct that resides in the cognitive and personality characteristics of individuals. In addition to three primary dimensions of cognition (motivation, metacognition, and self-regulation), Long (2000b) argues that learner control secondary dimension empowered by
self-regulation and choice. A wealth of evidence related to metacognition, self-regulation, and learner control was identified in the essay data. These findings are promising and suggest to educators, especially those charged with structuring teaching-learning environments, that providing ample opportunity for student choice may increase positive outcomes related to academic success. Likewise, as students make autonomous decisions, take ownership of their own learning, and accept responsibility for the outcomes, both self-direction and academic success may flourish.

Occasionally the research process reveals potential flaws in teacher practice and activates a process to review and refine instructional routines. Findings in this study suggest that it may be beneficial to examine the Strategic Learning course curriculum to reduce confusion related to pattern qualities, such as the erroneous associations of the Technical Reasoning pattern to technology or the Confluence pattern to creativity found in the essay data. Additionally, instruction may need to more explicitly explain that topics like time management, procrastination, and perfectionism are not linked to single pattern identities. The individual learning patterns are related to characteristics of self-directed learning, such as self-awareness, learning control, autonomy, and responsibility. Therefore, the more clarity provided in instruction related to the patterns, the greater the likelihood that students will increase their capacity for self-direction as learners. It may also be prudent to consider that the Strategic Learning curriculum, with an ambitious syllabus designed to serve comprehensive needs, may inadvertently focus more on coverage of information
rather than building a deeper knowledge and understanding of the content. To increase the likelihood of lasting change in student learning, it is possible that less content or a streamlining of classroom activities may prove advantageous. In a discussion of metacognition and academic learning, Paris and Winograd (2011) emphasize “Students should be taught to use particular strategies in particular settings to accomplish specific purposes and not simply taught an inventory of strategies” (p. 23). Providing multiple opportunities for students to apply the Let Me Learn Process® strategies across various academic settings, particularly the metacognitive tools, may advance the objective of learner self-direction.

**Recommendations for Further Research**

This phenomenological qualitative study strengthened the understanding of self-directed learning of first-year, first-generation college students. Additional inquiry may further expand the knowledge base; therefore, the following recommendations are presented for further research:

1. Single institution studies are inherently limited. Replication of this study at other institutions may increase transferability of the findings.

2. The essay data collected from first-generation students at the end of their first semester of college offered insight into a single phenomenon. Expanding qualitative data collection to a longitudinal study of the population through varied college programs would increase the understanding of self-directed learning in first-generation students as they broaden their academic experiences.
3. Learning pattern conflict between university professors or instructors and first-generation students may influence student success and persistence. Research to explore the role of learning pattern conflict in this setting will expand understanding of first-generation college students and conditions for success.

4. Decisions regarding major area of study and career pathways may relate to individual learning profiles as determined by the Learning Connections Inventory (LCI). The exploration of learning patterns and major area of study decisions of first-generation college students will expand understanding of the population and may inform career counseling departments, guidance programs, and student support services in their efforts to increase student persistence and retention.

5. The ability to communicate effectively through writing is critical to success in college and writing processes may be unique to individual learning profiles, as determined by the Learning Connections Inventory (LCI). Examination of student writing in various university courses and modes, such as research, technical, expository, and narrative writing, in relation to LCI scores will increase understanding of student learning and academic performance, and may offer insight to those who provide campus writing instruction or support services for academic writing.

Final Thoughts

The purpose of this study was to examine the reflective essays of first-year, first-generation college students for evidence of self-directed learning at the
conclusion of their first semester at the university. And the first five times the essays were examined, it was with a researcher’s eye; looking for evidence. But somewhere in the recursive process of reporting findings and discussing results, a shift occurred. There was a startling realization that even after the data was coded and recoded, the complete picture had not come into view.

The deeper understanding of this phenomenon was anchored in individual student experiences and personal stories. Nichols (1980) said, “The best way to understand people is to listen to them” (p. 4), so this researcher stopped coding data and started listening to what first-year, first-generation college students had to say. They told of their successes and challenges during the summer semester; shared proud moments and accepted responsibility when things didn’t go as well as they hoped. They were playful and sometimes even silly as they discussed adjusting to being away from home and living in dormitories filled with strangers. They opened up about their concerns and fears for the upcoming semester, many times with palpable anxiety. And as the stories unfolded, the student foibles provoked researcher laughter and their vulnerability brought the sting of tears. The data came to life and because of a shift in focus, this researcher was transformed by what truly had become a phenomenological qualitative method.

