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by

Janeen Antonelli

December 2016

SELF-REGULATED LEARNING CHARACTERISTICS OF FIRST GENERATION
COLLEGE STUDENTS

A Doctoral Thesis Presented to the
Faculty of the College of Education
University of Houston

In Partial Fulfillment
of the Requirement for the Degree

Doctor of Education
Professional Leadership – Special Populations

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An Abstract
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Abstract

The purpose of this study was to explore the characteristics of first generation (FG) college students in terms of the SRL components upon which many college student success courses (SSC) are designed. Using an ex post facto research design, the author analyzed the archival records of 914 full-time degree-seeking undergraduate students who had self-enrolled in a required SSC at a large, demographically diverse university over six consecutive semesters (Fall 2012 - Spring 2015). Defined as a student for whom neither parent had any type or quantity of education beyond high school, FG college students ($n = 288$) comprised 31.5% of the total data sample. The web-based Learning and Study Strategies Inventory (LASSI) 2nd edition was used to measure students' SRL characteristics by generational status at course entry. Analyses were conducted in two phases. First, descriptive statistical analyses of the archived LASSI data revealed that FG college students did not score universally higher or lower than non-FG college students. Moreover, both FG and non-FG undergraduate students scored lower than 50% of the national norming sample on most scales, suggesting several productive areas for intervention. Second, findings from ten independent samples t tests revealed that FG students were significantly more interested in and had better attitudes toward achieving academic success than non-FG students, though both groups scored at a level indicating an area of relative weakness. No other statistically significant differences were found. Results suggest that college students' FG status and its relationship to SRL are complex. These findings have important implications for students, administrators, policymakers,

and practitioners. Strengths and limitations of the study are discussed and a professional development action plan is advanced for the purpose of improving postsecondary outcomes and opportunities for all students.

Keywords: self-regulated learning, first generation college students, generational status, LASSI, student success course, professional development

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Chapter I

Introduction

America is facing a growing educational crisis that is threatening its future.

Despite a steady rise in the level of education in America over the past 70 years (Julian & Kominski, 2011), staggering national statistics and global rankings warn of significant and widening student achievement gaps between the United States and other developed nations that – left unresolved – will lead to an irrevocable decline of America’s power and influence in a competitive global market that increasingly favors the educated (U.S. Department of Labor, 2009). As countries like Finland, Japan, South Korea, China, India, and the United Kingdom surge ahead with quality and quantity education for their next generations, America is indisputably falling behind (Darling-Hammond, 2010).

Troubling Trends in Higher Education

Although postsecondary institutions are on record pace to increase their total enrollment from 17.5 million students in fall 2013 – a gain of 46 percent since 1990 – to 19.6 million by 2024 (Snyder & Dillow, 2012; NCES, 2013), college success in the U.S. has not kept pace with college access. According to Department of Education data systems, the nation’s overall college graduation rate remains low – only 59% of students who began as freshmen at a public four-year college in the fall of 2006 earned a diploma within six years (NCES, 2013). Furthermore, according to the most recent data from American College Testing’s College Retention and Graduation Rates, nearly a third (32%) of all freshmen enrolled in colleges and universities in the United States drop out before their sophomore year (ACT, 2016), while half of all students who enroll in college never finish (Obama, 2009). In fact, this will be the first generation of 25- to 34-year-

olds ever to attain lower levels of education than their parents achieved (OECD, 2014) – a startling trend that contradicts the typical intergenerational pattern of educational mobility that supports the American Dream and the country’s global status. As American college students increasingly disengage, the most recent edition of the *Education at a Glance* (OECD, 2014) reports a dramatic decline – in just over a decade – in the relative position of the United States from 2nd in 2000 to 12th among industrialized nations for the proportion of students completing a postsecondary degree.

The cost of these conditions is considerable for both the individual and the country. Despite the fact that the attainment of a bachelor’s degree is projected to be worth nearly \$1M more in lifetime income than a high school diploma, for far too many people, the failure to finish college once started has led instead to low income and high debt (U.S. Bureau of Labor Statistics, 2014). In turn, as countless academic and career aspirations go unrealized, accumulated student debt increasingly – and too frequently – goes unpaid (Federal Reserve Bank of New York, 2013).

Complicating matters further, the overall unpaid student loan debt – an 84% spike since the 2008 recession – has reached an all-time national record high of \$1.2 trillion (Federal Reserve Bank of New York, 2013) – hurting an already struggling economy challenged by a corresponding shortfall in workforce preparedness. As occupations requiring postsecondary education are expected to grow at significantly higher rates over the next ten years than jobs requiring less educational preparations (Carnevale, Smith, & Strohl, 2010; U.S. Department of Labor, 2009), U.S. Secretary of Education, Arne Duncan (2013) warns, “tight global economic competition means that jobs will go where the skills are” (p. 2). That is – as the number of qualified U.S. employees continues to

wane – companies will face the unfortunate choice to outsource their available positions from other countries or absorb the expense of stateside remedial training programs often to the tune of one fifth of their operating budget (Jobs for the Future, 2015).

Often the people most directly compromised by these circumstances are the same people who would benefit most from the life-changing, cycle-breaking opportunities that higher education affords (e.g., Baum, Ma, & Payea, 2013; Bowen, Kuzweil, & Tobin, 2005; Cameron & Stanton, 2014; Chessman & Newburger, 2002; Tough, 2014). The grim result is a persistent and ever-widening social class achievement gap (Duncan & Murnane, 2011; Fiske & Marcus, 2012) between various groups in America. Moreover, most educational reform efforts aimed at improving student outcomes to close this gap instead paradoxically perpetuate conditions “that often further disadvantages the most disadvantaged in society” (Bryk, Gomez, Grunow, & LeMahieu, 2015, p. ix).

Unless educational researchers, scholarly practitioners, and prudent policy makers in the U.S. decipher how to properly prepare *all* members of the next generations for the future, the consequences of growing inequality for national economic stability and international competitiveness – as well as personal advancement – will be catastrophic (e.g., Darling-Hammond, 2010; Bryk et al., 2015). In contrast, people and society as a whole ultimately benefit when more individuals complete higher levels of education. “When college attainment improves, the tax base increases, reliance on social welfare programs declines, and civic and political engagement increases” (CFHF, 2012, p. 39) resulting in positive intergenerational outcomes that are quite compelling (CFHF, 2012).

Ultimately, higher education must find a path to student success that recognizes and responds to the complexity of its enrolled population – including specific factors that

contribute to students' academic and motivational (dis)engagement – while designing and delivering effective intervention models and programs to meet all students' unique needs. A keen understanding of these facets – and their potential interaction effects – is essential to moving the nation forward. This study provides a critical first step in that direction.

A Complex Issue

Factors contributing to the crisis in American education have been researched and analyzed extensively over the years with results as varied as the models and programs implemented to address them. Several often-overlapping population factors – including but not limited to, racial and ethnic diversity, minority status, family income, social class, and generational status at the onset of college – are central to the conversation. Yet, defining disadvantage in higher education with enough precision to inform an effective response is an ongoing challenge as higher education has become more accessible to a wider range of people.

Diversity. One significant factor contributing to the current trends in higher education continues to be the largest influx of immigrant students that have made the United States their home since the early 1900s (Darling-Hammond, 2010) – paired with a corresponding growth rate of minority undergraduate enrollment which escalated 146% between 1980 and 2012 and continues to rise (Flores & Park, 2013). Such rapid and significant demographic shifts toward more racially, ethnically, and linguistically diverse student populations in the nation's colleges and universities (Fry & Lopez, 2012; Li, 2007) have transformed higher education from a standardized finishing experience reserved predominantly for white, Protestant, upper and working class young men just a few decades ago (e.g., London, 1989; Merritt, 2008) to a floodgate of differential

experiences and outcomes for today's much more broadly defined student body (Darling-Hammond, 2010; Merritt, 2008; Ward, Siegel, & Davenport, 2012).

Poverty. The effects of family income level on a child's academic achievement and educational attainment also are well established and profound (e.g., Duncan & Murnane, 2011; Espenshade & Radford, 2013; Pell Institute, 2015) – beginning before kindergarten and broadening with age (Magnuson & Duncan, 2006). Research shows that low family income is linked with poor academic achievement on a wide variety of outcome measures just as affluence clearly affords advantage to children from higher income households (Brown-Nagin, 2014; Espenshade & Radford, 2013; OECD, 2014).

The persistent advantage of affluence extends to college access and success. Despite the general consensus that postsecondary education is the surest path to upward mobility in the United States (e.g., Bailey & Dynarski, 2011; Bowen, Kurzweil, & Tobin, 2005; Julian & Kominski, 2011), whether or not a student graduates often depends on the family's income when she or he starts school (NCES, 2013). According to recent U.S. Census Bureau data analyzed in The Pell Institute 45-Year Trend Report (2015), students from high-income families tend to attain college degrees at much higher and faster rates than students from low-income families and spend less money in the process. In 2013, students from the lowest-income families – defined by family income quartiles – were eight times less likely to obtain a bachelor's degree by age 24 than those from high-income families.

With skyrocketing college tuition outpacing general inflation (Brown-Nagin, 2014), access to financial aid diminished (Mortenson, 2011), and childhood poverty levels at historic highs (CFHF, 2012), economic factors including income-based

differences – often but not always associated with racial and ethnic diversity – remain key contributors to the decline in social mobility, the ever-widening economic and academic achievement gaps (Duncan & Murnane, 2011), and a disappearing middle class in America (Reardon & Bischoff, 2016; Thorson, 2014).

Related research shows that the college pipeline students choose as their path to a better life also is influenced by income (Flores & Park, 2013). While beyond the scope of this study, the trend is a relevant factor nonetheless. Specifically, students from low-income families disproportionately attend two-year rather than four-year institutions (Perna, 2015) despite discouraging findings regarding the likelihood that students who start at a two-year institution will attain a four-year degree (Doyle, 2009; Long & Kurlaender, 2009; Park, 2012). In fact, less than one third of low-income students who enroll in college enroll in a four-year institution. Of these students, fewer than half graduate (DeParle, 2012). Even with above average test scores, students from the lowest-income families have a graduation rate (26%) that is 4% lower than the graduation rate (30%) of students from the wealthiest families with below-average scores (Brown-Nagin, 2014).

Generational status. Entwined in this “paradox that is undermining social mobility in the United States” (Stephens, Hamedani, & Destin, 2014) are particularly troubling outcomes for first generation (FG) college students. Recently touted as a “new way to identify and talk about social class diversity” (Banks-Santilli, 2014, p.2), FG college students are “a diverse, yet distinct group” (Ecklund, 2013, p. 159) both in terms of their demographic characteristics and their educational experiences and outcomes (Coffman, 2011; Terenzini, Springer, Yaeger, Pascarella, & Nora, 1996; Ward, Siegel, &

Davenport, 2012). For example, statistics show that the majority of FG undergraduate students begin college with the intent to graduate with a four-year degree (Noel-Levitz, 2016), yet far too many drop out earlier, finish later, and/or perform more poorly on various measures of academic achievement than their continuing generation counterparts (Choy, 2001; Pascarella, Pierson, Wolniak, & Terenzini, 2004; Sirin, 2005; Stephens, Hamedani, & Destin, 2014). Becoming a formidable presence and an intensifying topic of conversations on campuses nationwide, FG college students have come to account for roughly one third of the enrolled undergraduate population in the United States (NPSAS, 2012) – between 22% and 47% on average – depending on how they are defined (Brown-Nagin, 2014; Choy, 2001; Kuh, Kinzie, Buckley, Bridges, & Hayek, 2006).

Disadvantage redefined. In a compelling article released on the fiftieth anniversaries of the Civil Rights and the Economic Opportunity Acts of 1964, Brown-Nagin (2014) revisits the definition of disadvantage in higher education law and policy that originated with President Lyndon B. Johnson’s *War of Poverty* through affirmative action. A member of the participating university’s Institute for Higher Education Law and Governance (IHELG), the author argues for a renewed focus on and recommitment to the national pledge to ensure upward social mobility for all Americans through educational opportunity. Brown-Nagin (2014) makes a case for defining the appropriate demographic makeup of “truly needy students” (p.49) in higher education specifically as first generation, Pell-grant eligible students. The well-laid argument refutes traditional alternative proxies of “race-based,” “class-based,” and “income-based” affirmative action as singularly insufficient and unreliable.

While much of the breadth and depth of Brown-Nagin's (2014) article is outside the scope of this study, these arguments were useful to justify the choice of FG college students – in lieu of other disadvantaged groups – as the focus of this investigation and its subsequent action plan. Understanding the evolving nature and characteristics of current and future generations of college students is essential to the success of any higher education design efforts to affect positive change.

Seeking a Solution: Models, Programs, and Initiatives

Over the past two plus decades, a wide variety of student success models, programs, and initiatives have been implemented on campuses nationwide to address the persistent issues of inequality in American colleges and universities. Some have been successful, while others have come and gone unevaluated (Ward et al., 2012). Included in these efforts are financial assistance models, academic bridge programs, and student success initiatives (Stephens, Hamedani, & Destin, 2014), with the latter two targeting primarily academic skill development (Engle, Bermeo, & O'Brien, 2006).

While no single response will be sufficient to reverse the local and national trends in higher education (Perna, 2015), one model that has gained widespread credibility and is well established in the literature as a key framework to understand, evaluate, and improve student performance within various academic settings is self-regulated learning (SRL). In fact, numerous studies indicate the effectiveness across academic settings and individual differences of college student success courses (SSC) that integrate SRL instruction into their curriculum (e.g., Cleary, 2015; Cleary & Zimmerman, 2012; Cohen, 2012; Wibrowski, Matthews, & Kitsantas, 2016; Zimmerman & Schunk, 2011). Still, some researchers contend that the success course approach is insufficient to meet the

unique needs and learning characteristics of today's FG college students (Stephens, Hamedani, & Destin, 2014). Despite this inconsistency, little research has examined directly the self-regulatory characteristics of FG college students as a group or in comparison to their non-FG peers.

Given the growing significance of FG students on campuses nationwide, more practice-based research is needed to address this gap in actionable knowledge as a means to transformative change. Greenwald (2012) asserts, "If we want more first-generation students to thrive today, we need to understand what makes them unique" (para. 6), then act on that information with targeted, systematically evaluated responses as we learn what works for whom and in what context (Bryk, Gomez, Grunow, LeMahieu, 2015).

Purpose of the Study

As such, the purpose of this study was to investigate the characteristics of FG undergraduate students in terms of the SRL components upon which many postsecondary student success courses (SSC) are designed. Specifically, this study explored whether FG college students – at the onset of a required SRL development course at the participating university – self-reported SRL characteristics that were significantly different from the SRL characteristics of non-FG college students (Weinstein & Palmer, 2002).

Because many students' struggles can be traced to deficits in self-regulatory processes (e.g., Bembenuddy, Cleary, & Kitsantas, 2013), knowledge obtained from the study's results was expected to inform and direct future implementation of the current SRL undergraduate course as well as the professional development of the instructors who teach its sections – either by maintaining current instructional materials and methods, or advocating for appropriate adjustments – to improve course effectiveness for all students

based on students' SRL characteristics at course onset. In addition, this work sought to contribute value to the ongoing collaborative effort to optimize students' academic and motivational engagement in various postsecondary settings nationwide. Understanding the differences underpinning particular students' struggles is essential if colleges and universities are to develop and implement effective interventions (and professional development plans) to help all students overcome their unique obstacles and achieve success in college and beyond.

Research Questions

Based on prior research and the theoretical framework examined in the following literature review, two research questions were posed:

1. How do first generation (FG) and non-first generation (non-FG) undergraduate students score on each of the ten LASSI scales at SRL course entry?
2. To what extent do FG and non-FG undergraduate college students differ on each of the ten LASSI scales at SRL course entry?

Significance of the Study

With current literature on effective strategies for improving postsecondary success for student populations of differing backgrounds still emerging, more research is needed to establish fundamental, evidence-based knowledge of what works for whom and in what context (Bryk, Gomez, Grunow, LeMahieu, 2015). As a foundational first step, the findings of this exploratory study add twofold value to this broad effort. Results can be used (a) to inform and enhance background-specific instructional efforts in the specific context of the participating university, and (b) to contribute valuable practice-based information to improvement science efforts to increase students' academic performance,

persistence, and college degree attainment through collaboration with other colleges and universities as they work together in networked communities (Bryk & Yeager, 2013) to close critical gaps associated with students' generational status.

