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THE EFFECT OF HIGH IMPACT PRACTICES ON STUDENT THRIVING IN COLLEGE

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THE EFFECT OF HIGH IMPACT PRACTICES
ON STUDENT THRIVING IN COLLEGE

By

CODY J. LLOYD

A doctoral dissertation submitted to the
College of Education
in partial fulfillment of the requirements
for the degree Doctor of Education
in Organizational Leadership

Southeastern University
March 2019

**THE EFFECT OF HIGH IMPACT PRACTICES
ON STUDENT THRIVING IN COLLEGE**

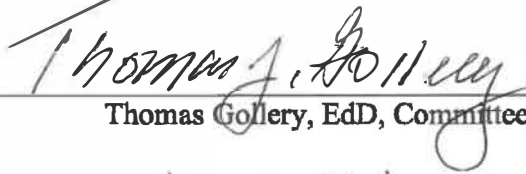
by

CODY J. LLOYD

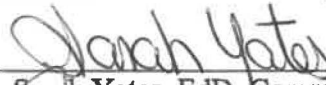
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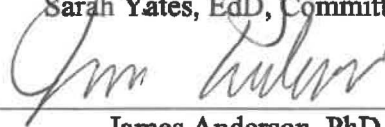
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ABSTRACT

The purpose of this study was to understand the impact of campus involvement, specifically high impact practices, on college student thriving. This single institution quantitative study was conducted at a mid-sized Christian university in the southeastern region of the U.S. Using preexisting data, a predictive analysis was conducted via multilinear regression techniques. Through evaluating college student participation in high-impact practices (HIPs), in addition to “alternative engagement indicators,” as independent variables and college student thriving, using the Thriving Quotient, as the dependent variable there were several notable findings. When considering “alternative engagement indicators”, three of the 11 included in the study were predictive of student thriving: campus events, community service, and religious services. As for specific high-impact practices one out of the 10 practices demonstrated predictive power: service learning.

Key Words: High-Impact Practices; College Student Thriving; Engagement; Involvement; Student Success; Student Development; Higher Education

TABLE OF CONTENTS

Acknowledgments.....	iii
Abstract.....	iv
Table of Contents.....	v
List of Tables.....	vii
List of Figures.....	viii
Chapter	Page
I. INTRODUCTION.....	1
Background.....	2
Purpose Statement.....	5
Research Questions.....	6
Methods.....	6
Definitions.....	9
II. REVIEW OF LITERATURE.....	11
Perspectives on Student Success.....	11
Theoretical Perspectives of Student Success.....	11
Sociological Perspectives of Student Success.....	12
Psychological Perspectives of Student Success.....	14
Organizational Perspectives of Student Success.....	17
Cultural Perspectives of Student Success.....	19
Economic Perspective of Student Success.....	22
Expanded Vision of Student Success.....	24
Thriving.....	27
Humanistic/Positive Psychology Foundations.....	28
Domains of Thriving.....	30
Academic Thriving.....	31
Interpersonal Thriving.....	31
Intrapersonal Thriving.....	32
Thriving Quotient.....	33
Pathways to Thriving.....	34
Theoretical Framework – Engagement/Involvement.....	37
College Impact Theory.....	37
Student Engagement Theory.....	39
Student Engagement/High-Impact Practices.....	41

First-Year Seminar/Experiences	41
Learning Communities and Common Intellectual Experiences	42
Experiential Learning	44
Course-Based High-Impact Practices.....	46
Characteristics of High-Impact Practices	48
Effects of High-Impact Practices	48
Limits on High-Impact Practices	49
Relationship Between HIPs and Thriving.....	50
III. METHOD.....	53
Participants and Procedures.....	54
Instrument.....	54
Variables.....	56
Definition of Terms.....	57
Analysis.....	58
IV. RESULTS	60
Preliminary Analysis.....	60
Research Question 1	61
Research Question 2	63
Research Question 3	64
V. DISCUSSION.....	65
Major Findings	65
Discussion of Results	65
Research Question 1	65
Research Question 2	69
Research Question 3	71
Limitations.....	74
Implications for Practice	75
Future Research	77
REFERENCES.....	79
APPENDICES.....	100

LIST OF TABLES

Table	Page
1	62
2	63
3	64

LIST OF FIGURES

Figure	Page
1 <i>Bean and Eaton's (2000,2001) Psychology Model of Student Retention</i>	15
2 <i>A Framework for Diversity</i>	22

I. INTRODUCTION

The importance of a college education has been clearly researched and documented. A college education provides a path for economic stability both for the individual and the nation. A college education has been a proven predictor of civic engagement, good health, and a higher sense of well-being (Wolfe & Haveman, 2002). A report by Hart Research Associates (2013), indicated that there is a keen awareness of the value of a college education that is held by the public, regardless of socioeconomic status. While there is a clear perceived value in education, and enrollment rates continue to rise overall, there are gaps in enrollment when looking across various demographic groups (Ma, Pender, & Welch, 2016). The same pattern can be seen when considering degree attainment.