Had the inquiry ended with carefully coded data and discussion of the evidence of the four themes related to self-directed learning, the research would have added to the field of knowledge. But by taking additional time to allow the hidden data to emerge, the contribution is larger and the gallery of portraits
displayed in the museum of inquiry into self-directed learning has expanded to include first-generation college students.

The end result is that the coded data was confirmed and understanding of the phenomena was refined by student voices. The researcher can now say that, the purpose of this study was to determine if first-generation students expressed characteristics consistent with self-directed learning in reflective essays written at the conclusion of their first semester of college experience. The answer is a resounding yes. The first-year, first-generation college students in this study did provide evidence and express characteristics consistent with self-directed learning.
REFERENCES


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APPENDICES
Appendix A: IRB Approval Letter

September 10, 2012

Patricia Linder, M.A.
Adult, Career and Higher Education
206 N Howard St
Plant City, FL 33563

RE: Not Human Research Activities Determination

Activity Title: AN ANALYSIS OF SELF-DIRECTED LEARNING OF FIRST-YEAR, FIRST-GENERATION COLLEGE STUDENTS

Dear Ms. Linder:

I have reviewed the information you provided regarding the above referenced project and have determined the activities do not meet the USF definition of human subjects research activities; therefore, IRB approval is not required. If, in the future, you change this activity such that it becomes human subjects research activities, prior IRB approval is required. If you wish to obtain a determination about whether the activity, with the proposed changes, will be human research activities, please contact the IRB Office for further guidance.

All research activities, regardless of the level of IRB oversight, must be conducted in a manner that is consistent with the ethical principles of your profession and the ethical guidelines for the protection of human subjects. As principal investigator, it is your responsibility to ensure subjects’ rights and welfare are protected during the execution of this project.

We appreciate your dedication to the ethical conduct of human subject research at the University of South Florida and your continued commitment to human research protections. If you have any questions regarding this matter, please call 813-974-5638.

Sincerely,

John A. Schinka, Ph.D., Chairperson
USF Institutional Review Board
Appendix B: Permission to Use PRO Model

From: Brockett, Ralph G <brockett@utk.edu>
Date: Thu, Sep 27, 2012 at 12:13 PM
Subject: RE: Permission for use
To: Patricia Linder <mail4linder@gmail.com>, Roger Hiemstra <rogerhiemstra@gmail.com>

HI Patti,

Yes, I want to confirm that Dr. Hiemstra and I, who hold the copyright to this material, are happy to grant permission for you to reprint the PRO model figure on page 26. Please be sure to note that its was reprinted by permission and that it it copyrighted by Ralph G. Brockett and Roger Hiemstra.

Best wishes for a successful dissertation. Hope to see you presenting your research at the ISDLS.

Ralph

From: Patricia Linder [mail4linder@gmail.com]
Sent: Wednesday, September 26, 2012 12:02 PM
To: Roger Hiemstra; Brockett, Ralph G
Subject: Permission for use

Hello Dr. Hiemstra, and Brockett,

In April you granted permission for me to use the PRO model figure from page 26 of your book Self-Direction in Adult Learning: Perspectives on Theory, research, and Practice for a dissertation study. In considering following information provided on Dr. Hiemstra's website, http://www-distance.syr.edu/sdlindex.html, I want to confirm your permission for use of the PRO model in my dissertation, as it will be published and may printed on a printer other than my own.

Thank you so much,
Patty

Patricia Linder
Doctoral Candidate
University of South Florida
Appendix C: Permission to Use Brain-Mind Connect and Interactive Learning Model

Sent: Thursday, September 27, 2012 6:18 PM
To: Linder, Patricia
Dear Patricia,
Thank you for your request. Please consider this e-mail as permission to reprint the material as detailed below in your upcoming dissertation. Please note that this permission does not cover any 3rd party material that may be found within the work. We do ask that you credit the original source. Please contact us for any further usage.