Definition of Terms

A number of terms commonly found in published research, policy, and practices related to the special population of FG college students were used in this study. Frequent overlap and ambiguity in the definition of these terms contribute to the complexity and challenges of addressing current trends in higher education. To increase clarity and to provide consistency, key terms are defined below:

FG. The narrowest definition of *first-generation student* was used for this study. FG college students – also known in the literature as *first-gens* or FGCS – were defined as a student for whom neither parent has attended college; in other words, students whose parents have no type or quantity of education beyond high school at the time of their child's postsecondary matriculation (e.g., Choy, 2001; Davis, 2010; Nuñez & Cuccaro-Alamin, 1998; Suder Foundation, 2016).

Non-FG. The definition of *non-first generation student* – also known in earlier literature as *continuing generation* (CG) student – was defined as a student with at least one parent who had some type or quantity of postsecondary education prior to the student's postsecondary matriculation (e.g., Somers, Woodhouse, & Cofer, 2000).

SRL. *Self-regulated learning* (or self-regulation) was defined in this study as “the process by which learners personally activate and sustain cognitions, affects, and behaviors that are systematically oriented toward the attainment of learning goals” (Schunk & Zimmerman, 2012, p. vii).

Chapter II

Review of Literature

“Understanding what school feels like for different students can lead to nonobvious but powerful interventions” (Yeager, Walton, & Cohen, 2013, p. 62).

As student populations become increasingly diversified on college and university campuses nationwide, it is imperative that higher education faculty, administrators, and support personnel seek to understand the unique contributions and challenges of their enrolled population to better serve them. Due to economic, cultural, social, and psychological factors associated with differing class backgrounds, first-generation (FG) college students are a “diverse, yet distinct group, both demographically and in terms of educational outcomes” (Ecklund, 2013, p. 159) that warrant such attention. Defined in accordance with Section 402(h) of the amended Higher Education Act of 1965 (P.L. 111-39, enacted July 1, 2009) as students for whom neither parent has a baccalaureate degree – and more narrowly for this study as students from families where neither parent had more than a high-school education (Choy, 2001) – FG college students tend to perform more poorly on various measures of academic achievement than continuing generation students who have at least one parent with a four-year degree (Choy, 2001; Pascarella, Pierson, Wolniak, & Terenzini, 2004). The effect is an ever-widening social class achievement gap (Duncan & Murnane, 2011) and lost opportunity for the upward social mobility that higher education affords (Stephens, Hamedani, & Destin, 2014).

While research on this special population is extensive and has intensified in recent years (Wildhagen, 2015; see Appendix A), persistent and increasing gaps between FG and continuing (non-FG) college students suggest the need for more practice-based

research that closely examines specific student characteristics as leverage points that may be responsive to targeted intervention (Ward et al., 2012). Self-regulated learning (SRL) is one approach that “has gained widespread credibility as a key framework used to understand, evaluate, and improve student performance within various academic settings” (Zimmerman & Schunk, 2011, p. 1) and as a means “to compensate for individual differences in learning” (Zimmerman, 2002, p. 64).

Although decades of research on SRL and FG college students exist independent of one another, literature that combines the two variables – an important first step to understanding potential background-related SRL differences that may impact students’ postsecondary success – is relatively scarce. As such, the present study focused on the topic of the academic self-regulatory characteristics of FG college students at the onset of a required SRL course to address this specific gap in knowledge and to inform the development and implementation of future success initiatives in support of local and national goals for improving higher education outcomes. For these purposes, SRL (or *self-regulation*) was defined primarily as “the process by which learners personally activate and sustain cognitions, affects, and behaviors that are systematically oriented toward the attainment of learning goals” (Schunk & Zimmerman, 2012, p. vii).

The independent and dependent variables selected as the focus of this work include, respectively: *generational status* (i.e., FG and non-FG) and *academic self-regulatory characteristics* as measured by the individual standardized scale scores for each of ten Learning and Study Strategy Inventory (LASSI) scales (Weinstein & Palmer, 2002).

First Generation College Students

A wide spectrum of definitions exists for FG college students (also known as first-gens and FGCSs) – all of which hinge on the level of the parents' postsecondary experience. While the distinctions between the definitions are seemingly subtle, they have serious implications for research, policy, and practice. Two definitions for the term *first-generation student*, in particular, are used most commonly throughout the literature (e.g., Choy, 2001; HEA, 1965; Stebleton & Soria, 2013; Suder Foundation, 2016). Although no single definition is more right than another, it is important for administrative and programming purposes to distinguish which definition will best meet the needs of an institution and its unique student body (Ward, Siegel, & Davenport, 2012). Of note, non-FG college students (also referred to in the literature as continuing generation, CG, NFC, NFGCS, non-FGCS, and, in one study, as Second Generation college students) are defined in relative counterpart to the selected FG college student definition.

A first generation college student is most commonly defined as a student for whom neither parent has a baccalaureate degree – even if either parent had some postsecondary education and/or has earned an associate's degree. This definition originated with the Higher Education Act of the 1960s – now in Section 402(h) of the amended Higher Education Act (HEA) of 1965 (P.L. 111-39, enacted July 1, 2009) – as an indicator of eligibility for federally funded outreach programs such as TRIO's three core student success initiatives: Upward Bound (1964), Talent Search (1965), and Student Support Services (SSS). The definition is still embraced by most federally funded programs and organizations today (Ward et al., 2012). Such broad classification allows a higher number of students to be identified as FG than do alternative definitions.

In contrast, some researchers and practitioners have redefined FG students in more restricted terms as students for whom neither parent has attended any college or, in other words, as students whose parents both have no education beyond high school (e.g., Suder Foundation, 2016). This narrower classification is founded on growing evidence that any amount of experience with higher education a parent acquires will influence a student's perception of and preparedness for college (Choy, 2001; Ishitani, 2006; Ward et al., 2012); taken into account, interim definitions also have emerged in the literature (e.g., Pascarella, Pierson, Wolniak, & Terenzini, 2004) and should be considered when analyzing research results for generalization and application.

In one of the first studies to explore the disparate experiences of FG college students, London (1989) analyzed the family, social, and educational histories of 15 students from various universities who were the first in their blue-collar working class families to go to college and found that all encountered difficulties with stressful family role dynamics and periods of “confusion, conflict, isolation, and even anguish” at the loss that accompanies social mobility gain, leading many “to drift off and drop out” (p. 168). Over a decade later, the profile of FG college students had shifted from white, blue-collar learners to students of diverse color (Merritt, 2008), and researchers' interest and attention – which had been small and steady in the 1970s through early 1990s – intensified (Wildhagen, 2015; see Appendix A). At least two comprehensive landmark studies, in particular, contributed the surge.

Analyzing multiple national educational data sets, Choy (2001) and Pascarella, Pierson, Wolniak, & Terenzini, (2004) reported numerous inequities between FG and non-FG (referred to in these studies as continuing generation) students' postsecondary

educational experiences and outcomes tied to their background-specific differences. Researchers since have referenced, replicated, and reflected upon these findings (e.g., Atherton, 2014; Lohfink & Paulsen, 2005). Overall, FG students were found to drop out earlier, finish later, and/or perform more poorly than their non-FG counterparts on various measures of academic achievement (Atherton, 2014; Choy, 2001; Lohfink & Paulsen, 2005; Pascarella, Pierson, Wolniak, & Terenzini, 2004; Warburton, Bugarin, & Nunez, 2001). For example, Choy (2001) found that 90% of FG students who began at a four-year college left before their second year (i.e., dropped out for more than four months during the first year or failed to return for the second year) while 23% of FG versus 10% of non-FG earned a GPA of less than 2.0, and were less likely than their non-FG peers to have commensurate academic support such as discussing test-taking preparations (16% vs. 27%) or postsecondary plans (42% vs. 61%) with parents or peers.

The literature also shows that FG college students are more likely to identify as a racial minority – especially Hispanic and African American (NPSAS, 2012) – and come from low-income households with fewer resources than their non-FG counterparts (Bui, 2002; Choy, 2001; Terenzini et al., 1996; Warburton et al., 2001). Consistently, ample research indicates that FG students tend to be older (Choy, 2001), live off campus (Housel & Harvey, 2011), work more hours (Barry, Hudley, Kelly, & Cho, 2009; Dennis, Phinney, & Chuateco, 2005), come from families with more financial dependents, and originate from high schools with less rigorous curriculum (Bui, 2002; Choy, 2001; Nunez & Cuccaro-Alamin, 1998; Pascarella, Pierson, Wolniak, & Terenzini, 2004).

Pascarella, Pierson, Wolniak, & Terenzini (2004) and others also found that, while FG were significantly less likely to be involved in extracurricular activities and

interactions with their peers, those who were involved had significantly stronger positive benefits than other students on degree plan, critical thinking, internal locus of attribution for academic success, and preference for higher-order cognitive tasks. Yet, combined with family role dynamics and students' perception that their parents are less supportive and encouraging and often ambivalent about the benefits of higher education, overall stress levels are greater for FG than non-FG students (Atherton, 2014; Banks-Santilli, 2014; Choy, 2001) making persisting to graduation especially difficult.

Cultural capital. Most literature that examines differences in the college experiences of FG and non-FG college students also discusses the disparity in social and cultural capital between the two groups. Arguably, the construct of capital is at crux of what it means to be a FG college student and the key factor that shapes the student's college experience. Originally described by sociologist Bourdieu (1973), cultural capital emphasizes the "intergenerational transfer of resources, viewpoints, and information about education" (Lohfink & Paulsen, 2005).

Countless iterations and parallels of this theory have been introduced over the years (e.g., Becker, 1964, 1975; Bean, 1983; Bourdieu, 1986; Tinto, 1975, 1993) – most with an emphasis on the complex relationships between the characteristics of the student and the institution in which he or she is enrolled – as researchers and scholars seek to explicate the effects of differing backgrounds on academic outcomes. Recently, Stephens, Fryberg, Markus, Johnson, and Covarrubias (2012) advanced the concept of "cultural mismatch theory" (p. 2) – a perspective on FG students' experience of higher education that has gained considerable attention for its implications – with outcomes similar to those associated with a lack of self-regulation (Zimmerman & Schunk, 2011).

Self-Regulated Learning in Higher Education

Emerging more than three decades ago, self-regulated learning (SRL), also known as academic self-regulation, “remains an active and fertile model for conducting research on students’ motivation, engagement, and academic achievement” (Wolters & Hoops, 2015, p. 81). Some researchers deem SRL especially relevant as students enter higher education contexts where increased academic demands, personal and social freedoms and responsibilities, and an emphasis on independence can present challenges to students’ motivation and engagement in ways that impact their achievement (Cohen, 2012; Pintrich & Zusho, 2007; Zusho & Edwards, 2011). That adult educators also acknowledge SRL as a foundation for lifelong learning (Merriam & Bierema, 2014) complements evidence that (a) students who engage more frequently in SRL tend to be more productive and successful learners (e.g., Bail, Zhang, & Tachiyama, 2008; Kitsantas, 2002; Zimmerman, 2000) and (b) the component skills, strategies, dispositions, and beliefs necessary for SRL are “amenable to improvement” (Wolters & Hoops, 2015, p. 72). In line with these perspectives, the following overview of SRL provides a framework for the present study and its accompanying action plan.

Overview of SRL. Many models, definitions, and conceptualizations of SRL have emerged over the years from a diverse set of theoretical and practical perspectives (e.g., Bandura, 1971, 1986, 1991; Cleary, 2015; Pintrich, 2000, 2004; Schunk, 2008; Winne & Hadwin, 2008; Wolters & Hoops, 2015; Zimmerman, 2000). Despite this wide range of underlying viewpoints – operant, social cognitive, information processing, volitional, phenomenological, Vygotskian, and constructivist – most SRL approaches have several defining features in common (Zimmerman & Schunk, 2012). One aspect

shared by most SRL models is the aspiration to understand, explain, and improve learners' active self-management of their personal academic functioning (Pintrich, 2004).

Core assumptions. Pintrich (2004) also outlined four general assumptions common to most SRL models. First, following from a general cognitive perspective, the *active, constructive assumption* (p. 381) views learners as creators of their own goals, meanings, and strategies using information gleaned from various sources, including their minds and their environment. Second, the related *potential for control assumption* (p. 381) recognizes that learners – although not necessarily at all times or in all contexts – can monitor, control, and regulate their cognition, motivation, and behavior. Third, the *goal, criterion, or standard assumption* (p. 381) acknowledges that some type of target exists against which students can apply the second assumption adaptively to reach it. This assumption emphasizes the critical role of goals and goal setting in learning. Fourth, SRL activities are assumed to be *mediators between personal and contextual characteristics and actual achievement or performance* (p. 381). As such, academic outcomes can improve due to students' self-regulation despite individual differences in self or learning environments.

Learning areas and strategies for SRL. Pintrich and Zusho (2007) discuss four dimensions of learning common to most SRL models that students can actively self-regulate, including his or her (a) cognition, (b) motivation, (c) behavior, and (d) the academic context or environment. Backed by years of research, each of these specific SRL areas has corresponding strategies and techniques that students can use to manage how, why, when and where they learn (Pintrich, 2000, 2004; Zimmerman, 2013).

Cognitive strategies consist of various mental processes learners use – such as

setting specific learning goals, activating metacognitive or prior knowledge, and/or thinking about and monitoring their progress toward a goal -- to encode, process, or learn when performing an academic task (Pintrich, 2000; Winne & Hadwin, 1998). Examples of such tactics, techniques, and activities include reading course materials with a goal of understanding, then monitoring what is learned through self-testing and adapting one's reading strategies accordingly. Rehearsal, elaboration, and organizational strategies that help students' memory, reasoning, problem solving, and learning (e.g., Ferrett, 2015) are a historic focus of SRL research (Pintrich, 2004; Zimmerman and Martinez-Pons, 1986).

Motivational strategies that students can use to regulate their achievement-related beliefs, emotions, and perceptions are assumed to be course or domain specific during SRL in higher education contexts (Pintrich, 2004). Playing a central role in SRL (e.g., Pintrich, 2004; Zimmerman, 2008), *motivation* covers students' purposes for doing the task (goal orientation); judgments about personal ability and capacity to complete the task (self-efficacy); beliefs and perceptions about the task's importance, use, and relevance (task difficulty and task value); reasons for success or failure (attributions); and personal interest in the task domain (Pintrich, 2004; Pintrich & Schunk, 2002; Wolters, 2003; Zimmerman & Schunk, 2011). Students' lack of personal effort or procrastination can be attributed to struggles with motivation (Zimmerman, 2011).

In addition to strategies that students can use to attempt to control these aspects of motivation, research suggests that students can use coping strategies to help manage negative affects and emotions such as anxiety and fear related to academic performance (Pintrich, 2004; Cheng & Liao, 2016). Examples of such tactics, techniques, and activities range from (a) using positive self-talk and/or Ferrett's (2015) ABC Method to

manage negative thoughts to (b) creating a study game to make a learning task more interesting (Pintrich, 2004) or promising oneself a post-dissertation reward night of Netflix binging as intrinsic and extrinsic motivators, respectively.

Behavioral strategies that can help students regulate their physical actions or overt conduct to support learning goals range from time management techniques and activities – like using a planner to create a study schedule or setting a timer to get to class on time (Ferrett, 2015) – to taking advantage of student support resources using help-seeking skills (Karabenick & Berger, 2013). The environment or context is an added dimension of learning that students can self-regulate with specific SRL skills and strategies. Classic examples include monitoring and controlling the noise, temperature, and/or lighting of the room.

Phases of SRL. Extending Bandura’s (1986) work, several theorists and researchers (e.g., Greene & Azevedo, 2007; Pintrich & Zusho, 2007; Winne & Hadwin, 2008; Zimmerman, 2000) describe SRL processes as embedded in a cyclical loop of three or four interdependent phases. Integrating motivational variables with metacognitive processes, Zimmerman (2000) describes SRL as occurring in three phases: *forethought* (pre-learning processes), *performance* (during learning processes); and *self-reflection* (post-learning processes), during which “learners personally activate and sustain cognitions, affects, and behaviors that are systematically oriented toward the attainment of learning goals” (Schunk & Zimmerman, 2012, p. vii). An adaptation of this model (Peters-Burton, Cleary, & Forman, 2015) – a SRL microanalytic protocol targeting teachers’ sub processes during these phases – is integrated as a formative assessment and modeling tool in this study’s action plan for the professional development of instructors.