With the increase of globalization in higher education, even the former President of the United States has called for increased involvement in higher education as a nation (Obama, 2009). According to the National Center for Public Policy and Higher Education (NCPPE), Americans between the ages of 25-35 are now ranked 10th in the world for college degree attainment (*Measuring Up 2008*, 2008). Degree attainment rates are even more concerning when looking at various demographics such as ethnicity, age, socioeconomic status, and first-generation college students (Choy, 2001). Efforts must continue to be undertaken to improve degree attainment rates, but completion rates only tell part of the story. Many scholars agree that

the definition of student success must be expanded to include the transformative impact that education can have on an individual (Braxton, 2008; Feldman, Smart, & Ethington, 2008; G. Kuh, Kinzie, Cruce, Shoup, & Gonyea, 2007; Perna & Thomas, 2008; Tinto, 2006).

Background and Review of Relevant Literature

A concerted effort has been taken to understand the factors that contribute to retention, persistence, and graduation rates. The historic emphasis on attainment rates is one of the most basic definitions of student success and only takes into account access to college and degree completion (Schreiner, Louis, & Nelson, 2012). This focus on student success led to research that has uncovered a vast set of contributing variables that impact persistence. The amalgamation of these variables form theories of student persistence that align with the following disciplinary perspectives: sociology, psychology, organizational, cultural and economic (Kinzie, 2012).

The sociological perspective of student success takes into account two main factors that influence persistence. First, numerous studies have evaluated the impact of social structures that influence college students (Braxton, 2000; Braxton, Doyle, & Jones, 2013; Tinto, 1986). Some of these social structures include college peers, socioeconomic status, socialization processes, and support from others (Braxton et al., 2013). Second, the sociological perspective considers the shared behaviors that promote a common outcome such as student persistence (Kinzie, 2012).

The psychological perspective of student success focuses primarily on individual students and their psychological characteristics that influence persistence and departure decisions (Astin, 1977, 1993; Bean & Eaton, 2000, 2001). This perspective emphasizes the impact of numerous variables on student persistence including “individual attributes, beliefs, coping skills, levels of

motivation, and interactions with other members of the campus community” (Kinzie, 2012, p. xvii).

The organizational perspective of student success considers the impact of institutional factors such as behaviors, policies, and practices that impact persistence. Research conducted by G. Kuh, Kinzie, Buckley, Bridges, and Hayek (2007) categorized these factors into the following groupings: “institutional size, selectivity, resources, faculty-student ratios...control, mission, and location” (p. 15). These elements impact the level of commitment students have towards an institution, their sense of belonging, and overall satisfaction and, in turn, their likelihood of persisting (Bean, 1980, 1983, 1985).

The cultural perspective of student success evaluates the unique challenges faced by underrepresented student groups. As a result of their unique lived experiences and underlying institutional constructs they are often less likely to benefit from the learning environment of an institution (Astin, 1977, 1993; G. Kuh, J. Kinzie, J. H. Schuh, E. J. Whitt, & Associates, 2005b; Mayhew, Rockenbach, Bowman, Seifert, & Wolniak, 2016).

Finally, the economic perspective of student success weights the cost and benefits of higher education. Specifically, this perspective considers how students conduct informal cost-benefit analysis related to their college experience and the activities they choose to participate in. Braxton (2003) found that students who perceive that the value of their education as not worth the cost are more likely to depart before completing a degree.

As noted previously, the view of student success held by many of the theories outlined above focuses on persistence and degree attainment as the primary measure of success. By applying many of the theories contained within the discipline perspectives outlined above, institutions increase the percentage of students who retain, persist, and graduate. Unfortunately,

this is an oversimplification of student success and the purpose of a college education. In recent years, scholars have begun to expand their view of student success. Some of the additional metrics now being considered in the research include learning gains, talent development, student satisfaction, and student engagement (Kinzie, 2012).