Best of luck with your dissertation!
Regards,
JJ

Jennifer ("JJ") Barron
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-----Original Message-----
From: Linder, Patricia [mailto:PLinder@usf.edu]
Sent: Thursday, September 27, 2012 1:21 PM
To: permissions (US)
Subject: RE: Use of figures

The Copyright Clearance Center indicates the SAGE holds the copyright for the information I requested. As directed in your email, here is a resubmission of my request:

I am a doctoral candidate at the University of South Florida and would like to request permission to include the three figures from a Corwin publication in my dissertation. My study analyzes self-directed learning of first-year, first-generation college students who were introduced to the Let Me Learn Process in a Strategic Learning course. During my review of current literature related to the study topic, your publication was extremely helpful and I believe the inclusion of the figures named below would increase clarity in my dissertation.

Figure 1.1 Representation of the Brain-Mind Connection Figure 1.2 Mental Processes That Operate Within Each Learning Pattern Figure A.10 The Metacognitive Drill
From the book: Intentional Teaching: The Let Me Learn Classroom in Action
Authors: Bonnie U. Dawkins, Robert B. Kottkamp, Christine A. Johnston

Thank you for your consideration,
Patricia Linder
Doctoral Candidate
College of Education
University of South Florida
Appendix D: Permission to Use Metacognitive Drill

Re: Request permission to use figure
johnstca@comcast.net [johnstca@comcast.net]
You replied on 9/28/2012 3:35 PM.
Sent: Friday, September 28, 2012 2:24 PM
To: Linder, Patricia

Well silly me. had I opened the Figure I would have seen the document source.

I hereby grant a one time permission to Patricia Linder (USF) to use Figure 4.1 Metacognitive Drill (Strategic Learning) in the publication of her dissertation.

Christine A. Johnston
September 28, 2012

From: Linder, Patricia
Sent: Friday, September 28, 2012 12:00 PM
To: Christine Johnston
Cc: Maher, Patricia; info@letmelearn.org
Subject: Request permission to use figure

Hello Dr. Johnston,

I am a doctoral candidate at the University of South Florida and would like to request permission to include a figure from a Let Me Learn, Inc. publication in my dissertation. My study analyzes self-directed learning of first-year, first-generation college students who were introduced to the Let Me Learn Process in a Strategic Learning course. I am using qualitative methods to support (or challenge) the research of Dr. Jeff Hall (2011).

Specific request:
Figure 4.1  Metacognitive Drill
From the book: Strategic Learning (An Academic Resource developed by Let Me Learn, Inc. (2010))

Thank you for your consideration,
Patricia Linder

Doctoral Candidate
College of Education
University of South Florida
<table>
<thead>
<tr>
<th>Themes</th>
<th>1 No evidence of awareness</th>
<th>2 Minimally aware</th>
<th>3 Somewhat aware</th>
<th>4 Reasonably aware</th>
<th>5 Highly aware</th>
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<tbody>
<tr>
<td>1. Self Awareness</td>
<td>Reports LCI scores or levels but provides no specific examples to validate their personal learning profile</td>
<td>Reports LCI scores or levels and offers specific examples to validate 1-2 patterns of their personal learning profile</td>
<td>Reports LCI scores or levels and offers specific examples to validate 3-4 patterns of their personal learning profile</td>
<td>Reports LCI scores or levels and provides specific examples to validate all 4 patterns, and either articulates the &quot;pros and cons&quot; of the varied pattern levels or offers some discussion of the interaction of the patterns</td>
<td>Reports LCI scores or levels and provides specific examples to validate all 4 patterns, articulates the &quot;pros and cons&quot; of the varied pattern levels, and discusses the interaction of the patterns</td>
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<td>2. Task Analysis</td>
<td>Provided no specific examples of task analysis using the LMLP® framework</td>
<td>Provided no specific examples of task analysis but discussed the need to adjust strategies related to academic task demand(s)</td>
<td>Provided at least 1 specific example of task analysis using the LMLP® framework</td>
<td>Provided at least 1 specific example of task analysis and possible strategy(s) to address academic task demand(s)</td>
<td>Provided more than 1 specific examples of task analysis and descriptions of strategies selected to address academic task demands</td>
</tr>
<tr>
<td>3. Intentional Learning</td>
<td>Provided no discussion of task analysis using the LCI framework</td>
<td>Provided no specific examples of task analysis but discussed awareness of need to analyze tasks and adapt</td>
<td>Provided at least 1 specific example of task analysis and potential strategy but did not report that he/she actually attempted to adapt to the task</td>
<td>Provided at least 2 specific examples of task analysis, discussed possible related strategies, and reported at least 1 example of an attempt to adapt to the task</td>
<td>Provided several specific examples of task analysis, descriptions of strategies selected to address task demands, and offered specific examples of how he/she attempted to adapt to the task</td>
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<td>No evidence of awareness</td>
<td>No discussion or examples of accepting responsibility or feeling accountable for their own learning.</td>
<td>No mention of academic success</td>
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</tr>
<tr>
<td>Minimally aware</td>
<td>Described the need to take more responsibility and be accountable but did not discuss how this might be accomplished.</td>
<td>Provided vague reference to academic success</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Somewhat aware</td>
<td>Described the need to take more responsibility and be accountable and discussed possible strategies to accomplish this.</td>
<td>Provided some general discussion of academic success (i.e., I am a better student now).</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Reasonably aware</td>
<td>Provided at least 1 specific example of having responsibility to meet the demands of learning expectations.</td>
<td>Provided at least 1 specific example of academic success related to LIMPs (i.e., test scores, grades on assignments, classes passed).</td>
<td></td>
<td></td>
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<tr>
<td>Highly aware</td>
<td>Provided more than 1 specific example of having responsibility to meet the demands of learning expectations.</td>
<td>Provided more than 1 specific example of academic success related to LIMPs (i.e., from failing to passing).</td>
<td></td>
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</tbody>
</table>