Most four-phase SRL models (e.g., Pintrich, 2004; Winne & Hadwin, 2008) conceptualize Zimmerman's (2000) performance phase as two phases: (a) *monitoring*, which includes students' awareness and tracking of their processes and progress across the four dimensions of learning, and (b) *control, management, or regulation*, which includes students' selection and implementation of SRL strategies. Students' task definition, goal setting, and activation of content and metacognitive knowledge while preparing to learn are markers of the *forethought* phase in most models (Pintrich, 2004; Winne & Hadwin, 2008). The final *reflection* phase commonly includes students' efforts to reflect upon and respond to feedback from their own monitoring of and external reactions to their academic performance (e.g., Pintrich, 2004). Most SRL models uphold the assumption that SRL phases – regardless of the number of them in the archetype – do not necessarily proceed in a strict linear sequence, but function together as a structure of continuous feedback loops within a recursive and adaptive process (Pintrich & Zusho, 2007; Winne & Hadwin, 2008; Zimmerman, 2000; Zusho & Edwards, 2011).

Definition of SRL. The broad application of SRL with its richly varied theoretical background and many models has resulted in myriad definitions. Synthesizing several SRL paradigms that emphasize a social-cognitive perspective for SRL interventions with youths identified as at-risk, Cleary (2015) defines SRL as “a process through which individuals self-generate thoughts and actions that are planned, monitored, and refined as they pursue personal goals” (p. 4). While elegant and appropriate to the premise of this investigation, Wolters and Hoops (2015) offer an alternate definition for college students' SRL – consistent with that of Pintrich and Zusho (2007) – that aligns well with the practical context of this study. They view SRL as “an active, constructive process

through which [students] set academic goals and work to monitor and control dimensions of the learning process to accomplish those goals” (p. 69). Ultimately, students (and professionally developing instructors) are considered self-regulated when they actively and independently adapt their learning approaches to apply specific strategies within each phase of SRL (Schunk, 2008; Zimmerman, 2012).

Significance of SRL. A review of the literature validates that SRL is useful for understanding and predicting students’ academic functioning and success in a variety of contexts and domains (e.g., Duckworth & Carlson, 2013; Kitsantas, 2002; Pintrich & Zusho, 2007; Xia, Fosco, & Feinberg, 2016). Of particular interest for this research, several studies show that college students who engage more frequently in SRL tend to be more productive and successful learners (e.g., Bail, Zhang, & Tachiyama, 2008; Credé & Kuncel, 2008; Kitsantas, 2002; Wibrowski, Matthews, & Kitsantas, 2016).

For example, Kitsantas (2002) conducted an interview study of 62 college students that examined the effects of specific SRL processes on students’ test preparations and performance. Findings confirmed their expectations that students who achieved high test scores used significantly more SRL processes and strategies during test preparations, while test-taking, and in response to test results than low-scoring students. Bail, Zhang, and Tachiyama (2008) also reported evidence that improved SRL had a positive impact on college students’ academic outcomes, including grade point average (GPA) and continued matriculation in students’ first seven semesters. Tuckman and Kennedy (2011) likewise found that teaching learning strategies significantly increased GPAs, retention, and graduation rates in first-term college students over their first four terms. These findings are consistent with a meta-analysis conducted by Credé & Kuncel

(2008), which revealed that academic motivation and study skills, as measured using popular inventories, were strong predictors of both GPA and individual course grades, rivaling standardized tests and previous grades in this capacity.

In complement, Zusho and Edwards (2011) emphasize that students' failure to self-regulate can lead to negative academic outcomes. The authors assert that limitations in students' knowledge about a task, domain, and/or SRL strategies and skills can lead to inappropriate or incomplete goal setting and poor academic planning that ultimately preclude effective monitoring and management of their learning. As such, they point to the importance of developmental SRL programs (e.g., Hofer, Yu, & Pintrich, 1998; Weinstein, Husman, & Dierking, 2000) that aim to improve students' learning strategies, including but not limited to knowledge, awareness, affect, self-monitoring, goal setting, and time management.

Similarly, Dunlosky, Rawson, Marsh, Mitchell, & Willingham (2013) advocate helping students develop effective learning techniques as a means to better regulate their learning. Supporting this stance, they conducted a thorough mixed-method evaluation of whether the benefits of selected techniques generalize across learning conditions, materials, criterion tasks, and student characteristics. The result was a lengthy monograph reviewing each SRL technique and why it should work to improve student achievement. Recognizing SRL's impact on academic outcomes, many researchers (e.g., Bembenuddy, 2008; Boekaerts & Corno, 2005) contend that teaching SRL strategies and skills to students to develop them as self-regulated learners should be a principal goal of formal education.

Measuring SRL

According to Zimmerman (2008), several instruments were developed in the 1980s that assessed SRL in alignment with the 1986 inclusive symposium definition of SRL as “the degree to which students are metacognitively, motivationally, and behaviorally active participants in their own learning process” (p. 167) to improve their own academic achievement. Among these measures were the Learning and Study Strategies Inventory (LASSI; Weinstein, Schulte, & Palmer, 1987) and the Motivated Strategies for Learning Questionnaire (MSLQ; Pintrich, Smith, Garcia, & McKeachie, 1993) – both widely used self-report questionnaires utilizing 5-point and 7-point Likert scales, respectively, to indicate how typical (or how true) of me a statement seemed – as well as the Self-Regulated Learning Interview Scale (SRLIS; Zimmerman & Martinez-Pons, 1986, 1988). The latter involved structured interviews in which students responded to six open-ended “problem contexts” (p. 168) that were transcribed and coded into SRL categories.

Classified as *aptitude* versus *event* measures of self-regulation (p. 169), the LASSI, MSLQ and SRLIS were all significantly correlated with measures of course performance, albeit using differently named processes to meet the defining criteria for SRL. As such, all are useful tools in their own right. Recently, additional efforts have expanded the ability to assess students’ SRL to online methods such as think-aloud protocols, computer traces, structured diaries, direct observations, and microanalytic measures, as described by Zimmerman (2008) in detailed comparison.

While the latter are better suited to capture how individuals self-regulate their academic-related thoughts and actions in real time, the traditional, broad-based, self-

report questionnaires and rating scales allow researchers to generate data that is useful for understanding how a student typically acts or think in a given SRL domain – across contexts, situations, and time. In addition, extensive literature exists showing that “these global measure of SRL strategies are often linked with various motivational beliefs, including self-efficacy, interest, and value, and are predictive of key academic outcomes, such as grades and exam performance in school” (Cleary, Dembitzer, Kettler, 2015).

Based on their research findings that three different self-regulation inventories – the MSLQ, LASSI, and Metacognitive Awareness Inventory (MAI; Schraw & Dennison, 1994) – yielded different results in a multitrait-multimethod (MTMM) item-level analysis, Muis, Winne, and Jamieson-Noel (2007) recommend that “researchers should be selective in the inventory they use to assess self-regulated learning (SRL)” (p. 177).

LASSI

Abundant evidence suggests that the Learning and Study Strategies Inventory (LASSI) second edition (Weinstein & Palmer, 2002) is a useful resource to achieve the purposes of this study. In addition to its existing role as a cornerstone of the SRL course at the participating university, the inventory’s widespread use in similar student success courses complements quantitative and qualitative evidence of its documented reliability and validity as a measure of SRL in the higher education context. According to H & H Publishing Company, the second edition LASSI has been used by more than 3000 institutions on every continent except Antarctica and has been translated into Spanish, Chilean, Hungarian, Romanian, and Chinese. Last year alone, 26,095 paper versions and 121,944 administrations of the web version of the 2nd edition LASSI were purchased for use (K. Hackworth, personal communication, May 24, 2016).

Easy to administer and score, the web-based LASSI generates a visually accessible graphic report immediately following students' self-administration that is both diagnostically and prescriptively useful for a better understanding of the self-regulatory characteristics of FG college students. Specifically, the LASSI was developed and tested as a self-assessment tool to provide all students feedback about their strengths and weaknesses in knowledge, attitudes, beliefs, skills, and behaviors related to their learning (Weinstein & Palmer, 2002). Several examples of its successful use are published in a user-driven newsletter – the LASSI In Action – that allows professionals to share their experiences with the second edition LASSI assessment (http://www.hhpublishing.com/_assessments/LASSI/uses.html). Peer-reviewed studies using the LASSI likewise indicate its relevance and usefulness for assessing the SRL characteristics of college students in student success courses (e.g., Moseki & Schulze, 2010) and institution-wide (Kwong, Wong, & Downing, 2009).

Of note, one caveat about the LASSI stems from continued controversy about the validity of the three latent constructs – skill, will, and self-regulation – advanced by the measure's developers (Cano, 2006; Weinstein & Palmer, 2002). For example, in their longitudinal study of the interrelationship between various motivation and self-regulation constructs and their relative influence on academic performance with a sample of 581 undergraduate business students, Ning & Downing (2010) suggest a psychometrically sound four-factor model as an alternative to the LASSI developers' triad one: (a) effort-related strategies (CON, TMT), (b) comprehension monitoring strategies (SFT, STA, INP), (c) test strategies (SMI, TST, ANX), and (d) affective strategies (ATT, MOT). While the discrepancy in proposed models suggests that caution should be taken when

analyzing and interpreting LASSI results using the original three latent constructs, the conversation is mute for the purposes of this practice-based study; only archived data of the LASSI (2nd edition) individual scale scores were used for these exploratory analyses.

SRL and FG College Students

Despite decades of empirical and theoretical research on this special population, much remains unknown about FG college students and the specific mechanisms that impact their success. Particularly scarce in the literature are studies that assess their academic self-regulatory characteristics – either broadly or in terms of the individual components upon which many current SSCs are designed. For example, a OneSearch database search using the terms *self-regulated learning characteristics* (and alternatively self-regulation) and *first generation college students* revealed only 24 items, of which 15 were dissertations and theses dated within five years, two were text resources from 2011 and 2013, and five were peer-reviewed articles with one poster presentation abstract and a clinical report abstract on platform sessions. Furthermore, of these results, the vast majority incorporated student characteristics as a means to evaluate the effectiveness of a particular course or program as opposed to assessing directly the SRL characteristics of FG students to better understand the baseline from which these students enter and experience higher education. Bryk, Gomez, Grunow, & LeMahieu (2015) refer to this epidemic in education as “solutionitis” (p. 24), or the propensity in policy and practice to jump on a problem quickly with a solution without first investigating the root cause. The present study aims to address this problem of practice by embracing the tenets of improvement research (Bryk et al., 2015) and Ward, Siegel, and Davenport’s (2012)

holistic approach depicted by the Learning Cycle Matrix (see Figure 1), which first asks, “Who are our first generation students, and what do they need?” (p. 96).



Figure 1. Learning Cycle Matrix. From “First-generation college students: Understanding and improving the experience from recruitment to commencement,” by L. Ward, M. J. Siegel, & Z. L. Davenport, 2012, p. 96. Copyright 2012 by Jossey-Bass.

Summary

It is clear that many FG students arrive at college underprepared academically and with insufficient knowledge about how to navigate campus life successfully relative to their non-FG counterparts (e.g., Atherton, 2014; Stebleton & Soria, 2013; Stephens, Fryberg, Markus, Johnson, & Covarrubias, 2012; Stephens, Hamedani, & Destin, 2014). Using a nonexperimental, causal-comparative (or *ex post facto*) design, this exploratory study seeks to examine how the pre-existing independent variable (*generational status*) – free of manipulation – related in a descriptive way to the dependent variable (*academic self-regulatory characteristics*) as measured by the ten individual LASSI scales. The reviewed literature provides a theoretical and empirical framework that suggests possible variability in these characteristics related to various background-specific differences

between FG and non-FG undergraduate students. As such, two exploratory research questions are posed:

1. How do FG and non-FG undergraduate students score on each of the ten LASSI scales at SRL course entry?
2. To what extent do FG and non-FG undergraduate college students differ on each of the ten LASSI scales at SRL course entry?

Chapter III

According to Kezar (2014), the importance of analyzing and understanding context as a critical component of implementing effective change in higher education policy and practices cannot be overstated. Global and national trends and perspectives frame the overriding significance of understanding student backgrounds and experiences as college campuses across the country continue to diversify, while local and institutional conditions reinforce the immediate relevance and importance of understanding the role and influence of the participating university's self-regulated learning (SRL) course – and the key characteristics of the people who take it.

As colleges and universities plan programs and interventions, success courses emphasizing SRL have improved academic outcomes for students needing support (Bail, Zhang, & Tachiyama, 2008; Wibrowski, Matthews, and Kitsantas, 2016). However, recent findings also suggest that the success course approach is insufficient to meet the unique needs and learning characteristics of first-generation (FG) college students – a “diverse, yet distinct group, both demographically and in terms of educational outcomes” (Ecklund, 2013, p. 159) that comprises a large proportion of current college populations across America (NCES, 2012). Despite this discrepancy, little research has examined explicitly the self-regulatory characteristics of FG college students as a group or in comparison to their non-FG counterparts.

To address this gap in actionable knowledge, the present study used the methods detailed in this chapter to explore the learning characteristics of FG college students at the onset of a college success course in SRL at the participating university. Future course content and delivery can be informed by the outcomes of this study. Also, evidence- and

practice-based efforts to reduce persistent achievement gaps among students with diverse backgrounds can be enhanced nationwide as a result of this work.

As an exploratory study, no hypotheses were advanced. Instead, based on the presented theoretical and empirical framework discussed in the literature review, the following research questions were posed:

1. How do FG and non-FG undergraduate students score on each of the ten LASSI scales at SRL course entry?
2. To what extent do FG and non-FG undergraduate college students differ on each of the ten LASSI scales at SRL course entry?

In response to these questions, both descriptive and inferential statistical analyses of students' archived Learning and Study Strategy Inventory (LASSI) scores (Weinstein & Palmer, 2002) were conducted: (a) to describe the self-regulatory characteristics of FG and non-FG undergraduate college students and (b) to explore potential differences in undergraduate students' self-regulatory characteristics with respect to their generational status (i.e., FG or non-FG) at the onset of a required student success course. Results of these analyses contribute valuable knowledge both to the literature and to the higher education classroom as a critical first step toward better understanding what works for whom and in what context (Bryk et al., 2015).

Method

Study Setting

The setting of this archival study was a large public research university situated in one of the five largest city in the country in a region where only 28.4% of the residents aged 25 years and older have a four-year college degree (CFHF, 2012). An integral part

of the solution for the area's public education issues, the university achieved Tier One status in 2011 for its extensive research activity as designated by the Carnegie Foundation for the Advancement of Teaching. The classification was reconfirmed in 2016.

Both national trends and their accompanying challenges are magnified in the university and its city populations as they continue to grow and diversify rapidly together. Named by Forbes (2015) as *America's Fastest-Growing City*, this gateway metropolis – which boasts the second largest port in the nation – has more than doubled over the past three decades in its proportion of Hispanic residents – from 17% to 44% – according to 1980 and 2010 U.S. Census estimates. In the same time span, the African American population increased by 11%, accompanying a nearly one third increase in overall population. Moreover, the area total population is projected to reach 7,413,214 people by 2020 – a 14.5 % increase over the estimated population of 6,473,316 people in 2014, based on official data from the state's health department (DSHS, 2014).

Capps, Fix, and Nwosu (2015) of the Migration Policy Institute corroborate these figures, emphasizing that 1.4 million of the 6.3 million people who made this study's metropolitan area their home in 2013 were foreign born – an increase of almost 60% since 2000 – nearing twice the national growth rate. Ranked third in number of Mexican, Honduran, and Vietnamese immigrants and fifth largest among metropolitan areas nationwide for its immigrant population, the city hosts more than 145 languages spoken at home, according to a 2015 analysis of U.S. Census data from 2009-2013; more than a third of the city's residents who are more than five years old speak a language other than English at home (U.S. Census Bureau, 2015).

A major pipeline to the university, the surrounding independent school district is the largest single school district in the state and 7th largest in the country – serving over 211,000 students in 283 schools – of whom 87% are minority students (63% Hispanic and 25% African American), 75% are economically disadvantaged, and 46% are designated English (Second) Language Learners versus 20% nationally; only 52% of local students enroll in some form of higher education (Local ISD, 2015). School ratings, recently released by the state’s education agency (2015) revealed that, while more schools statewide met the state’s academic standards this year than last, the surrounding city’s district had nearly twice the rate of low-performing schools as the state average.

Serving the educational needs of this growing and diversifying population, the participating university and its student population reflect these trends. Overall enrollment at the university has increased in the past decade by 16.7% – from 35,066 in 2003 to 40,914 in 2014 – and experienced a shift in the demographic mix of its student population in the process. Hispanic enrollment during this timeframe increased by 75.7% to comprise nearly one third of the current student body, while Asian American enrollment also grew (117%) to 20.4%. In contrast, the university’s proportion of White and African American enrollment declined by 18% and 11%, respectively – despite an increase in total numbers of White students enrolled – while African American student enrollment declined in both number and proportion of the student body. This is consistent with national trends in postsecondary minority populations in which Latino/a students replaced African-American students as the largest minority attending U.S. two- and four-year institutions in 2012 (Fry & Lopez, 2012). The same year, the U. S. Department of Education designated the participating university a Hispanic-Serving Institution (HSI).