From the emerging perspectives on student success comes the work of Laurie Schreiner on the development of the thriving construct. The thriving construct embodies the concepts of positive psychology and their application to student development theories in higher education. Schreiner (2010c), defines thriving as “the experiences of college students who are fully engaged intellectually, socially, and emotionally in the college experience” (p. 4). Thriving students are often more successful academically, develop a strong sense of community, and have higher levels of psychological well-being. Students who are thriving are more likely to complete college and lead a more productive and satisfying life (Schreiner, 2010c).

If this broader view of student success is embodied within the construct of thriving and the benefits of thriving are evident then what factors influence a student’s ability to thrive? Schreiner’s (2010) research has shown that thriving is “... a distinct construct comprised of (1) engaged learning, (2) academic determination, (3) positive perspective, (4) diverse citizenship, and (5) social connectedness” (p. 4). Four pathways have been identified as having a strong influence on student thriving: a psychological sense of community, spirituality, campus involvement, and student-faculty interaction (Schreiner, 2012).

Developed out of the same emerging perspective on student success comes the research of George Kuh. As a result of Kuh’s extensive research with the Association of American Colleges and Universities (AAC&U), the National Institute of Learning Outcomes Assessment (NIOLA), and Indiana University’s Center for Postsecondary Research comes the development

of a common technique in student success called high impact practices. High impact practices include first-year seminars, common intellectual experiences, learning communities, writing-intensive courses, collaborative assignments, undergraduate research, diversity and global learning, service learning, internships, and senior capstone projects (American Association of Colleges and Universities, 2017). Research on these practices shows substantial evidence of higher grades and increased retention, persistence, and graduation rates (G. Kuh, Cruce, Shoup, Kinzie, & Gonyea, 2008). According to Kuh (2008), what makes these practice high-impact are: the considerable amount of time students invest in educationally purposeful activities, engaging with diverse others, have intentional interactions and formal relationships with faculty and peers, team building, problem-solving, the opportunities to apply theory to practice, and formal feedback on performance.

Since 2008, the number of institutions reporting student participation in high-impact practices has increased (G. Kuh et al., 2008; G. D. Kuh, 2008; McNair & Albertine, 2012). Significant evidence exists that participation in high-impact practices results in positive gains related to persistence and retention, academic and social integration, academic achievement, and ultimately degree attainment (American Association of Colleges and Universities, 2010; Gardener, Upcraft, & Barefoot, 2005; G. Kuh et al., 2008). Even more compelling is that participation in high-impact practices results in positive outcomes for all students, regardless of background (Finley, 2012; G. D. Kuh, 2008).

Purpose Statement

The purpose of this study was to understand the impact of campus involvement, specifically high impact practices, on college student thriving. While extensive research exists on student success and the positive results of participation in high-impact practices (e.g., higher

grades and increased persistence/graduate rates), it is still unclear how formative these experiences can be on the holistic development of students. By evaluating the relationship between involvement in high-impact practices and student levels of thriving, the purpose of this dissertation is to fill the gap in literature and continue to expand the definition of student success beyond degree attainment.

Research Question(s)

In order to address the purpose statement of this study the following research questions are posed:

1. Considering the study's sample of participants what was the manifest level of overall "Thriving" as well as the thriving "domains"?
2. Considering study participant "alternative engagement indicators", which represents the most robust, statistically significant predictor of "Overall" Thriving?
3. Considering "High Impact Practices," which represents the most robust statistically significant predictor of "Overall" Thriving?

Methods

Participants and Procedures

This single institution quantitative study was conducted at a mid-sized Christian university in the southeastern region of the U.S. Students enrolled in the institution represent a wide range of diverse backgrounds.

This study utilized a recently collected pre-existing dataset. Participants included within this dataset are defined as undergraduate students enrolled at a private faith-based institution located in the southeast United States. All students enrolled in the institution, a population of 2,465 traditional undergraduate students, received the Thriving Quotient online survey. The

participants received an invitation to complete the Thriving Quotient through their institutional email address. Reminders were sent seven, 14, and 21 days after the initial announcement. Students had four weeks to complete the survey. Most students should have completed the survey within 20 to 30 minutes. A drawing for one of five \$25 Amazon gift cards was the incentive for students to participate. The survey sample was representative of the overall student population.