4. Autonomy/Responsibility: To what extent did students state responsibility and accountability for their own learning?  
5. Academic Achievement: To what extent did students report academic achievement?
## Content Analysis Rating Rubric V2

<table>
<thead>
<tr>
<th>Themes</th>
<th>1: No evidence of awareness</th>
<th>2: Minimally aware</th>
<th>3: Somewhat aware</th>
<th>4: Reasonably aware</th>
<th>5: Highly aware</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Self Awareness</td>
<td>Reports LCI scores or levels but provides no specific examples to validate their personal learning profile</td>
<td>Reports LCI scores or levels and offers specific examples to validate 1-2 patterns of their personal learning profile</td>
<td>Reports LCI scores or levels and offers specific examples to validate 3-4 patterns of their personal learning profile</td>
<td>Reports LCI scores or levels, provides specific examples to validate all 4 patterns, and either articulates the “pros and cons” of 1-2 pattern levels or refers to pattern interaction</td>
<td>Reports LCI scores or levels, provides specific examples to validate all 4 patterns, articulates the “pros and cons” of 3-4 pattern levels, and refers to pattern interaction</td>
</tr>
<tr>
<td>2. Decoding and Pattern Fit</td>
<td>Provided no specific examples of decoding or matching their learning profile to academic task demands</td>
<td>Provided no specific examples of decoding but demonstrated awareness of the process of matching their learning profile to academic task demands</td>
<td>Provided at least 1 specific example of decoding and matching their learning profile to academic task demands and identified modifications of their learning profile that would be required to successfully complete the task</td>
<td>Provided at least 1 specific example of decoding, matched their learning profile to academic task demands and used modifications of their learning profile to successfully complete the task</td>
<td>Provided at least 1 specific example of decoding, matched their learning profile to academic task demands and used modifications of their learning profile to successfully complete the task</td>
</tr>
<tr>
<td>3. Autonomy/Responsibility</td>
<td>No discussion or examples of accepting responsibility or being accountable for their own learning</td>
<td>Described the need to take more responsibility and be more accountable <strong>but</strong> did not discuss how this might be accomplished</td>
<td>Described the need to take more responsibility and be more accountable and discussed possible strategies to accomplish this</td>
<td>Provided at least 1 specific example of having taken responsibility and been more accountable and discussed strategies used to meet the demands of academic learning expectations</td>
<td></td>
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<tr>
<td>----------------------------</td>
<td>----------------------------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>4. Academic Success</td>
<td>No mention of academic success</td>
<td>Provided vague <strong>reference</strong> to academic success</td>
<td>Provided some general <strong>discussion</strong> of academic success (i.e., I am a much better student now; showing improvement)</td>
<td>Provided at least 1 specific example of academic success related to LMLP® (i.e., GPA, course grades, from failing to passing, test scores, grades on assignments, classes passed)</td>
<td></td>
</tr>
<tr>
<td>Emergent Theme</td>
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</table>

Revised September 2012

Linder, 2012
Appendix G: 2009 Strategic Learning Reflective Essay Protocol

Instructions
Using a formal essay format, (typed, double spaced, heading, numbered pages) respond to the following questions:

1) Describe yourself as a learner in terms of how you typically use your team of learning patterns to succeed in school. Be sure to discuss both the benefits of how all four patterns interact for you as well as the difficulties or challenges associated with your particular profile of patterns.