In sum, according to the university's institutional research data, approximately three quarters of the undergraduate students originate from high schools within the immediate (53.8%) and adjacent counties (22.6%); approximately 88.6% of the total enrollment is from within the state. Of the 11.5% non-resident students enrolled in 2014, 77.1% identified as international and 22.8% as out-of-state residents, equating to 8.9% and 2.6% of the total enrollment. In the past year, overall fall enrollment increased 3.6%. On average, approximately 60% of the university's graduates remain in the immediate area after graduation.

While the total number of graduates at the participating university did increase 47% from 6,273 in 2003 to 9,238 in 2014, overall graduation rates remain relatively low. Of the students who began as freshmen at this large, four-year public university in 2008, only 48.2% received their diplomas within six years. Whereas this reflects a 6.4% increase over the 41.8% of students who earned a bachelor degree within six years in 2008, the number remains well below the national average reported by the National Center for Education Statistics (2015). That is, 59% and 71% of students who began as freshmen at a four-year college nationwide in the fall of 2006 received their diplomas within six years at (a) national public universities and (b) public Tier One Universities, respectively. In an *Update to the Faculty Senate* on October 15, 2015, the Office of the Provost on the main campus of the participating four-campus university system reported a six-year graduation rate increase of 3% – from 48% in 2014 to 51% in 2015 – with a goal of reaching 60% in five years. This goal was paired with a call to innovative action to meet the unique and diverse needs of a new generation of college students.

Course Context

Designed to improve student outcomes, the SRL course through which the self-regulated learning data was collected is a major core requirement for the baccalaureate degrees in Human Development and Family Studies (HDFS) and Teaching and Learning (TL) and is offered in multiple sections within the participating university's College of Education. Described in the official course catalog as “theory and research on cognitive, motivational, and behavioral factors related to academic success with an emphasis on application to students' development,” each section of the SRL course met twice a week for 80-minute sessions over 15 weeks for face-to-face instruction by a single instructor. First introduced in Fall 2009, the SRL course was redesigned to its current form in Spring 2012 to reflect current research and evidence-based practices in adult learning and higher education. Beginning in 2012, each instructor used the most recently available edition of the Peak Performance textbook and curriculum (Ferrett, 2015) to frame the course with the theoretical foundations and practical strategies of self-regulated learning to facilitate student success in college and beyond. Freshman and transfer students of all majors in the HDFS and TL programs are required to enroll.

Assessment of SRL. A central component of the course, the LASSI (2nd edition) is self-administered twice each semester – once in the first week (pretest) prior to instruction and again within the final two weeks (posttest) of the course. Students (and their instructors) use the scale scores from the first administration to identify and to evaluate critically a specific area in which to focus self-improvement efforts in a semester-long learning project designed to give students relevant and practical experience with targeted self-regulated learning and study strategies. Posttest scores are used in the

course to evaluate individual progress toward a written S.M.A.R.T. goal (Doran, 1981). Archived pretest data were analyzed for this study.

Participants

The present study analyzed the archival records of 914 full-time degree-seeking undergraduate students who self-enrolled a required three-credit development of self-regulated learning (SRL) course through the Human Development and Family Studies (HDFS) program in the Psychological, Health, and Learning Sciences (PHLS) Department at the participating university. Of the total participants, 565 students (61.8%) enrolled in a fall semester course, and 349 students (38.2%) enrolled in a spring semester course over six consecutive semesters (Fall 2012 - Spring 2015). Typical enrollment for each course section consists of 25 – 36 students from four levels of class status (i.e., freshman, sophomore, junior, senior), including students who transferred from other universities and community colleges. Undergraduate student classification at the university is based on the total number of semester credit hours earned at the beginning of the semester in which the student enrolled in the SRL course, including semester credit hours earned both at the participating university and those accepted in transfer from other colleges and universities – regardless of whether or not the courses are applicable to the major or degree plan. Demographic details of the participants, including age, gender, ethnicity, and student classification by generational status are provided in Table 1.

Table 1

Students' Demographic Characteristics by Generational Status

Characteristic	FG		Non-FG		Not Specified		Total	
	Count	Column %	Count	Column %	Count	Column %	Count	Column %
Gender								
Female	265	92.0	474	89.4	80	83.3	819	89.6
Male	23	8.0	56	10.6	16	16.7	95	10.4
Total	288	100%	530	100%	96	100%	914	100%
Ethnicity								
Hispanic	182	63.2	150	28.3	39	40.6	371	40.6
White	34	11.8	190	35.8	14	14.6	238	26.0
African-American	26	9.0	93	17.5	17	17.7	136	14.9
Asian/Asian-American	38	13.2	73	13.8	16	16.7	127	13.9
Multi	7	2.4	18	3.4	4	4.2	29	3.2
International	0	0.0	3	0.6	6	6.3	9	1.0
Unknown	0	0.0	3	0.6	0	0.0	3	0.3
Total	288	100%	530	100%	96	100%	914	100%
Classification								
Freshman	150	52.1	265	50.0	44	45.8	459	50.2
Sophomore	65	22.6	142	26.8	31	32.3	238	26.0
Junior	63	21.9	87	16.4	17	17.7	167	18.3
Senior	10	3.5	34	6.4	3	3.1	47	5.1
Post-Baccalaureate	0	0.0	2	0.4	0	0.0	2	0.2
Total	288	100%	530	100%	96	100%	914	100%

Note. Participant Ages: FG ($M_{\text{age}} = 19.93$ years, $SD = 4.81$ years, age range: 16-52 years); Non-FG ($M_{\text{age}} = 19.89$ years, $SD = 4.26$ years, age range: 16-54 years); Age Not Specified ($M_{\text{age}} = 21.06$ years, $SD = 5.13$ years, age range: 16-43 years).

Research Design

To address gaps in knowledge about the participating university's FG population and to inform the development and implementation of future success initiatives in support of local and national goals for improving higher education outcomes, a non-experimental, ex post facto, causal-comparative design was used to examine how the following dependent variables relate to the independent variable for undergraduate students in the first week of a semester-length student success course at the participating university:

Independent variable. The independent variable for all research questions was *generational status*. Generational status had two levels: FG and non-FG.

First generation (FG) college students. First generation college students were defined as a student for whom neither parent has attended college or any type or quantity of education beyond high school (e.g., Choy, 2001; Davis, 2010; Nuñez & Cuccaro-Alamin, 1998; Suder Foundation, 2016), including (a) no high school, (b) some high school, and (c) high school diploma. All students in the archived sample had self-reported during the university admissions process the highest level of education achieved by each parent at the time of their child's matriculation.

Non-first generation (non-FG) college students. Non-first generation college students were defined in this study as students with at least one parent who had some type or quantity of postsecondary education beyond high school (Somers et al., 2000), including (a) some college, (b) associates degree, (c) bachelor's degree, or (d) graduate or professional degree at the time of their child's matriculation.

Dependent variables. The dependent variables for both research questions were student percentile scores on each of ten LASSI scales: Anxiety (ANX), Attitude (ATT),

Concentration (CON), Information Processing (INP), Motivation (MOT), Self-testing (SFT), Selecting Main Ideas (SMI), Study Aids (STA), Time Management (TMT), and Test-taking Strategies (TST). Each of the dependent variables is described in more detail in the following section.

Measures

The LASSI (2nd edition) is a web-based self-assessment tool that provides students (and their instructors) feedback about their strengths and weaknesses in knowledge, attitudes, beliefs, skills, and behaviors related to learning (Weinstein & Palmer, 2002). The LASSI yields an individual standardized scale score for each of ten scales, with each scale designed to measure a specific facet of SRL based on established theory (e.g., Pintrich, 2004) and psychometric data analysis (Weinstein et al., 2002).

Each standardized scale score is reported as a percentile score equivalent in relation to national norms included with the instrument. Each LASSI scale contains eight items for a total of 80 items in the inventory. Students indicate – using a 5-point Likert Scale on a range of (1) *not at all typical of me* to (5) *very much typical of me* – the extent to which a statement reflects their study behaviors and thought processes (Weinstein et al., 2002). See Appendix B for the LASSI (2nd edition) student instruction sheet, including the web address (URL) for accessing the inventory.

Table 2 provides a summary of the ten LASSI (2nd edition) scales with descriptors, including Cronbach's Alpha for each scale as a measure of scale reliability or internal consistency. Scales with inverse percentile scoring (i.e., ANX) are noted with an asterisk. Both diagnostic and prescriptive, the inventory is recognized for its utility and strong psychometric properties (e.g., the lowest Cronbach's Alpha for any scale on this

version is .73, with all but two scales above .80; the highest Cronbach's Alpha is .89).

Table 2

Summary of the Ten LASSI (2nd edition) Scales

LASSI Scale	Code	Cronbach's Alpha	What the scale measures
Anxiety	ANX	0.87	anxiety and worry about tests and school or classroom performance
Attitude	ATT	0.77	attitude and interest in course work and academic success
Concentration	CON	0.86	ability to stay focused and attentive to academic tasks; listening skills; awareness of distractibility
Information Processing	INP	0.84	use of strategies (elaboration, organization, reasoning, practice) that facilitate understanding and retrieval of new knowledge
Motivation	MOT	0.84	diligence, self-discipline, and willingness to work hard and take responsibility for one's own learning
Self-testing	SFT	0.84	use of monitoring and self-checking for understanding; formulating questions about course material before, during, and after class
Selecting Main Idea	SMI	0.89	ability to recognize most important information, sort out key points from minor details in textbooks and lecture
Study Aids	STA	0.73	use of study support techniques, in-text resources, and supplemental aids to help learn class material
Time Management	TMT	0.85	use of time management principles and strategies to achieve academic success
Test-taking Strategies	TST	0.80	use of effective test preparation and test taking strategies

Note. Adapted from "User Manual for Those Administering the Learning and Study Strategies Inventory, Second Edition," by C. E. Weinstein, & D. R. Palmer, 2002, p. 11-13. Copyright 2002 by H&H Publishing Company, Inc.

Table 3 provides a summary of how to interpret the reported percentile scores for each LASSI scale. A percentile indicates the portion of a national sample of students who scored at or below the reported score on any given scale. The publisher-provided cut-offs at the 75th and 50th percentiles facilitate interpretation of the scores for counseling and advising.

Table 3

Summary of How to Interpret LASSI Scale Percentile Scores

LASSI scale: Percentile Range	Scoring Interpretation
75 – 100	Scores above 75 th percentile indicate an area of relative strength. Improving strategies is not considered a high priority.
50 – 75	Scores between 50 th and 75 th percentile indicate an area in which knowledge and skills need to improve to avoid potential difficulty succeeding in college.
0 – 50	Scores below the 50 th percentile indicate an area of relative weakness. Improving upon insufficient strategies and skills in these areas should be highest priority to avoid serious problems succeeding in college.

Note. Adapted from “The Learning and Study Strategies Inventory,” by C. E. Weinstein, D. R. Palmer, and A. C. Schulte, 2002, p. 11. Copyright 2002 by H&H Publishing Company, Inc.

Procedure

In compliance with 45 Code of Federal Regulations (CFR) 46, Institutional Review Board (IRB) approval for proceeding with this archival record study was obtained from the participating university’s Committees for the Protection of Human Subjects (CPHS) on February 19, 2016 (see Appendix C). With IRB approval, data were extracted from the existing web-based LASSI (2nd edition) and administrative databases at the participating university. The archival records for this study had been archived during the first week of each semester prior to students receiving any SRL instruction.

As a course requirement, all students in the archived sample had self-administered a web-based version of the LASSI, 2nd edition (Weinstein & Palmer, 2002) purchased by the department via H&H Publishing and made accessible to each individual student with a school code provided upon course enrollment.

To create the analysis file, demographic data were extracted from the administrative databases for all students who had enrolled in the SRL course by the 12th day of class, regardless of whether or not they completed the course. Demographic data then were matched to the LASSI scores using the university identification number, name, and term information to create a unique match. Although the majority of students had self-administered the LASSI twice during the semester and therefore had two sets of ten LASSI scale scores on file, only data from the beginning of archived semesters (i.e., archived first self-administration / pretest) of the LASSI were used for analysis. Students' archived data were included/excluded based on the following criteria:

Inclusion criteria. Inclusion criteria were used to identify data of undergraduate students who (a) were enrolled in one of multiple SRL course sections offered across six consecutive long semesters (Fall 2012 to Spring 2015); (b) had a self-administered pretest LASSI scores on file; and (c) had on file all data needed for the proposed analyses.

Exclusion criteria. Exclusion criteria included any student: (a) not enrolled in the designated SRL course in the fall or spring semesters of Fall 2012 to Spring 2015, (b) missing the pretest LASSI scores on file, and/or (c) missing any other data points needed for analyses (e.g., generational status, student classification). Analyses of the archived data by students' generational status included 89.5% of the sample population.

Demographic data. Demographic data were extracted from administrative databases maintained by the participating university for all students enrolled in the SRL course in the time period studied (Fall 2012 – Spring 2015). Participants then were matched to the archived LASSI scores using the university’s identification numbers, name, and year/semester as identifiers.

Confidentiality. To ensure student confidentiality in the proposed analyses, all archival data were de-identified (coded) by personnel in the college’s Office of Institutional Effectiveness prior to access by the investigator. Research data will be retained and maintained in an electronic data file that will be password protected for a minimum of three years after completion of the project.

Group assignment. Because students cannot be “assigned” to FG status, a causal-comparative approach was necessary. As such, the present survey research does not meet the “gold standard” (Odom, Brantlinger, Gersten, Horner, Thompson, & Harris, 2005) of randomized experimental groups (also called randomized clinical trials or RCTs) in which groups are formed and assigned to intervention and control groups at random; however, the selected approach remains a useful method to extend researchers’ knowledge of the characteristics of FG college students compared to non-FG college students, given its “versatility, efficiency, and generalizability” (Check & Schutt, 2012) in the search for patterns that can direct instruction or interventions.

Measurement. By using archived data from the widely respected LASSI instrument with well-established validity and reliability for the proposed study, the self-administered web-based survey was the most viable choice to answer the posed research questions in the given context. Despite the common survey limitation that student

respondents may provide less-than-honest answers due to potential feelings of social desirability, the purpose of the course and application of the LASSI scores to practical goal setting arguably promoted honesty in students' responses.

Data Analysis

All data were analyzed using the IBM SPSS Statistics Package (Version 24.0.0.0).

Research question #1. To determine how FG and non-FG undergraduate students scored on each of the ten LASSI scales at SRL course entry, several common types of descriptive data analysis were conducted, including frequencies (counts, percentages) to identify the number of occurrences, measures of central tendency (mean) to characterize what was typical for each group, and measures of variability (range, standard deviation) to describe the spread or variation found in the results.

Research question #2. To determine the extent to which FG and non-FG undergraduate students differ on each of the ten LASSI scales at SRL course entry, confidence intervals of the difference of each scale were used with Cohen's d to identify and measure effect sizes. Independent samples t tests also were conducted to explore differences between the two groups on each of the ten dependent variables.

Chapter IV

Results

Students' archived data were extracted from the existing web-based LASSI (2nd edition) and administrative databases at the participating university and analyzed using the IBM SPSS Statistics Package Version 24.0.0 (SPSS, 2016). Results of this exploratory investigation are presented in text, tables, graphs, and figures to describe the overall sample population and to summarize the relationship of generational status (i.e., FG, non-FG) to undergraduate students' self-regulated learning (SRL) characteristics as measured by the LASSI 2nd edition (Weinstein & Palmer, 2002) at the onset of a required student success course. Specifically, descriptive statistical analyses, including frequencies (counts, percentages), measures of central tendency (mean), and measures of variability (range, standard deviation) were conducted (a) to examine the demographics and LASSI scale scores of the overall sample population and (b) to examine how undergraduate students score on each of the ten LASSI scales by generational status (i.e., FG, non-FG) at course entry. Next, independent samples *t* tests and confidence intervals of the difference of each scale were performed to explore differences between the two groups on each of the ten dependent variables. Statistical significance and confidence in the research findings are reported and categorized with effect sizes, as appropriate.