Instrument

The Thriving Quotient (TQ) survey includes 25 items that group into the following subscales: Engaged Learning, Academic Determination, Social Connectedness, Diverse Citizenship, and Positive Perspective (Schreiner et al., 2011). The survey also includes 16 additional items that group into additional scales, which have an effect on student success: sense of community, spirituality, institutional integrity, and overall outcomes. The final additional scale measures students' overall sense of confidence in and satisfaction with the institution. Participants provided additional information that rated their levels of participation in various campus activities and services that constitute High Impact Practices (HIPs). The next section requests that participants rate their satisfaction with a variety of campus experiences. The instrument collects an array of demographic and background characteristics, including gender, age, class level, enrollment status (e.g., part-time or full-time), transfer history, grades in high school, educational pursuits, household income, residency status, racial or ethnic background, and financial aid.

The TQ instrument was constructed from multiple public domain instruments and then adapted to higher education based on input from student focus groups (Schreiner, McIntosh, et al., 2009; Schreiner et al., 2011). Multiple pilot studies found the TQ instrument to have “an

internal reliability of $\alpha = .90$ and construct validity evidence from confirmatory factor analysis of a five-factor structure (RMSEA = .042; CFI = .956)” (Schreiner, McIntosh, et al., 2009, p. 10). This analysis confirms that the TQ survey offers a brief, reliable, and valid assessment of students’ academic, interpersonal, and intrapersonal thriving, which are predictive of academic performance and persistence to graduation (Schreiner, McIntosh, et al., 2009).

Variables

Independent variables. For this study, the independent variables are derived from the additional questions on the TQ survey that measure the level of participation in High Impact Practices (HIPs). These variables reflect individual items from the survey. See Appendix A for the specific items and the complete descriptions.

Dependent variables. To measure the contribution of High Impact Practices to student thriving, this study will use the following thriving subscales (i.e., composite measures) as independent variables: (a) Engaged Learning scale, (b) Academic Determination scale, (c) Social Connectedness scale, (d) Diverse Citizenship scale, and (e) Positive Perspective scale along the overall Thriving Quotient mean. Scales were established by computing mean score of individual items. See Appendix A for a complete description of variables.

Definition of Terms

Thriving. The thriving construct embodies the concepts of positive psychology and their application to student development theories in higher education. Schreiner (2010c), defines thriving as “the experiences of college students who are fully engaged intellectually, socially, and emotionally in the college experience” (p. 4).

Student Engagement. Student engagement is defined as “the time and effort students devote to activities that are empirically linked to desired outcomes of college and what institutions do to induce students to participate in these activities” (G. D. Kuh, 2009, p. 683).

High-Impact Practices. According to Kuh (2008), high-impact practices are the activities that have a proven positive impact on student outcomes as a result of the considerable amount of time students are investing in the following undertakings: educationally purposeful activities, engagement with diverse others, intentional interactions and forming relationships with faculty and peers, team building, problem solving, opportunities to apply theory to practice, and receiving formal feedback on performance. Activities that have had proven records as high-impact practices include: first-year seminars/experiences, common intellectual experiences, learning communities, writing-intensive courses, collaborative assignments and projects, undergraduate research, diversity/global learning, service learning/community-based learning, internships, and capstone courses/projects. A detailed definition of each practice can be found in Appendix B.

Analysis

In order to address the stated research questions, the researcher will employ both descriptive and inferential statistical techniques. Specifically, measures of central tendency, variability, and percentages will be utilized for comparative purposes. To test the statistical significance of finding t-test of Independent/Dependent Means, ANOVA, and linear regression will be used to analyze study data. In all cases of statistical significance testing an alpha level of .05 will be employed as the threshold for the determination of statistical significance.

A variety of preliminary analyses were employed prior to the formal address of the study’s research questions. Missing data, internal consistency of participant response, and

essential demographic information were evaluated using both descriptive and inferential statistical techniques. Both descriptive and inferential statistical techniques were utilized to address Research Question #1. The mean score and standard deviation constitutes the primary means of descriptive statistical analyses. The inferential statistical technique *Single Sample t-test* was utilized to evaluate the statistical significance of the finding in Research Question #1. Research Question #1 was used to ensure goodness of fit between existing applications of the Thriving Quotient and the sample included in this study. The Multiple Linear Regression test statistic was used to assess the predictive robustness of “alternative engagement indicators” such as engagement with faculty, engagement in campus events/activities, community service, and level of engagement for Research Question #2. Regression test statistics was used to assess both the statistical significance of independent predictor variables and the likelihood (odds ratio) values in the predictive models for Research Question #3. Stepwise and hierarchical methods were used along with a receiver operator characteristic (ROC) curve post-hoc test to ensure appropriate depth and breadth of the regression analysis.