2) Now that your first semester is almost over, revisit your list of concerns from the beginning of the semester and evaluate your response and progress. Consider the same question now and describe your top 3 concerns for next semester. How are they different from the beginning of this semester? Discuss what changes you have made to address your original concerns and what has been the result? Have your concerns changed as a result of your experiences so far? Explain how they have changed and why.

3) Describe your most successful academic situation from this semester. Be sure to discuss this experience in terms of your learning patterns, the task expectations, and the source of your motivation. Discuss what you actually did to accomplish it, why the result was successfully accomplished and how you felt.

4) Describe your most regretful academic situation from this semester, one that did not end very successfully. Discuss why it was difficult for you in terms of your learning patterns, the task expectations, and the source of your motivation. Discuss what you actually did to accomplish it, why the result was less than you wanted. From our class activities, discuss what you could have done to intentionally shift gears in your approach in order to improve your results in this challenging situation. What did you learn from that situation that will help you to build your confidence for the next time and increase chances for success?

Essays will be graded for both content and accuracy of writing format. A rubric will be used. Please submit your assignment directly through Blackboard.
Appendix H: Scoring Team Meeting Agenda

Scoring Team Meeting One

September 17, 2012

Agenda

Welcome and Introductions
- Note: To increase accuracy in the audit trail, meetings will be recorded

The Study: An Analysis of Self-directed Learning of First-year, First-generation College Students
- Focused on personal voice of the students
- We are the audience. What will we hear?

The Content Analysis Rating Rubric

Common Rating Errors
- Halo Effect: bias in which our judgments can be influenced by our overall impression of student
  - What components of a student essay might lead us to an impression of the student and possible bias in our ratings?
- Generosity error: less than accurate rating due to general tendency to be lenient
- Severity error: Less than accurate rating due to tendency to be overly critical
- Error of Central Tendency: Less than accurate rating due to general tendency to make ratings at or near the midpoint of the scale
- How might the rubric help us limit these rating errors?

Analysis Plan
- Electronic copies, coded to protect student identity
- Pilot Dataset - 9 pilot essays
- Dataset One - 8 essays each (24 total)
- Dataset Two - 2-3 essays (tentative)
- Dataset Three - 2-3 essays (tentative)

Timeline
- Tuesday (9/18) 3:00PM - Discussion of Pilot Dataset emergent themes
- Wednesday (9/19) OR Thursday (9/20), at your convenience: Individual phone call with me discuss Dataset One ratings
- Friday (9/21), 9:00AM - 1 hour to discuss any additional emergent themes and decisions regarding saturation

Compensation
- $25 Target gift card
## Appendix I: Random Assignment of Essay Data

<table>
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<th>Outside Reviewer Y</th>
<th>Outside Reviewer Z</th>
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Appendix J: Rater Agreement Pilot One and Two

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<td>2. Decoding and Pattern</td>
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</table>

Note: Rater agreement is based on independent scoring of reflection essays prior to any scoring team discussion for consensus.

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ABOUT THE AUTHOR

Patricia Linder has 37 years of experience as an educator. Her professional practice spans K-12 to adult education and includes program administration, evaluation, professional development, and classroom instruction. As a consultant, Ms. Linder provides support for national, state, and district literacy leadership initiatives and is currently serving as a faculty member in a national program to develop school leaders. In this capacity she assists aspiring principals in nine urban cities across the United States in the implementation of a school wide process to increase student motivation, engagement, and achievement. In Florida, her work includes a project to guide middle and high schools in the implementation of a collaborative instructional framework to imbed literacy standards that promote college and career readiness.

Formerly, as a Program Director in the College of Education at the University of South Florida, she managed a wide range of projects, including a program evaluation of the 2006-2008 Florida Department of Education implementation of the federal Reading First initiative, and the Florida Department of Education 2003-2005 delivery of professional development to over 15,000 teachers statewide.

Ms. Linder earned a Bachelor of Arts from USF in Music Education (1975) and a Master of Education (1980) from the University of Tampa, Florida.