Sample Demographics

Descriptive statistical analyses were conducted on the archival records of 914 full-time degree-seeking undergraduate students who self-enrolled in a required three-credit development of SRL course through the HDFS program in the College of Education's Department of Psychological, Health, and Learning Sciences at the

participating university. As anticipated, the overall sample was predominantly female (89.6%) and ethnically diverse, with students who self-identified as African-American (14.9%), Asian or Asian-American (13.9%), Hispanic (40.6%), International (1.0%), Multi-ethnic (3.2%), White (26.0%), and Other (0.3%). Students ranged in age from 16 to 54 years old ($M = 20.03$, $SD = 4.54$); student classification at course entry included freshman (50.2%), sophomore (26.0%), junior (18.3%), senior (5.1%), and post-baccalaureate (0.2%), of which 60.7% were “first time in college” (FTIC) students ($n = 555$) and 39.3% were transfer students ($n = 359$).

Term and Year. Of the total participants, 565 students (61.8%) enrolled in a fall semester course, and 349 students (38.2%) enrolled in a spring semester course over six consecutive semesters (Fall 2012 - Spring 2015), excluding summer terms. A closer examination of the archived data revealed that the disproportionate fall versus spring enrollment was more pronounced in the first two semesters (Fall 2012 – Spring 2013) with more than two-thirds (68.9%) of students enrolled in fall ($n = 155$) versus spring ($n = 70$), after which the difference in fall-spring enrollment decreased by 9.4% with the addition of Teaching and Learning students to the course. On average, 59.5% of students enrolled in a fall semester course between Fall 2013 and Spring 2015.

Parents’ Maximum Education Level. All students in the archived sample had self-reported during the university admissions process the highest level of education achieved by each parent at the time of their matriculation, including (a) no high school, (b) some high school, (c) high school diploma, (d) some college, (e) associates degree, (f) bachelor’s degree, or (g) graduate or professional degree (see Table 4).

Table 4

Generational Status: Parents' Maximum Education Level

Generational status	Frequency	Percent
First Generation	288	31.5
No high school	69	7.5
Some high school	84	9.2
High school diploma	135	14.8
Non-First Generation	530	58
Some college	173	18.9
Associates degree	44	4.8
Bachelor's degree	202	22.1
Graduate or professional degree	111	12.1
Unknown	96	10.5

Note. Students [N = 914] in the archived sample had self-reported during the university admissions process the highest level of education achieved by each parent at the time of their child's matriculation.

Mothers. Nearly half (42.2%) of the sample's mothers had no education beyond a high school diploma, including 11.1% of mothers who had no high school education and 10.4% with some high school. Of mothers with postsecondary education beyond high school, 18.4% had earned a bachelor's degree, 17.7% had some college, 5.9% had earned a graduate or professional degree, and 4.6% had earned an associate's degree. The education level of 11.3% of the sample's mothers is unknown.

Fathers. In proportion slightly smaller than the maximum level of education reported for mothers, two-fifths (39.4%) of the sample's fathers had no education beyond a high school diploma, including a slightly higher percentage (13.0%) of fathers who had no high school education and a slightly lower percentage (9.7%) with some high school. Of fathers with postsecondary education beyond high school, 17.1% had earned a bachelor's degree (1.3% fewer than mothers), 18.2% had some college (0.5% more than mothers), 8.4% had earned a graduate or professional degree (2.5% more than mothers),

and 3.2% had earned an associate's degree (1.4% fewer than mothers). The education level of 13.7% of the sample's fathers is unknown.

Generational status. For the purposes of this study, *first generation (FG) college students* were defined as a student for whom neither parent has any type or quantity of education beyond high school (e.g., Choy, 2001; Davis, 2010; Nuñez & Cuccaro-Alamin, 1998; Suder Foundation, 2016), including (a) no high school, (b) some high school, and (c) high school diploma. Of the 914 students studied, 31.5% were classified as FG college students ($n = 288$). *Continuing generation (non-FG) college students* were defined as students with at least one parent who had some type or quantity of postsecondary education beyond high school (Somers et al., 2000), including (a) some college, (b) associates degree, (c) bachelor's degree, or (d) graduate or professional degree. Of the 914 students studied, 57.9% were classified as non-FG college students ($n = 530$). The generational status of 96 students is unknown. See Table 1 for a summary of students' demographic characteristics by generational status, including age, gender, ethnicity, and student classification.

Overall LASSI Scores

Descriptive statistical analyses (range, mean, standard deviation) were performed to determine how the overall sample of undergraduate students scored on each of the ten archived LASSI scales at SRL course entry. Because the range of scores spanned from the minimum to maximum possible percentiles (1 to 99), data were inspected for response bias, including missing responses (i.e., unanswered questions) and response patterns that would suggest disengagement or social desirability. Consistent with the expectation that students responded honestly due to the nature of the course and the

application of LASSI scores to personal goal setting, no pattern or indication of disengagement or social desirability was identified. Students did not score consistently high or low across the scales.

Overall, students' mean scores were below the publisher's 50th percentile cut-off score on all but two of the ten scale scores: motivation ($M = 51.79$, $SD = 29.20$) and test-taking strategies ($M = 51.02$, $SD = 27.39$). According to LASSI guidelines for diagnostic and prescriptive interpretation, any score at or below the 50th percentile level indicates areas of relative weakness and a lack of sufficient strategies and skills in that area to support success in college (see Table 3). Mean percentile scores for the ten LASSI scales ranged from 37.48 ($SD = 28.02$) for time management to 51.79 ($SD = 29.20$) for motivation.

Research Question 1

Descriptive statistical analyses (range, mean, standard deviation) also were performed to determine how undergraduate students scored by generational status on each of the ten archived LASSI scales at SRL course entry. First, a dichotomous independent variable (i.e., generational status) was created using the definitions provided above and the maximum parent education reported by students during the university admissions process. The archived data file then was split by generational status for subsequent analyses. Both percentile and raw scores generated by students' first self-administration of the LASSI (2nd edition) were analyzed and compared to confirm the appropriateness of using the former as the focus of statistical analyses and interpretation for this study. Supported by (a) prior work that found using percentiles instead of raw scores protected the Type I error rate (i.e., false positives) of t tests for all distributions

studied (Zimmerman & Zumbo, 2005), (b) a lack of significant differences in the present study's outcomes by score type, and (c) the centrality of the inventory's percentile scores to the design and delivery of the SRL course at the participating university, percentile scores were used in all relevant analyses. Table 5 and Figure 2 summarize students' mean LASSI (2nd edition) scale scores by generational status.

Table 5

Summary of LASSI (2nd edition) Scale Percentile Scores by Students' Generational Status

LASSI Scale	FG (n = 288)		Non-FG (n = 530)		Mean Difference	t(814)	p	95% CI	
	M	(SD)	M	(SD)				LL	UL
Anxiety	42.11	(29.02)	44.15	(29.93)	-2.05	-0.94	.345	-6.30	2.21
Attitude	45.18	(29.52)	39.49	(27.47)	5.69	2.76	.006	1.64	9.74
Concentration	44.90	(27.78)	44.02	(27.32)	0.88	0.44	.664	-3.07	4.82
Information processing	47.21	(29.67)	51.22	(28.72)	-4.01	-1.88	.060	-8.18	.17
Motivation	52.63	(29.21)	51.48	(29.50)	1.15	0.54	.593	-3.07	5.38
Self-testing	40.45	(29.39)	39.01	(28.53)	1.45	0.68	.494	-2.70	5.59
Selecting main ideas	47.44	(27.95)	47.62	(28.31)	-0.18	-0.09	.931	-4.23	3.87
Study aides	39.08	(29.43)	41.31	(28.32)	-2.23	-1.06	.290	-6.35	1.90
Time management	38.99	(29.43)	37.13	(27.64)	1.86	0.90	.370	-2.21	5.92
Test-taking strategies	49.49	(27.40)	51.82	(27.64)	-2.34	-1.16	.247	-6.30	1.62

Note: CI = confidence interval; LL = lower limit; UL = upper limit; scale scores range from 1 – 99; *p > .05 (two-tailed).

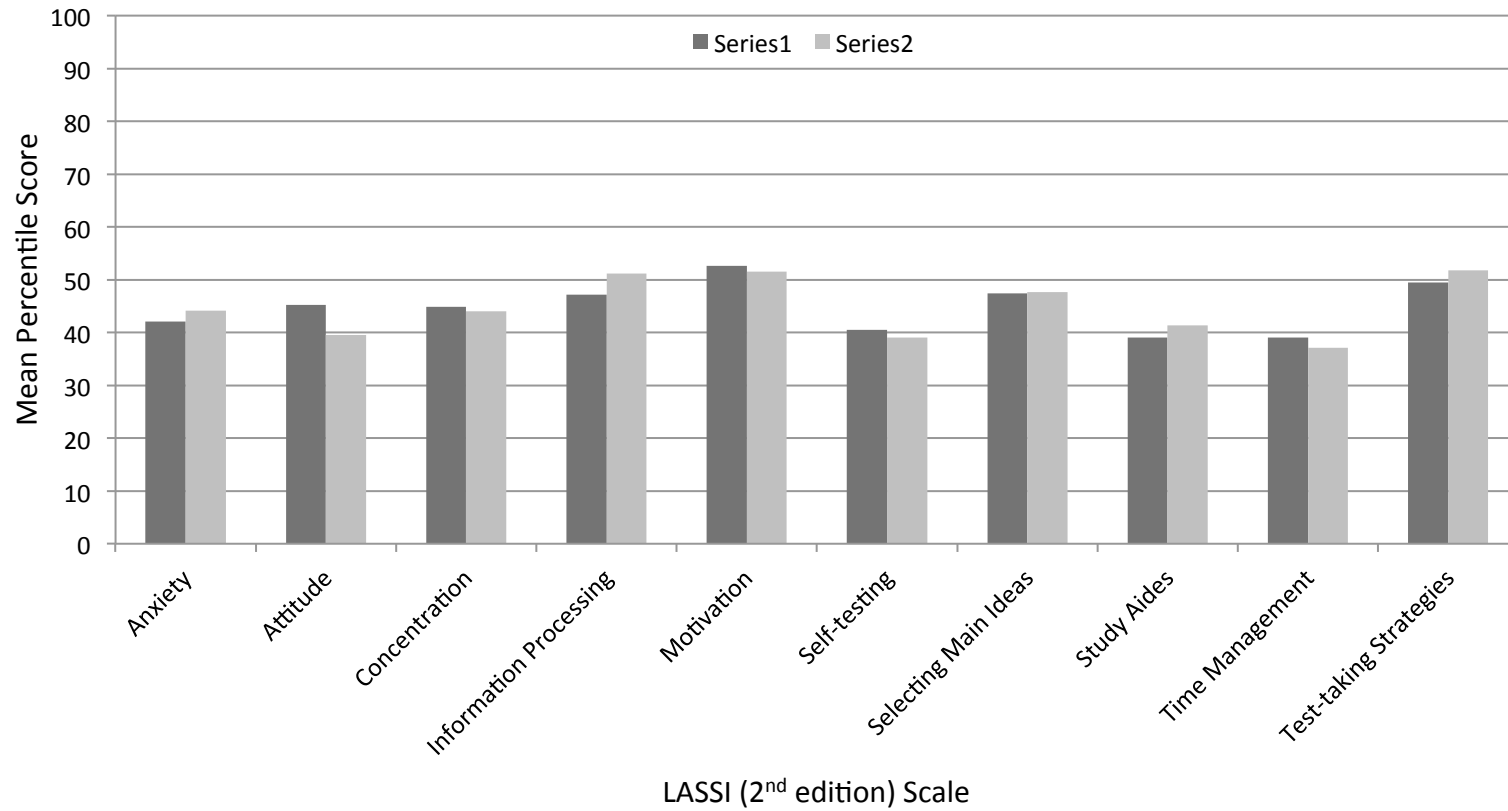


Figure 2. Summary of LASSI (2nd edition) Scale Percentile Scores by Students' Generational Status. Series1 = FG college students; Series2 = Non-FG college students.

First generation college students. First generation college students scored below the publisher's 50th percentile interpretive cut-off score on all but **one** of the ten scale scores: motivation (M = 52.63, SD = 29.21). Mean percentile scores for the ten LASSI scales of FG students ranged from 38.99 (SD = 29.44) for time management to 52.63 (SD = 29.21) for motivation.

Continuing generation college students. Non-first generation college students scored below the publisher's 50th percentile interpretive cut-off score on all but **three** of the ten scale scores: information processes (M = 51.22, SD = 28.72), motivation (M = 51.48, SD = 29.50), and test-taking strategies (M = 51.82, SD = 27.64). Mean percentile scores for the ten LASSI scales of non-FG students ranged from 37.13 (SD = 27.64) for time management to 51.82 (SD = 27.64) for test-taking strategies.

Descriptive comparison by generational status. FG students' mean percentile scores were (a) at least one percentile point higher than non-FG college students' mean percentile scores (range of mean difference: 1.15 to 5.69) on four LASSI (2nd edition) scales: attitude (ATT), motivation (MOT), self-testing (SFT), and time management (TMT); (b) at least two percentile points lower than non-FG college students' mean percentile scores (range of mean difference: 2.04 to 4.01) on four LASSI (2nd edition) scales: anxiety (ANX), information processing (INP), use of study aides (STA), and test-taking strategies (TST); and (c) nearly identical – less than one mean percentile point difference – on two LASSI (2nd edition) scales: concentration (CON) and selecting main ideas (SMI). FG students on average scored slightly higher than non-FG college students in CON (+ 0.88) and slightly lower on average for SMI (-0.18). Time management (TMT) was the lowest mean percentile score for both FG and non-FG college students.

The extent to which these descriptive differences were statistically significant was analyzed in response to the study's second research question.

Research Question 2

Independent samples *t* tests were performed comparing the mean scores of FG and non-FG undergraduate students on each of the ten LASSI (2nd edition) scales to determine the extent to which the two groups differed in academic SRL characteristics at the onset of a required student success course. Results indicated that FG students ($M = 45.18$, $SD = 29.52$) scored significantly higher on the attitude (ATT) scale than non-FG students ($M = 39.49$, $SD = 27.47$), $t(816) = 2.76$, $p = .006$, two-tailed, 95% CI [1.6, 9.7]. The difference of 5.69 scale units indicates a small effect (scale range: 1 to 99; $d = 0.20$). There were no other statistically significant differences between the groups (p 's $> .05$), see Table 5.

Chapter V

Discussion

Higher education is widely acknowledged as a path to upward social mobility. Yet, for many first generation (FG) students, college success has not kept pace with college access (NCES, 2013). Because many students' struggles can be traced to deficits in self-regulated learning (SRL) processes (e.g., Bembenuddy, Cleary, & Kitsantas, 2013), the purpose of this study was to investigate the characteristics of FG undergraduate students in terms of the SRL components upon which many postsecondary student success courses (SSC) are designed. To that end, descriptive and inferential statistical analyses of archival data were used to examine the relationship of generational status to undergraduate students' SRL characteristics at the onset of a required SSC at a large, diversely populated urban university grappling with conditions that serve as a harbinger to the rest of the country.

As an exploratory study, no hypotheses were advanced; instead, two research questions framed this work: (a) how do FG and non-FG undergraduate students score on each of the ten LASSI (2nd edition) scales at SRL course entry? and (b) to what extent do FG and non-FG undergraduate students differ on each of the ten LASSI (2nd edition) scales at SRL course entry? Statistical analyses revealed that – while the mean percentile scores of both FG and non-FG undergraduate students were lower than 50% of the national norming sample scores on all but one and three LASSI (2nd edition) scales, respectively – FG students did not universally score higher or lower than non-FG students on the ten scales; they showed a subtle but overall non-significant pattern of relative strengths and weaknesses in SRL related to generational status. These results

confirm the complex nature of today's college student population and the need for further purposeful investigation to identify and to understand how better to meet FG students' unique learning needs. Findings are discussed with respect to the posed research questions, study design, method used, and current literature, with consideration given to the study's limitations and generalizability and suggestions provided for future directions in research, policy, and practice.

Interpretation of Findings

Prior to analyzing the archival data to address the posed research questions, descriptive statistical analyses (range, mean, standard deviation) were performed to determine how the overall sample of undergraduate students scored on each of the ten archived LASSI scales at SRL course entry without consideration to generational status. Results showed that undergraduate students' mean scores at the participating university were below the publisher's 50th percentile cut-off on all but two of the ten scale scores – motivation and test-taking strategies – with students' mean scores for these two scales registering less than two percentile points above the cut-off.

According to LASSI guidelines for diagnostic and prescriptive interpretation, any score at or below the 50th percentile level indicates areas of relative weakness and a lack of sufficient strategies and skills in that area to support success in college. As such, these results suggest that the highest priority of the average undergraduate student taking the SRL student success course during the time frame studied should be improving his or her learning skills and strategies in the areas of anxiety, attitude, concentration, information processing, self-testing, selecting main ideas, use of study aides, and time management to avoid serious problems succeeding in college. According to the LASSI User's Manual

(Weinstein & Palmer, 2002), students scoring between the 50th and 75th percentile on any of the ten scales also may consider improving their knowledge, skills, and strategies in those areas to avoid difficulties succeeding in college. No mean scale scores for the overall sample of undergraduate students were at or above the 75th percentile level, indicating a lack of relative strength in all ten SRL areas for the overall sample group.