II. REVIEW OF LITERATURE

Perspectives on Student Success

A concerted effort has been taken to understand the factors that contribute to retention, persistence, and graduation rates. The historic emphasis on attainment rates is one of the most basic definitions of student success but only takes into account access to college and degree completion (Schreiner et al., 2012). The subsequent focus on student success led to research that has uncovered a vast set of contributing variables that impact persistence. The combination of these variables form theories of student persistence that align with the following disciplinary perspectives: sociology, psychology, organizational, cultural and economics (Kinzie, 2012). In addition to the theoretical perspectives on student success this section will also explore various characteristics that impact persistence. This section will close with an expanded perspective of student success.

Theoretical Perspectives of Student Success

Over the last several decades student persistence has been a heavy focus for higher education scholars (Braxton, 2000). After WWII, and the introduction of the Servicemen's Readjustment Act (GI Bill), enrollment in higher education skyrocketed. With government funded education and an influx of returning GIs, colleges and universities were reestablished as a focal point of the American dream (Johnson, 2010). Research on student persistence began in the 1970s and rapidly proliferated in the 1980s and 1990s as universities began to realize the significance of retaining and graduating students (Kinzie, 2012). With the rise of research on

student persistence and the development of theories on student success, formal disciplinary perspectives were developed. The following sections will focus on the sociological, psychological, organizational, cultural, and economic perspectives on student success.

Sociological perspectives of student success. The sociological perspective of student success takes into account two main factors that influence persistence. First, numerous studies have evaluated the impact of social structures that influence college students (Braxton, 2000; Braxton et al., 2013; Tinto, 1986). Some of these social structures include college peers, socioeconomic status, socialization processes, and support from others (Braxton et al., 2013). Second, the sociological perspective considers the shared behaviors that promote a common outcome such as student persistence (Kinzie, 2012).

The foundational sociological theory pertaining to student success is Tinto's (1975, 1987, 1993) interactionist theory of student departure. To reinforce the foundational nature of Tinto's theory a meta-analysis by Braxton, Sullivan, and Johnson (1997) found over 775 citations of the theory. In his theory, Tinto (1975) postulated that student departure from college is a "longitudinal process of interactions between the individual and the academic and social systems of the college" (p. 94). Academic integration consisted of structural (performance) and normative (educational values) elements that students navigate in their transition into college. If a student fails to perform well academically or holds a misaligned value of education it impacts their persistence. Social integration involves the level of congruency between the student and the social structures of the college environment. If a student has positive or negative interactions with fellow students, faculty, or staff it impacts their level of commitment to the institution.

Tinto revised this theory of student departure several times based on further research by the higher education community and his own. His first revisions in 1987 resulted in the

development of a formal theoretical framework that organized research on student departure into psychological, sociological, economic, organizational, and interactional perspectives. Tinto's second major revision to the theory culminated in his 1993 work *Leaving College: Rethinking the Causes and Cures of Student Attrition*. In this revised work, Tinto took into account the experiences of adult learners, students of color, commuters, and students at two-year colleges.

While Tinto's theory of student departure is considered a seminal work, it has not been received without critique. Concerns have been raised about Tinto's methodology (E. Pascarella, 1986; Tierney, 1992), philosophical foundations (Attinasi, 1989), and experimental support (Braxton & Hirschy, 2004; Braxton et al., 1997). As a result of the critiques Braxton et al. (2004) offered a revised interactionist theory of student departure. This revised theory took further into account the various social factors that impact student persistence. These factors include "commitment of the institution to student welfare, institutional integrity, communal potential, proactive social adjustment, psychosocial adjustment, and ability to pay" (p. 22). Braxton et al. (2004) took into account the role of student involvement and the psychological energy they would need to invest to successfully transition into college. Braxton et al. (2004) also acknowledged the role of the institution to create an environment where students could "learn the behaviors, values, and attitudes needed to establish membership in the college community" (p. 25).

In conclusion, the sociological perspective of student success takes into account the both the social structures of the college environment and the student's ability to navigate those structures. While there are preexisting factors that students bring with them to college, the institution also has the ability to create socialization opportunities that aid in a student's

transition into the college environment and positively or negatively influence student persistence and, ultimately, student success.

Psychological perspectives of student success. The psychological perspective of student success focuses primarily on individual students and their psychological characteristics that influence persistence and departure decisions (Astin, 1977, 1993; Bean & Eaton, 2000, 2001). This perspective emphasizes the impact of numerous variables on student persistence including “individual attributes, beliefs, coping skills, levels of motivation, and interactions with other members of the campus community” (Kinzie, 2012, p. xvii).