Research Question 1: How did they score by generational status?

Subsequent descriptive analyses were conducted to determine how undergraduate students scored by generational status on each of the ten LASSI scales at course entry. Results revealed scoring patterns that differed from the overall sample's pattern of mean scores and from the pattern of the counterpart group. That is, FG college students scored above the 50th percentile on only one scale (motivation) while non-FG students scored above the 50th percentile on three scales (information processing, motivation, and test-taking strategies). Time management was the lowest mean percentile score for both FG and non-FG college students –falling below 39 percent of the nationally normed sample of students for both groups – while motivation and test-taking strategies were FG and non-FG students' highest mean percentile scores, respectively, albeit just above 50 percent of the nationally normed sample of students.

Notably, the only statistically significant finding – as discussed in the next section (Research Question 2) – was the mean difference in attitude scores between the two groups. While no other statistically significant results were found, an examination of the level of scoring and subtle directionality of differences for each scale by generational status is worthwhile for extending academic knowledge about what today's FG college

students bring at entry into a SSC. A discussion of how students at the participating university scored by generational status with respect to the current literature follows:

Anxiety. A lower score on the anxiety scale – the only inverse scale on the LASSI (2nd edition) – indicates a higher degree of worry or anxiety about school and personal academic performance or lower level of skills and strategies to cope with such anxiety. In this study, FG college students scored slightly but not significantly lower than non-FG students, suggesting a higher degree of anxiety and lesser coping skills. While the directionality of the mean scores is consistent with the current literature, the lack of significant difference in students' academic anxiety by generational status does not support previous research findings (e.g., Atherton, 2014; Banks-Santilli, 2014; Stebleton & Soria, 2013). Most research suggests that FG college students experience heightened academic anxiety, stress, and frustration relative to their non-FG counterparts due to various background-specific characteristics and conditions that are unique to their generational status. In contrast, results of this study show that both FG and non-FG college students struggle with negative thoughts, beliefs, self-statements, or feelings about their ability, intelligence, and/or success relative to others at a similar level that – without improved strategies and skills – is insufficient to support success in college.

With respect to the current literature, one possible explanation for the lack of a significant difference in mean anxiety scores is the timing of the self-assessment. That is, Atherton (2014) suggests that FG college students experience elevated anxiety due to a lack of self-awareness about their generally lower academic abilities combined with lower academic achievement. However, the archival records for this study had been archived during the first week of each semester prior to students receiving any SRL

instruction or course performance feedback – and predominantly in their first year at a four-year institution when expectations are highest (Noel-Levitz, 2016). As such, the opportunity for FG students in this study to experience any apparent discrepancy (and therefore, anxiety) likely would not yet have occurred. This explanation is consistent with FG students' high drop out rate in the second year of matriculation at a four-year college (e.g., Choy, 2001; Pascarella et al., 2004) when frustration and heightened anxiety related to unmet expectations have been afforded time to develop and can lead to disengagement and attrition (Atherton, 2014). For a better understanding of this issue, future research is recommended to examine academic anxiety as it relates to generational status at various intervals throughout FG students' postsecondary experience.

Concentration. First generation college students also might be expected to struggle with mediating thoughts, feelings, situations, and other distractions that interfere with their academic success based on extensive evidence that many FG college students experience competing emotions, disparate and demanding roles, and disadvantaged conditions uniquely associated with their generational status (e.g., Choy, 2001; Stephens et al., 2012) that would likely reduce the ability to concentrate. Yet, results of this study showed no significant difference in concentration related to students' generational status despite a subtle agreement in directionality. That is, FG and non-FG college students' mean percentile scores were nearly identical – differing by less than one percentile point – on the LASSI concentration scale. These findings suggest that both groups similarly need to improve their learning strategies and skills in this area as a highest priority.

Information Processing. Scores on the information processing scale indicate how well students use imagery, organization, elaboration, and other processing skills “to

help learn new information and skills and to build bridges between what they already know and what they are trying to learn and remember” (Weinstein & Palmer, 2002, p. 5). FG college students scored slightly lower than non-FG students in this SRL area. While the directionality of these findings is consistent with well-established literature – that is, that many FG students arrive at college academically underprepared with relatively fewer effective methods, learning strategies, and reasoning skills to process new information for retention and retrieval at the postsecondary level (e.g., Atherton, 2014; Choy, 2001; Ecklund, 2013; Housel, 2012; Pascarella et al., 2004) – the difference of 4.01 mean percentile points in students’ mean scale scores related to their generational status was not sufficient to be statistically significant.

Even so, the difference in mean scores relative to the publisher’s interpretive cut-off mark at the 50th percentile has interesting practical implications that align with the literature-based expectation that FG students have unique learning needs. With a mean score in information processing below the 50th percentile, FG college students as a group would be advised (or instructional designs put into place) to make efforts to improve their information processing strategies and skills as a highest priority, while the non-FG college students – with a mean score above the 50th percentile cut-off – might be counseled to improve their knowledge or skills in this area with relatively less urgency.

Motivation. A student’s motivation – or diligence, self-discipline, and willingness to work to succeed academically – is a central and extensively studied component of SRL (Ning & Downing, 2010; Pintrich, 2004; Wolters & Hoops, 2015; Zimmerman, 2008). Students who struggle with motivation in learning contexts tend to give up easily when work becomes difficult, attribute setbacks to external factors (e.g., a

flawed teacher), and lack effective goal-setting (Weinstein & Palmer, 2002), among other attributes. In this investigation, both FG and non-FG college students had mean scores less than three percentile points above the publisher's 50th percentile cut-off level for motivation, with FG students scoring only 1.15 mean percentile points higher than non-FG students. In addition to a lack of statistically significant difference in students' mean scores by generational status, neither the level nor the subtle directionality of the mean scores support the varied findings and suppositions in the current literature about the motivation level of FG college students. That is, these results suggest that FG students' academic motivation is neither overly compromised (e.g., Housel & Harvey, 2011; Stebleton & Soria, 2013) nor uniquely high (DiBenedetto, 2010; Ecklund, 2013). That said, as the single mean score for FG college students to register above the publisher's 50th percentile cut-off, motivation might be considered an area of relative strength within the group compared to the other nine SRL areas measured by the LASSI (2nd edition).

Taking into account additional literature, one possible explanation for the lack of a significant difference in mean motivation scores by generational status could be the affect of the overall demographic composition of this study's sample. With a sample population similar to the present study – predominantly young and Hispanic – Prospero, Russell, & Vohra-Gupta (2012) found that high school FG students and Hispanic students were more likely to self-report higher intrinsic motivation than college FG and non-Hispanic students. In this study, more than half of the total sample was comprised of incoming freshman (50.2%) and FTIC students (60.7%) with 63.2% of the FG and 40.6% of the overall sample of students self-identifying as Hispanic. Given the potential impact of overlapping characteristics on the study's outcome, further analyses are warranted.

Self-testing. Self-testing is another area of SRL in which FG college students might be expected to struggle differentially due to background-specific disadvantages in academic preparation with specific learning strategies (Housel, 2012) and study skills (Stebbleton & Soria, 2013). However, results showed that FG students scored 1.44 mean percentile points higher than non-FG students on the self-testing scale. While the below average mean score is consistent with the low level of academic preparation associated with FG college students, (a) the lack of a statistically significant difference and (b) the inverse direction of students' mean scores by generational status are unexpected. Most importantly, these findings suggest that both groups of students similarly need to improve as their highest priority their use of reviewing and comprehension self-monitoring techniques as learning tools if they are to succeed in college.

Selecting main ideas. Similarly, students' ability to distinguish important information from lesser details in lecture, textbooks, and/or other learning materials might be expected to differ due to background-specific disadvantages in academic preparation by generational status (Atherton, 2014; Housel, 2012; Stebleton & Soria, 2013; Warburton, Burgin, & Nuñez, 2001). Instead, FG and non-FG college students' mean percentile scores were nearly identical for this study's sample in the SRL area of selecting main ideas. These findings again suggest that both groups similarly need to improve their learning strategies and skills in this area as a highest priority to achieve success in college.

Study Aides. A score on this LASSI (2nd edition) scale represents how typically students use support materials, practices, and resources to aid their learning. In this study, FG college students scored 2.23 mean percentile points lower than non-FG

students in this area. While the directionality of these mean scores is consistent with the current literature, the mean difference in students' use of study aides scores was not statistically significant as might be expected from previous findings. Most research shows that FG college students are relatively less likely than their non-FG counterparts to engage in interactions with peers or instructors outside of class or to use other campus student support services (e.g., Choy, 2001; Engle & Tinto, 2008; Stebleton & Soria, 2013). However, both groups in this study self-reported insufficient methods and strategies in this SRL area to support success in college.

One plausible explanation for the lack of a significant difference in these mean scores is the prevalence of commuter students in the sample population. Because 82% of undergraduate students at the participating university reside off campus – some at a considerable distance from the university – their proximal exposure to campus materials and resources is limited relative to their residential counterparts. Future research might investigate the comparative impact of students' generational versus commuter status – and the extent to which these classifications overlap – on students' tendency to access and use campus resources to support their academic achievement and degree attainment.

Another interesting direction for future research would be to compare results from the recently released LASSI (3rd edition) – with its newly created Using Academic Resources (UAR) scale that replaces the Study Aides (STA) scale – to archived scores on the LASSI (2nd edition) scale. Touting all new items, the new scale purportedly fits with current conceptions and research in SRL and student learning assistance (Weinstein, Palmer, & Acee, 2016) and could be useful to explore this topic further.

Additional investigations into FG college students' use of resources also might include multi-method approaches that assess students' (a) awareness of their need to access support resources, (b) awareness of the availability of resources, (c) specific skills at accessing available resources, and (d) self-reported versus actual use of resources. Extensive research shows that students who use campus resources are much more likely than non-users to be at an advantage for academic achievement and degree attainment (e.g., Kuh, Kinzie, Schuh, & Whitt, 2011; Soria, Fransen, & Nackerud, 2013). Therefore, understanding better the mechanisms and patterns of FG college students' use of supplemental support resources could inform and improve future resource awareness, content, delivery and access substantially as a way to support their college success.

Time management. Time management was the lowest mean percentile score for both FG and non-FG college students. These findings suggest that this may be a productive area for intervention for both FG and non-FG college students to succeed in college. Interestingly, results indicated that FG students scored 1.86 mean percentile points higher than non-FG students on the time management scale. While the mean difference in scores was not statistically significant, the subtle directionality of the mean scores aligns with some researchers' suggestion that time management may be a relative strength of FG students due to their background-specific experience managing competing demands on their time (e.g., Ecklund, 2013). However, the overall low level of scoring is arguably more compelling and consistent with the prevalent literature that identifies poor use of time management principles and practices as a substantial barrier to FG college students' academic success (Morales, 2012) and a strong correlate of academic stress (Macan, Shahani, Dipboye, & Phillips, 1990). One explanation for the lack of significant

mean difference by generational status on the time management and other LASSI (2nd edition) scales again centers on the complex demographics of the present study's sample, as discussed further in the section addressing the limitations of this work.

Test-taking strategies. Substantial research suggests that, due to background-specific conditions associated with their generational status, FG college students are much less likely than their non-FG peers to have developed effective test-taking strategies prior to matriculation into higher education (Choy, 2001; Atherton, 2014; Pascarella et al., 2004; Stebleton & Soria, 2013). While the results of this study revealed that FG students did score 2.33 mean percentile points lower than non-FG students on the test-taking strategies scale, a lack of statistically significant difference in students' mean scores in this area again defies expectations. Nevertheless, the difference in these scores relative to the publisher's interpretive cut-off at the 50th percentile – analogous to the scoring pattern on the information processing scale – may have practical implications that align with evidence-based expectations (i.e., that FG students struggle comparatively in this area). With a mean score below the 50th percentile, FG college students as a group would be advised (or instructional designs put into place) to improve their test-taking strategies as a highest priority, while non-FG college students – with a mean score above the 50th percentile cut-off – might be guided with less emphasis to improve their test-taking knowledge, skills, and strategies.

Research Question 2: To what extent did they differ?

Results of independent samples *t* tests performed to compare the mean scores of FG and non-FG undergraduate students on each of the ten LASSI (2nd edition) scales revealed a significant mean difference in attitude between the two groups. That is, FG

students were significantly more interested in and had better attitudes toward achieving academic success than non-FG students; albeit, both groups scored below the 50th percentile cut-off score, indicating an area of academic weakness that threatens college success. While the level of this result for FG students is consistent with prior research that suggests FG students may be at risk for a compromised attitude due to role conflict (e.g., Ecklund, 2013) and uncertainty about the cost-benefit ratio of earning a college degree (Becker, 1964; Ecklund, 2013), the directionality of these findings is counter to the logical conclusion that their mean attitude scale score would be lower than non-FG students' mean scale score.

One possible explanation for FG students' elevated attitude relative to their non-FG peers again may be related to the timing of the self-assessment and the levels of FG students' awareness and expectations at that point in their matriculation. It is possible that many FG students at the onset of their transition to a four-year college – affirmed by the accomplishment of their unprecedented college acceptance – have no objective reason to expect anything but success. Any potential discrepancy in academic achievement and their self-assessed ability (Atherton, 2014) that might affect their attitude had yet to be realized, therefore FG students may have self-reported a relatively better attitude toward and interest in college than might be reported at a later point in their matriculation. In addition, the relatively low mean attitude scores of both groups may be associated with the growing conversation across higher education about the cost-benefit ratio of earning a college degree (e.g., Becker, 1964; Carnevale, Strohl, & Melton, 2011; DiPrete & Buchmann, 2006; Porter, 2002; Stange, 2012).

Future research might assess FG college students' attitude – including their academic mindset (e.g., Yeager & Dweck, 2012) and perceptions about the value of a degree (Alves, 2011) – at various intervals throughout their matriculation using a variety of methods to better understand their postsecondary experience and its impact on their academic achievement and degree attainment.

Strengths of the Study

A primary strength of this study is its alignment in method and measure with the Improvement Research principle of achieving scalable instructional improvements to advance student success in and through practice (Bryk & Yeager, 2013). Understanding the starting strengths and challenges of FG college students is essential to the preparation of a relevant and effective learning environment of instructional materials and methods that support success in college and beyond. This study took the first step toward filling that gap in practical knowledge at the participating university by (a) exploring how students scored by generational status using the actual self-assessment inventory used in the SSC classroom by students and their instructors and (b) interpreting the quantitative results with respect to the publisher's diagnostic and prescriptive percentile cut-off scores also used in the classroom. Furthermore, despite typical limitations associated with self-report measures, students' individual response patterns in this study suggest authentic responses, adding to the strength of the results in this regard.

That this study's causal-comparative design supports the creation of testable experimental hypotheses based on its results is another strength of this work, while the large sample of archived data affords confidence in the statistical significance levels of the findings and the likelihood that the sample is representative of the population being

studied. Although a related sampling strength is that the SSC was required of all students in the specified majors – not simply students identified as at-risk – it is important to note that there are also limitations to this archival sample and to other aspects of this work that offer important opportunities for future research.

Limitations and Future Research

The limitations of any research must be understood within the context of threats to the internal and external validity of the study (Shadish, Cook, & Campbell, 2002; Reichardt, 2011). Foremost, caution should be exercised when interpreting this study's nonexperimental results due to limitations associated with its causal-comparative design, its single-measure method, and the demographic composition of the sample population.

Design. Because students cannot be assigned to groups by generational status, the independent variable of this study could not be manipulated and a causal-comparative approach was necessary. As such, conclusions were limited to describing how SRL related to FG status sans inferences regarding direct cause and effect. That is, without randomization or statistical procedures to control for covariates, alternative systematic differences between the students in each group may have contributed to the results individually (or in interaction with each other) more so than (or in interaction with) generational status. For example, although socioeconomic status is commonly used as a proxy for generational status in research (Brown-Nagin, 2014), family income (e.g., Pell-grant eligibility) was not included as a variable in this study. Likewise, two-fifths of the study sample was classified as transfer students; yet, the extent to which prior college experience influenced the results is an unknown limitation that warrants further analysis.

Consequently, future studies of this heterogeneous group are recommended that examine as covariates all factors – age, gender, race/ethnicity, family income, transfer, and commuter status – often concomitant with FG status. The large variability of the individual score distribution in this study – with standard deviations between 25 and 30 – and the restricted range of mean scores that may have limited the finding of significant differences in SRL between groups further support this recommendation.

Measure and method. Other threats to the study's internal and external validity involve instrumentation. The LASSI (2nd edition) is widely used and well established as a reliable and valid measure of SRL in the higher education context; however, some aspects of this measure and its use limit the extent to which causal inferences can be made. For example, as a self-report instrument, the LASSI (2nd edition) includes potential for perception bias. Without observable behaviors recorded to corroborate or contradict student's self-reported perceptions of their attitudes, knowledge, belief, skills, and behaviors related to SRL, results can be interpreted only within this limitation. The limits of analyzing archival data also must be considered. Moreover, because the LASSI (2nd edition) was the only measure used, the additional advantages of multiple measures and methods were missing from this study. For instance, the use of a single self-report measure to define SRL characteristics in this study limits the generalizability of the results to contexts using a comparable instrument and/or operational definition of SRL.

To address these issues, it is recommended that additional and/or alternative approaches be incorporated into future investigations of the SRL characteristics of this population. Qualitative and quantitative methods can be used to uncover students' perceptions of their SRL experiences and to assess those perceptions in comparison to

their LASSI outcomes. For example, researchers might examine more closely a student-selected area of improvement (e.g., academic anxiety, concentration, motivation) using classroom-based interviews, focus groups, and/or qualitative coding of the existing semester-long Learning Project Paper through which students apply, monitor, and adapt SRL strategies and skills to reach an academic S.M.A.R.T. goal (Duran, 1981). Also, as part of the self-management process toward improved self-regulation, themed surveys (e.g., Bandura's self-efficacy scale) can add actionable knowledge and understanding.

That only the English version of the web-based inventory was offered is an additional limitation worth noting. Although the students' language proficiency was not included as a variable in this study, the prevalence of students of minority status in the overall group and by generational status suggest a possible limitation to the interpretation of results due to language issues. Future researchers may explore the impact of language as it relates to the measurement of SRL in FG college students by using an alternate version of the LASSI and/or other measures and methods.

Demographics. Another caveat to the interpretation of these results is found in the clear demographic differences between the archived sample of students at the participating university and the national norming sample of students for the LASSI (2nd edition) (Weinstein & Palmer, 2002). Whereas the norming sample of students taking the LASSI (2nd edition) identified as over two-thirds white, less than one sixth Hispanic, less than one sixth African American, and approximately one percent Asian/Asian-American/Pacific-Islander, this study's student sample was far more diverse, consistent with the current demographic trends across the nation. In the present study, nearly two-thirds of FG students self-identified as Hispanic – almost a quarter more than the overall sample –

while less than 12% and 26%, respectively, self-identified as white. Asian/Asian American students were represented equally in both the FG and overall sample of students at approximately thirteen percent. Also, although African American students were equally represented in the overall study and the national norming samples, this group was underrepresented by approximately 5% in the FG college student group.

Students' ages and gender also differed somewhat between the groups. While most students were traditionally aged, the FG student sample was slightly older at 20 years of age on average ($SD = 4.81$), ranging from ages 16 to 54 years, compared to the national normed student sample of which the majority (57.5%) were 18 to 19 years old, ranging from 17 or younger to 26 or older. All groups were predominantly female; however, the proportion of women in this study outweighed the normed sample by 24%; only 8% of the FG college students from the archived sample were male. Despite these discrepancies, prior research has demonstrated that men and women undergraduates similarly interpret items on inventories that measure SRL (Muis et al., 2007) suggesting that the influence of gender alone on the results of this study is likely limited.

Finally, while the sample archival data ($N = 914$) used for this study was archived at a single public four-year university in an urban location and is representative of the population in teaching and human development programs, the LASSI norming sample data ($N = 1,092$) was collected from twelve different higher education institutions, including four-year university, community college, state college, and technical institutions located in different geographical regions of the United States (Weinstein & Palmer, 2002) without distinction by program. Careful consideration of the noteworthy

differences between this research and the LASSI (2nd edition) national norming sample is recommended when interpreting the results of this study for application.

External validity revisited. The extent to which the results of this study can be generalized to other postsecondary institutions is limited by how similar their campus demographics are to the participating university in type and proportion. That said, because the archival sample of students reflects current demographic trends toward increasingly diverse campuses nationwide – progressively female, Hispanic, and FG status – it is likely that the number of contextually comparable institutions and the generalizability of this study’s findings will grow. Nevertheless, with the presented analyses limited to students grouped dichotomously by generational status using the most conservative definition of FG college students, there are limits to the generalizability of these findings for application to any circumstances or groups that differ from those defined in this study.

Because results may be sensitive to the way FG is defined in research, it is suggested that future investigations go beyond a dichotomous definition to analyze data using additional classification levels of the maximum education that parents’ achieved. Questions to address may include: (a) to what extent do FG students whose parents did not attend high school differ on selected measures from FG students whose parents earned a high school degree? or (b) how do results compare when FG college students are defined more broadly as students for whom neither parent has a bachelor’s degree versus students for whom neither parent has any education beyond high school?

Similarly, with evidence of compelling intergenerational benefits of a mother’s level of education on her child throughout the child’s lifespan, future research might

examine the extent to which the mother's versus the father's highest level of education impacts FG college students' SRL characteristics, and in turn, their academic achievement, persistence, and degree attainment. Furthermore, the influence of older siblings and/or extended family members (e.g., aunts, uncles, cousins) who preceded the student in attending college and offered guidance to the FG student might be examined.

Of note, whether or not students self-reported their parents' maximum level of education on their admissions application affected the inclusion rates and generalizability of the study sample. Some students declined to provide this background information; as such, generational status was not available for 10.5% of the sample. Results of analyses by generational status are limited to those who reported this information. The reason(s) students chose not to report remain an open question.

As addressed in an earlier section, additional limitations to generalizability relate to the timing of the measurement. These include (a) analyses were limited to the pretest LASSI (2nd edition) scores archived within the first week of each semester, and (b) analyses did not take into account whether or not the students had enrolled in the SSC during their first or subsequent semester. Both issues should be addressed in future work.

Additional research. As more institutions of higher education incorporate into their mission coursework and orientation workshops targeting the development of SRL, future researchers need to investigate the differential impact that direct instruction of SRL has on FG students. Such research must focus on evaluating not only the impact of SRL course participation but also the effect of individual aspects of instruction (e.g., SMART goal setting, reflective writing; time management skills) to determine more clearly the particular mechanisms of the intervention's impact on student success by generational

status. Once determined, additional research is needed to establish the extent to which any improved post-instruction LASSI scores – or other measures of SRL – endure over time for students’ by generational status, and to what extent they serve as mediating factors for improved academic achievement, persistence in college, and degree attainment. Finally, to develop a comprehensive model of FG college student success, future research needs to examine the differences between FG graduates and those FG students who do not persist and/or graduate to determine if these groups of FG students differ significantly in their backgrounds, academic preparation, and SRL characteristics.

Conclusion

The purpose of this study was to investigate the SRL characteristics of FG college students at the onset of a SSC to address this gap in actionable knowledge and to inform the development and implementation of future college success initiatives in support of local and national goals for improving higher education outcomes for all students. With research on effective approaches still emerging, these results extend the current literature and promote several productive avenues for future practice-based inquiries. Given the overall lack of statistically significant differences between groups and the largely low SRL mean scores in this study, it is imperative that higher education faculty and other stakeholders actively seek to understand the specific mechanisms for success associated with the complexity of their enrolled population to better serve them. Investment in the postsecondary success of FG college students in particular – by better defining and then responding systematically to their unique challenges and strengths – promises significant, wide-spread advantages not just for the individual learner, but for generations of students – and American citizens – to come.

Chapter VI

Action Plan

The ultimate aim of this Professional Development Action Plan is to produce changes in classroom-based instructional practices at the participating university that can be linked to improvements in students' self-regulated learning (SRL) and overall postsecondary achievement (grades, persistence, and degree attainment) as a foundation for success in an increasingly competitive global workforce.

Context Analysis: A Need for Action

National and global trends in higher education point to a dire need for change in the way postsecondary institutions support positive learning outcomes for the diverse population of undergraduate students now attending college (Darling-Hammond, 2010). At the participating university, an ever-diversifying student population presents unique challenges that contribute to persistence and graduate rates that remain lower than the national average. In response, several student success initiatives have been put into motion to reach the institution's five-year goal of increasing the four-year graduation rate from the current 58% to 60% by May 2020. Many initiatives, such as UHin4, target the financial burden the financial burden associated with access to and attainment of a college degree. Other efforts focus on improving classroom instruction through professional development opportunities, such as those offered by the university's Center for Teaching Excellence. These solitary workshops sponsored by the Center address such relevant topics as how to teach, learning from failures, effective ways to improve student engagement, and diversity and global learning. In addition, the Office of Academic Affairs hosts an annual Innovative Teaching and Learning Symposium to

facilitate a collaborative effort of instructional design teams and faculty from the participating university's four campuses in a full day event devoted to bringing faculty and staff from all campuses together to share innovative teaching and learning ideas.

The presented PD action plan aligns with and supports the participating university goal to increase the four-year graduation rate to 60% by May 2020 by providing evidence-based professional development in adult learning (AL) and universal design for learning (UDL) practices and processes applied to facilitate self-regulated learning (SRL) in all students, with a special emphasis on meeting the unique needs of first-generation (FG) students. A key characteristic of adult learning, SRL (or *self-regulation*) is defined as “the process by which learners personally activate and sustain cognitions, affects, and behaviors that are systematically oriented toward the attainment of learning goals” (Schunk & Zimmerman, 2012, p. vii) and is linked through several decades of research to improvements in academic achievement across settings and despite individual differences in learning (Zimmerman, 2002, p. 64). Baseline data on FG and non-FG students' self-regulatory characteristics – as measured by the individual standardized scale scores for each of ten Learning and Study Strategy Inventory (LASSI) scales (Weinstein & Palmer, 2002) – suggest a need for the development of students' SRL to bridge achievement gaps among the diverse population of undergraduate students at the participating university.

Format. Because SRL “is a multifaceted, interdependent, and recursive process” (Wolters & Hoops, 2015, p. 80), a semester-long course is the better format and context to teach SRL to college students than shorter-term workshop-based instruction like those offered by the student learning center. For durable and effective changes in their instructional practices, college instructors similarly benefit most from systematic and

purposeful job-embedded professional development training in SRL as it applies to the specific content area that they are appointed to teach (Odden & Picus, 2012; Peters-Burton, Cleary, & Forman, 2015) versus the analogous single event options described above.

Delivery. A clear need exists to educate higher education instructors on the distinction in theory and practice between pedagogy and andragogy. Current instructional methods and materials commonly used in to teach most courses at the participating university continue to reflect a more pedagogical (teaching children) than andragogical (adult learning) approach. In most classrooms, a professor stands near or behind a podium and lectures while students listen and take notes. This “sage on a stage” (King, 1993) teaching styles is marked by a heavy reliance on text-laden PowerPoints and minimal interaction with the learner – a process of teaching and learning that is highly incongruent with what researchers now know are the best ways to facilitate learning (e.g., Bain, 2004; Brown, Roediger, & McDaniel, 2014; Merriam & Bierema, 2014). To support an optimal model for students’ successful development of self-regulated learning at the participating university, both teachers and students need the structured and regularly scheduled SRL training and instruction proposed by this action plan.

Intended audience. Currently, in a typical semester at the participating university, multiple sections of 25 to 36 students meet twice weekly for a 90-minute SRL course taught by one of several instructors who are part of a team that sees a high turnover rate in its membership each term. Since the course began in 2009, new instructors each semester have numbered between one and five ($M = 2$), ranging in

designation from graduate teaching fellows to tenure-track faculty with varying years of teaching experience in general and in self-regulated learning, specifically.

Intended outcomes. Two intended outcomes are: (a) to achieve fidelity of instruction that results in consistent and significant student SRL outcomes (i.e., improved LASSI scores) across all HDFS 1311 SRL course sections for all enrolled students within and across fall and spring semesters of instruction beginning with the 2017-2108 academic year; and subsequently, (b) to establish campus-wide Peak Performance SRL courses in every college of the university, using as a model the PD plan initiated in the Human Development and Family Studies program of the participating university's College of Education.

General Approach Rationale

Given the varying breadth of instructors' career stages (Stroot et al., 1998), constructive-developmental levels (Kegan, 1982), and familiarity with SRL course materials and methods within a typical team of instructors, professional development activities will be adapted to accommodate individual capacities as determined by informal and formal assessments at the beginning of each semester of implementation (Guskey, 2002).

In addition, based on the research-based recommendations of Odden and Picus (2012) and others, the PD plan will be implemented as a professional learning community (PLC), also known as a community of practice (Wenger, 1998), that supports job-embedded training that is rigorous in content, relevant to the adults who are learning, and rich in collaborative relationships. This approach acknowledges that teachers need some time during the regular school day to work collaboratively on the instructional program to

achieve better data-driven results (Odden & Picus, 2012). Furthermore, the lead instructor, or course coordinator, will serve as the PD facilitator in the proposed action plan supported by research that indicates a need for school- or program-based instructional facilitators and/or coaches to effectively implement and monitor progress of PD strategies and learning (Hall & Hord, 1998; Odden & Picus, 2012).

Peer coaching will supply further collaborative support and assist in fidelity of implementation as working in isolation is the primary reason for disparity in effective teaching within and across classes and institutions (Odden & Picus, 2012). Research findings reported by Joyce and Calhoun (2010) show that “when teachers supported themselves through peer-coaching groups that met regularly together and planned and discussed lessons, implementation rates of new knowledge and skill exceeded 90%.”

To help inform the evaluative process, instructors will provide formative and summative self-reports on their knowledge, skills, self-confidence, and preparedness levels in key PD and SRL concepts, strategies, and skills that will be considered in planning the participants’ PD experiences. Results of this approach are expected to align with additional research on the benefits of collaborative PD that suggests participation bolsters teacher self-efficacy (Kennedy & Smith, 2012), and in turn, increases teacher self-efficacy which is linked to improved student outcomes (Lieberman & Miller, 2011). Furthermore, teachers who engaged in a sustained PLC process around lesson planning and student-led inquiry – as in the presented PD action plan – were able to move from a teacher-driven method of instruction (i.e., “Sage on a Stage”) to a student-centered method of instruction through the course of a year (Miranda & Damico, 2015) – an outcome that is consistent with the aims of SRL instruction for adult learners.

Overview of Professional Development Plan

The PD action plan will be initiated in Fall 2017 with a group of four to six college instructors who have been appointed to teach at least one section of a semester-long, face-to-face undergraduate SRL course in the Human Development and Family Studies (HDFS) program of the participating university's College of Education. In the role of change facilitator (CF) – a key implementation component of the well-established Concerns-Based Adoption Model (C-BAM) detailed in *Change in Schools: Facilitating the Process* (Hall and Hord, 1987) – the course coordinator, or lead instructor, will implement the PD plan in three phases over the course of each semester. Adaptations will be incorporated, as appropriate, in following semesters for instructors with renewed SRL teaching appointments to address their evolving stages of concern, levels of use, and innovation configurations (Hall and Hord, 1987). Appendix D provides an *at-a-glance* overview of the professional development program.

Phase I will consist of a two-day *Course Kick-off* event designed: (a) to welcome the present team of instructors to the SRL professional learning community (PLC), or community of practice, and (b) to train the present team of SRL instructors in relevant, evidence-based frameworks and foundations -- such as adult learning, universal design for learning, and the flipped classroom -- and in course-specific administrative details to prepare for the current term. Final Phase I topic selection will be shaped by instructors' responses on a preformative online survey (available from the author) two weeks prior to the kick-off event.

Phase II will consist of weekly one-hour workshops and resources designed: (a) to build instructors' knowledge, skills, self-efficacy, and preparedness in course-specific

SRL topics and practices and (b) to reinforce a collaborative PLC/community of practice that will assess and refine SRL course methods and materials to align with the tenets and techniques of Phase I in support of student-centered learning objectives. Peer coaching will be provided as additional instructor support during this phase (e.g., Tate, 2012). The SRL Course Overview (Instructor Team Orientation) is available from the author.

After attending Phase II workshops, SRL course instructors should be able to remember, understand, and apply with high self-efficacy: (a) key concepts, contexts, processes, and practices for each SRL topic; (b) a number of evidence-based methods and strategies for success in that topic; and (c) how learning improves through the application, monitoring, and adaptation of those strategies as part of the self-management process. A semester-long learning project using the LASSI (Weinstein & Palmer, 2002) provides learners with hands-on practice – building knowledge, skills, confidence and preparedness in SRL.