Alexander Astin’s (1975) research on college factors that influence persistence ultimately lead to one of the first major psychological theories on student persistence, Astin’s (1984) student involvement theory. Astin defined involvement as “the amount of physical and psychological energy that the student devotes to the academic experience” (p. 297). Astin’s perspective on involvement is focused more on the behavioral aspects of involvement versus the psychological motivation that a student may or may not display. In other words, what actions do students actually take towards engaging in their academic work versus what motivates them to do so. The introduction of involvement theory took some of the weight of student success off of the institution (curriculum, pedagogy, and resources) and empirically supported the need for students to be involved (Astin, 1985). While curriculum, pedagogy, and institutional resources are a key part of the educational experience, the amount of energy a student invests impacts their talent development or behavioral habits that will allow for long-term student development (e.g. life-long learning). The primary critique of Astin’s student involvement theory is that its development relied on the impact of majority members of the college environment. At the time

of the theory's development, the majority member of college campuses were white. The theory does not take into account cultural implications of ethnic and racial minorities (Bensimon, 2007).

The second major psychological theory that informed student success research is Bean and Eaton's psychological model of student success. Bean and Eaton's (2000) model of student success postulates that a student's reason to leave college is motivated by psychological processes. Bean and Eaton include the following psychological theories in the development of their model: attitude-behavior theory (Fishbein & Ajzen, 1975), coping behavior theory (Eaton & Bean, 1995; French, Rodgers, & Cobb, 1974), self-efficacy theory (Bandura, 1982, 1986, 1997), and attribution theory (Weiner, 1985). Attitude-behavior theory states that a person's beliefs become attitudes which become intentions and ultimately behaviors. Coping behavior theory essentially describes how a person is able to evaluate and adapt to his/her current environment. Self-efficacy theory is defined by an individual's perception of their ability to perform to achieve a specific outcome. Finally, attribution theory focuses most commonly on a person's locus of control or how they perceive past experiences and how that perception might shape future behavior. Based on these psychological theories Bean and Eaton (2000, 2001) developed their model of student retention. Figure 1 provides a visual representation of the model.



Figure 1. Bean and Eaton’s (2000, 2001) psychological model of student retention. Adapted from “A psychological model of college student retention” by J. Bean and S. Eaton, 2000, *Reworking the Student Departure Puzzle*, p. 57. Copyright 2000 by the Vanderbilt University Press.

In summary, Bean and Eaton’s (2000, 2001) psychological model of student retention provides some of the foundational research on cognitive and non-cognitive aspects of student persistence. Taking into account theories on attitude-behavior, coping, self-efficacy, and attribution, Bean and Eaton were able to assess how students integrate into the college environment socially and academically and how that integration impacts student retention and persistence.

The research, theories, and models developed by Bean and Eaton (2000, 2001) and Astin (1977, 1993) were pivotal developments in student persistence research and they allowed for the development of continued research on the psychological aspects of student success. In addition to the psychological theories noted within Bean and Eaton’s model the following theories have also contributed to the psychological perspective of student success: expectancy-value (Ethington, 1990; Wigfield & Eccles, 2000, 2002), self-determination (Deci & Ryan, 1985, 1991; Ryan & Deci, 2000), psychological contracts and student expectations (Howard, 2005; Rosseau, 1995), and theories of intelligence (Dweck, 1996, 2000, 2016).

Expectancy-value theory takes into account the expectation a student has about success and the value he/she place on degree attainment. Self-determination theory evaluates student extrinsic and intrinsic motivation and how that impacts goal development and decision making. Psychological contract theory postulates that students come to college with a set expectation on how interactions with peers and other members of the institution will occur. When students feel these expectations are not met the level of trust a student has in the institution and/or peers is reduced. Finally, theories of intelligence, specifically Dweck's (2000) implicit self theory, evaluates the mindset a student has about personal abilities and intelligence. Dweck found that students either have an entity or incremental view on intelligence. An entity view implies intelligence is fixed and an incremental view implies intelligence is malleable and can expand with practice.

In summary, three key premises arise from the research on psychological perspectives on student success. First, student involvement is key to student achievement. Second, the following psychological practices influence a student's institutional fit, student commitment, and student persistence: the transition of attitudes to behavior, coping skills, self-efficacy, and locus of control. Third, social integration is impacted by a student's perceived value of a college degree, psychological contracts, and their perceptions of intelligence. The psychological aspects of student success are complex and multi-faceted and must be considered when trying to determine a student's decision to persist and graduate.