Phase III will occur in the final week of the semester and consist of formal and informal summative evaluation(s) of the PD experience and a celebration event that includes learning project reflections, team member affirmations, and more (Tate, 2012).

Preformative, formative, and summative evaluations will be incorporated before, during, and after each phase to assess the merit or worth – including relevance, quality, and effectiveness – of the PD components and to guide necessary improvements in program design, delivery, content, and impact (Guskey, 2002). As part of the overall process, measures of individual instructor's stages of concern, levels of use, and innovation configuration (Hall & Hord, 1987) will be embedded in both informal and formal assessments throughout the PD to monitor participants' point of view as a critical

component of positive, sustainable change. The semester-long program will culminate in a final report for a stakeholder that includes a written evaluative summary of the above results as well as FG and non-FG student learning outcomes with samples and recommendations for data-driven adaptations to the SRL PD program for the subsequent semester(s).

Program Format

To maximize participant engagement and meet individual adult learning needs, PD sessions within each phase will be structured and organized using individual, paired, small- and whole-group formats (Caffarella & Daffron, 2013; Tate, 2012) – primarily face-to-face –supplemented with ongoing online resource sharing and open discussion boards using the collaborative platforms and tools of Dropbox and Blackboard Learn 9. In addition, “Sit & Get” professional learning strategies (Tate, 2012) will be incorporated in content area activities throughout each session to engage and instruct SRL instructors in evidence-based approaches designed to improve their teaching practices and optimize their students’ development of self-regulated learning.

Common Elements Across Phases

Each PD session across phases will have in common several process elements to smooth implementation, facilitate learning, and serve as modeling for participant instructor to apply in their own classroom. For example, the facilitator will arrive early to the designated site to set up all materials (including the room arrangement and a pre-test of any technology-supported components), establishing a relaxed, welcoming environment of respect, inclusion, and collaboration to facilitate adult learning (Dettmer, Knackendoffel, & Thurston, 2013; Tate, 2012). Then, to personalize the learning

experience and to demonstrate an essential professional skill to be taught later to students, the facilitator will open each session by standing at the door to greet – by name and with a handshake – each arriving participant (Tate, 2012).

Mingling will be encouraged as participants arrive for each session as well as during regularly scheduled breaks. Sessions will start on time – even if all participants are not present – to show respect for those who are prompt and to encourage punctuality in the future. Also, to set the tone for learning and to reap its many benefits (Jensen, 2008), background music – appropriate to the theme of the lesson (e.g., high energy or quiet reflection) – will be played as participants arrive and during group and/or individual activities. Fun, memorable ringtones will be used regularly throughout the PD to model the SRL strategy, “Respect the Timer” – and the musical motto, “Keep Moving Forward” from the Disney’s *Meet the Robinsons* will be shared to memorably reinforce the concept of developing a growth mindset (Dweck, 2007) as a framework for the overall PD program. Light refreshments will be provided to energize and encourage participation.

In general, PD presentations will progress through a standardized sequence with customized content for each topic summarized within a simple set of PowerPoint slides following the 10-20-30 Guidelines (Tate, 2012, p. 117). Each session will open with a memorable quote (or question, image, story, quip, activity, or case-based scenario) to introduce a training topic. The facilitator will also provide a clear overview of the learning objectives for a full day’s session, weekly workshop, or individual topic presentation to ensure that participants know the purpose of each PD component and how specific objectives will be achieved (“*By the end of this session, you should know and be able to ...*”). Group and individual expectations –both formally and informally assessed

throughout the sessions – will be acknowledged and incorporated in the PD learning opportunities, as appropriate, while predictable processes for active engagement across sessions will also be established. For example, participants will be introduced to the Fist to Five strategy of holding up five fingers for “*love it!*” to a fist for “*given authority, I would veto it*” (Tate, 2012, p. 55) to indicate their level of support for instructional materials or methods suggested during the PD (or to indicate the number of minutes still needed to complete a group or individual exercise). The classic Thumbs Up, Thumbs Down, or Thumbs Sideways gauge will also be used frequently to determine informally, for example, participant instructors’ attitude, confidence, or buy-in about a strategy or skill. A post-it Parking Lot will also be established for each session to manage discussion questions that arise and cannot be addressed immediately (Tate, 2012).

An essential element, confidentiality will be discussed at the onset of each day’s training (or weekly workshop) with reiterated reminders (e.g., “*Let’s remember that – to help everyone feel safe to share and participate openly and honestly – what happens in our group, stays in our group.*”) as needed, such as when a participant shares something especially sensitive or personal about themselves. Because telling stories is “one of the most powerful tools for shaping the feelings and thinking of others” (Patterson, Grenny, Maxfield, McMillan, & Switzler, 2008), participants will be encouraged at designated points in each session to share their topic-relevant personal and professional experiences – often with a prompt such as, “*tell about a time that ...*” (Tate, 2012). The facilitator will also intersperse appropriate personal and professional stories throughout the presentation to illustrate key points, engage the participants, and create more durable learning (Brown, Roediger, & McDaniel, 2014).

Sessions will end on time or slightly ahead of time with a memorable review activity and self-persuasion reflective writing exercise (Aronson, 1999) – for example, “*Briefly describe how you would convince another teacher to [use this strategy] ... and why.*” – to solidify an actionable takeaway. Specific details for implementation of each of the three phases are available from the author.

Call to Action

The warning signs are clear. America is falling behind even as other developed countries like South Korea, Finland, Japan, China, India, and the United Kingdom are surging ahead in providing their populace with a quality and quantity of higher education that meets the demands of an ever-changing world workforce (Darling-Hammond, 2010). These conditions are a call to action for the United States to properly invest in and educate its next generations to avoid the catastrophic consequences for the nation’s economic stability, international competitiveness, and security. This PD action plan answers the call with frontline evidence-based efforts to support teaching excellence and to enhance FG/non-FG college student performance by aligning instructional practices with the tenets and techniques of adult learning and by providing college instructors with specific knowledge, skills, and strategies needed to facilitate the development of successful self-regulated learners across today’s diverse university campuses.

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Appendix A

Researchers' Interest in First Generation College Students: 1970 -- 2013

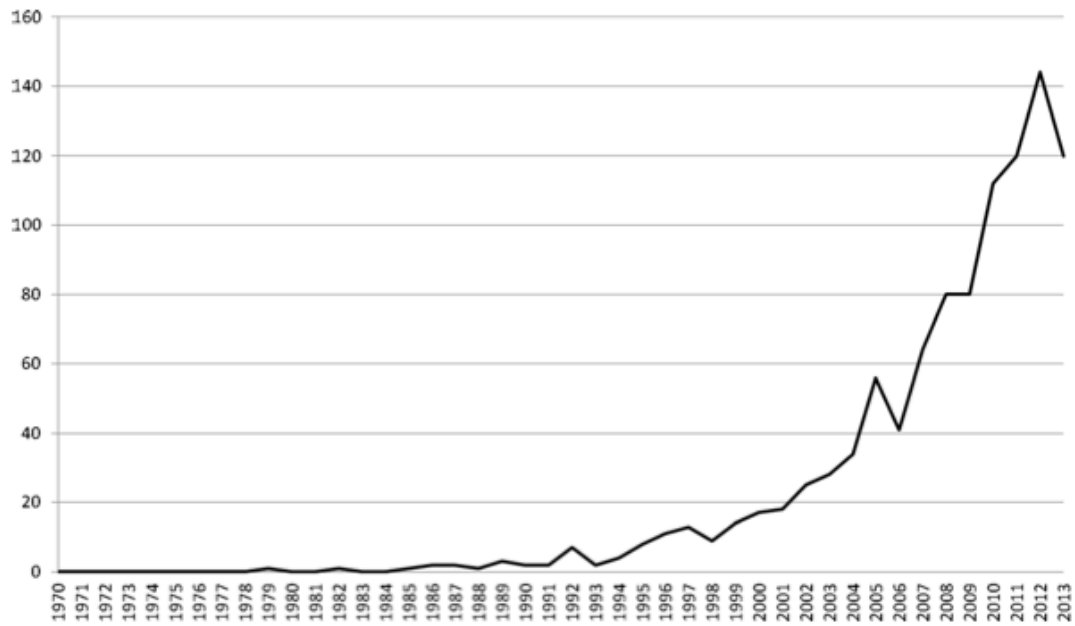



Figure A1. Number of studies with “first-generation college student” appearing in the title, 1970-2013. From “Not Your Typical Student’: The Social Construction of the ‘First-Generation’ College Student,” by T. Wildhagen, 2015, *Qualitative Sociology*, 38(3), p.288. Copyright 2015 by Springer International Publishing AG.

Appendix B

Learning and Study Strategies Inventory (LASSI) 2nd Edition

Learning and Study Strategies Inventory (LASSI) 2nd Edition

Student Instruction Sheet




University 

The Learning and Study Strategies Inventory (LASSI) is designed to gather information about learning and study practices and attitudes. Upon submission and approval of your institution number, 80 statements will be presented that relate to your knowledge of these areas.

If you are ready to begin, locate the following URL with your web browser:

<http://www.hhpubco.com/lassi/>

This URL will direct you to a web page that contains directions for taking the LASSI. After you have read these directions, you must enter your school number to continue. Your school number is listed below along with your user name and password.

School Number: 
User Name: 
User Password: 

After entering this information, the next screen to appear requires you to enter your first and last name into the spaces provided for the page to be submitted correctly. The ID and E-mail fields are optional. The next screen to appear will be the LASSI assessment.

You will be asked to respond to 80 statements. To help you decide which responses to select, we would like to explain what is meant by each option.

- By **Not at all typical of me**, we do not necessarily mean that the statement would never describe you, but that it would be true of you only in rare instances.
- By **Not very typical of me**, we mean that the statement generally would not be true of you.
- By **Somewhat typical of me**, we mean that the statement would be true of you about half of the time.
- By **Fairly typical of me**, we mean that the statement would generally be true of you.
- By **Very much typical of me**, we do not necessarily mean that the statement would always describe you, but that it would be true of you almost all the time.

After completing all the items and successfully submitting the results, a two-page report will be displayed listing your scores for each scale, together with your name, institution, date of administration, and an explanation of your results. You may print a copy of the results for your records.

Appendix C

Institutional Review Board (IRB) Letter of Approval

UNIVERSITY of HOUSTON
DIVISION OF RESEARCH

March 12, 2016

Janeen Antonelli
c/o Dr. Jacqueline Hawkins
Dean, Education

Dear Janeen Antonelli,

Based upon your request for exempt status, an administrative review of your research proposal entitled "Examining the Impact of a Self-Regulated Learning Course for a Diverse Population of Undergraduate Students" was conducted on February 19, 2016.

At that time, your request for exemption under **Category 4** was approved pending modification of your proposed procedures/documents.

The changes you have made adequately respond to the identified contingencies. As long as you continue using procedures described in this project, you do not have to reapply for review. * Any modification of this approved protocol will require review and further approval. Please contact me to ascertain the appropriate mechanism.

If you have any questions, please contact Alicia Vargas at (713) 743-9215.

Sincerely yours,



Kirstin Rochford, MPH, CIP, CPIA
Director, Research Compliance

*Approvals for exempt protocols will be valid for 5 years beyond the approval date. Approval for this project will expire **March 10, 2021**. If the project is completed prior to this date, a final report should be filed to close the protocol. If the project will continue after this date, you will need to reapply for approval if you wish to avoid an interruption of your data collection.

Protocol Number: 16289-EX

316 E. Cullen Building Houston, TX 77204-2015 (713) 743-9204 Fax: (713) 743-9577

COMMITTEES FOR THE PROTECTION OF HUMAN SUBJECTS.

Appendix D

At-A-Glance: Sample Professional Development Program Overview

Frameworks & Foundations																																														
<i>FG, Andragogy, Universal Design for Learning, Flipped Classrooms & More</i>																																														
Phase I	<p>Two Day Course Kick-off one week prior to semester</p> <p>Day One</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td style="width: 20%;">8:45 AM</td><td>Refreshments</td></tr> <tr><td>9:00 AM</td><td>Welcome & Introductions</td></tr> <tr><td>9:30 AM</td><td>PD Overview</td></tr> <tr><td>10:30 AM</td><td><i>Break</i></td></tr> <tr><td>10:45 AM</td><td>FG, Andragogy, & SRL</td></tr> <tr><td>11:45 AM</td><td>Lunch</td></tr> <tr><td>12:30 PM</td><td>Blackboard Learn Course</td></tr> <tr><td>2:00 PM</td><td><i>Break</i></td></tr> <tr><td>2:15PM</td><td>Campus Scavenger Hunt</td></tr> <tr><td>3:30 PM</td><td>Wrap up</td></tr> <tr><td>3:45 PM</td><td>Adjourn</td></tr> </table> <p>Day Two</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td style="width: 20%;">8:45 AM</td><td>Refreshments</td></tr> <tr><td>9:00 AM</td><td>Welcome & Review</td></tr> <tr><td>9:15 AM</td><td>Flipped Classroom</td></tr> <tr><td>10:30 AM</td><td><i>Break</i></td></tr> <tr><td>10:45 AM</td><td>UDL</td></tr> <tr><td>Noon</td><td>Lunch</td></tr> <tr><td>12:45 PM</td><td>LearnSmart Modules</td></tr> <tr><td>2:00 PM</td><td><i>Break</i></td></tr> <tr><td>2:15 PM</td><td>LASSI & Learning Project</td></tr> <tr><td>3:30 PM</td><td>Evaluation & Celebration</td></tr> <tr><td>3:45 PM</td><td>Adjourn</td></tr> </table>	8:45 AM	Refreshments	9:00 AM	Welcome & Introductions	9:30 AM	PD Overview	10:30 AM	<i>Break</i>	10:45 AM	FG, Andragogy, & SRL	11:45 AM	Lunch	12:30 PM	Blackboard Learn Course	2:00 PM	<i>Break</i>	2:15PM	Campus Scavenger Hunt	3:30 PM	Wrap up	3:45 PM	Adjourn	8:45 AM	Refreshments	9:00 AM	Welcome & Review	9:15 AM	Flipped Classroom	10:30 AM	<i>Break</i>	10:45 AM	UDL	Noon	Lunch	12:45 PM	LearnSmart Modules	2:00 PM	<i>Break</i>	2:15 PM	LASSI & Learning Project	3:30 PM	Evaluation & Celebration	3:45 PM	Adjourn	<p>Pre-Kick-off Survey</p> <p style="text-align: center;">Survey Monkey Web Address</p> <p>Selected Topics</p> <ul style="list-style-type: none"> • First Generation College Students • Andragogy / Adult Learning • Self-Regulated Learning (SRL) • Universal Design for Learning (UDL) (The Iris Center, 2012) • Science of Successful Learning • Rigor, Relevance, and Relationships • Facilitating Discussions • Flipped Classroom • Course Management • Use of Technology <p>Course Administration</p> <ul style="list-style-type: none"> • Syllabus / Semester Calendar • Blackboard Learn • Publisher McGraw-Hill Resources
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3:45 PM	Adjourn																																													

Self-Regulated Learning Topics <i>Peak Performance: Success in College and Beyond (Ferrett, 2015)</i>	
Phase II	<p style="text-align: center;"><i>LASSI, PENs & Other Self-Assessments</i></p> <p>Foundational Skills</p> <ul style="list-style-type: none"> • Lifelong Learning • Emotional Intelligence • Time Management • Self-Management Process • SMART Goal Setting • Progress Monitoring • Maximize Your Resources • Professional Attributes <p>Basic Skills and Strategies</p> <ul style="list-style-type: none"> • Listening & Taking Effective Notes • Active Reading • Memory Skills • Test Taking • Writing and Speaking <p>Application</p> <ul style="list-style-type: none"> • Critical Thinking • Creative Problem Solving • Maintaining a Healthy Mind-Body-Spirit • Supportive Relationship • Celebrating Diversity • Positive/Effective Habits • Career Path Development <p style="text-align: center;"><i>Mid-term Classroom Observations</i> <i>Journaling & Reflections</i></p>
	<p>Weekly Workshops</p> <p><i>Peer Coaching</i></p> <p><i>Online Community of Practice</i></p> <p><i>Classroom Implementation</i></p> <p>14-week semester</p> <hr style="width: 10%; margin: auto;"/>

Accomplishments & Lessons Learned	
Phase III	<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p style="text-align: center;"><i>Celebration of Success</i></p> <p style="text-align: center;">final week of semester</p> </div> <div style="width: 50%;"> <ul style="list-style-type: none"> • Learning Outcomes / Reflections • Student Success Outcomes • Fidelity of Implementation Check • Planning Ahead • Final Report </div> </div>
Evidence-based Adaptations to PD for Subsequent Semester	