Organizational perspectives of student success. The organizational perspective of student success considers the impact of institutional factors such as behaviors, policies, and practices that impact persistence. Research conducted by G. Kuh, Kinzie, Buckley, et al. (2007) categorized these factors into the following groupings: "institutional size, selectivity,

resources, faculty-student ratios...control, mission, and location” (p. 15). These elements impact the level of commitment students have towards an institution, their sense of belonging, and overall satisfaction and, in turn, their likelihood of persisting (Bean, 1980, 1983, 1985).

Bean (1980) developed the casual model of student attrition. This model took into account the various instructional factors that impact student satisfaction and ultimately retention, persistence, and graduation. Bean’s model made the following assertions:

1. The background characteristics of students must be taken into account in order to understand their interactions within the environment.
2. The student interacts with the institution, perceiving objective measures, such as grade point average or belonging to campus organizations, as well as subjective measures, such as the practical value of the education and the quality of the institution.
3. These variables are in turn expected to influence the degree to which the student is satisfied with the college.
4. The level of satisfaction is expected to increase the level of institutional commitment.
5. Institutional commitment is seen as leading to a decrease in the likelihood that a student will drop out of school. (pp. 158-160)

Bean (1983, 1985) continues to research and update his model adding in additional academic, psychosocial, and environmental factors that impact student persistence. Bean’s model of student attrition is not without limitation. Cabrera, Castañeda, Nora, and Hengstler (1992) found that Bean’s model lacked sound empirical support. They felt that overlap that existed between Bean’s model and Tinto’s (1993) interactionalist theory should be merged to provide a more holistic and empirically support theory of student departure.

Berger and Braxton (1998) contributed to the research on organizational impacts to student persistence through their revisions to Tinto's (1987) interactionist theory of student departure. Berger and Braxton expanded Tinto's theory in an attempt to measure the impact of organizational traits on student social integration. Through their work, Berger and Braxton found that the following institutional factors influenced social integration and student persistence: institutional communication, fairness in policy and enforcement, and student participation in the decision-making process. A limitation of Berger and Braxton's work is the limited scope of their sample making it difficult to apply their theory broadly to higher education.

The final organizational theory that has a key impact on student success is Berger's (2000a, 2000b, 2001) work on understanding how organizational behavior impacts student success. Berger evaluated the organizational behavior of an institution through five lenses: bureaucratic, collegial, political, symbolic, and systemic. Berger found that institutional types/processes impact the level of involvement a student has and that organizations should consider how their organizational practices and policies might be impacting student success.

Through a review of research on the organizational perspective of student success it is clear that organizational characteristics have an impact on student sense of belonging (intuitive fit), satisfaction, and student retention, persistence, and graduation. Institutions have a key role and influence on student socialization and integration within the community. Finally, institutional behavior, policies and procedures have an impact on student engagement and sense of belonging.

Cultural perspectives of student success. The cultural perspective of student success evaluates the unique challenges faced by underrepresented student groups. As a result of their

unique lived experiences and underlying institutional constructs they are often less likely to benefit from the learning environment of an institution (Astin, 1977, 1993; G. Kuh et al., 2005b; Mayhew et al., 2016). In light of this a number of critiques have been voiced on the foundational theories of student success. Tinto's (1975, 1987, 1993) model for student success has been criticized for the culturally biased assumptions used to form the model (Attinasi, 1989, 1992; Tierney, 1992, 1993). Additionally, Astin's (1984, 1985) theory of student involvement and Kuh's et al. (2005a) research on student engagement have been criticized for their use of a dominant frame of reference. Bensimon (2007), postulates that these prominent theories view engagement and involvement through the perspective of the majority students on the college campus, which are predominantly white. When these theories of involvement and engagement are applied students from different cultural backgrounds are often overlooked.

An effort has been taken to develop models of student success that take into account culturally diverse backgrounds that can be generalizable to all of higher education. Some of those models include Kuh et al.'s (2007) application of habitus concept, Kuh and Love's (2000) culturally responsible model of student departure, Museus' (2014) culturally engaging campus environments model, and Smith's (2011, 2015) institutional diversity framework.

The habitus concept considers that there are unconscious dispositions that influence what an individual aspires to do or become. Kuh et al. (2007) postulates that the habitus concept explains the various patterns that exist with underrepresented student engagement in the college environment. Kuh et al. (2007) also state that the role of the institution is to help build cultural capital among underrepresented students to help encourage cultural patterns that might unconsciously impact student success.

Kuh and Love (2000) developed a culturally responsible model of student departure and

outlined the following propositions that could influence underrepresented students' departure from college.

1. The college experience, including a decision to leave college, is mediated through a student's cultural meaning-making system.
2. One's cultures of origin mediate the importance attached to attending college and earning a college degree.
3. Knowledge of a student's culture of origin and the cultures of immersion is needed to understand a student's ability to successfully negotiate the institution's cultural milieu.
4. The probability of persistence is inversely related to the cultural distance between a student's culture(s) of origin and the cultures of immersion.
5. Students who traverse a long cultural distance must become acclimated to dominant cultures of immersion or join one or more enclaves.
6. The amount of time a student spends in one's culture of origin after matriculating is positively related to cultural stress and reduces the chances that they will persist.
7. The likelihood a student will persist is related to the extensity and intensity of one's sociocultural connections to the academic program and to affinity groups.
8. Students who belong to one or more enclaves in the cultures of immersion are more likely to persist, especially if group members value achievement and persistence (p. 201).

Kuh and Love (2000) intentionally state that this list is not all inclusive. While their model does not have an empirical basis, it laid the foundation for future research on culturally aware models of student success.

Museus' (2014) built upon the work of Kuh and Love (2000) to develop a quantifiable

model of student success that was culturally and racially relevant. Museus' culturally engaging campus environment (CECE) model intentionally addresses the critiques of past theories and developed a model that can be quantified, tested, and applied in future research. The model takes into account pre-college characteristics, student involvement and engagement, and the role of the student on their own success. While additional validation is needed, Museus' work has provided a framework for assessing student success for racially diverse students.

Finally, Smith's (2011, 2015) institutional diversity framework evaluates from an institutional perspective the capacity of an institution for diversity. Smith identified five dimensions that should be evaluated: mission, institutional viability and vitality, education and scholarship, climate and intergroup relationships, and access and success. Figure 2 provides a visual review of the framework.

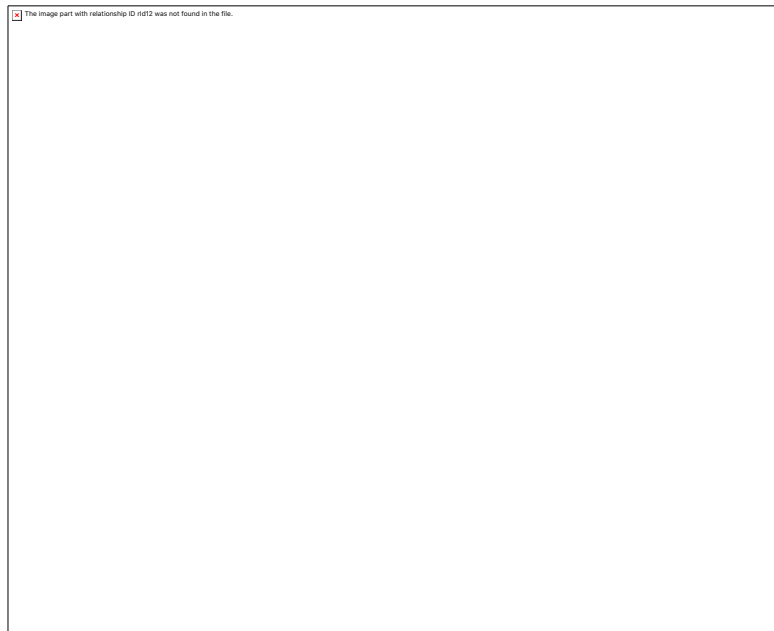


Figure 1. A framework for diversity. The above figure presents a visual representation of Smith's (2011, 2015) framework on institutional capacity for diversity. The five dimensions (e.g., institutional viability and vitality) represent the major components of a higher education environment that is conducive to diversity. Retrieved from "A Diversity Framework for Higher Education" by D. G. Smith, 2011, *Diversity's promise for higher education: Making it work*, p. 64. Copyright © 2011, 2015 by The John Hopkins University Press.

Smith's work provides a roadmap for institutions wanting to build their capacity for

diversity. He notes that efforts should not just be taken to increase the diversity on campus but to ensure that students feel welcomed and are successful.

Economic perspectives of student success. Finally, the economic perspective of student success weighs the cost and benefits of higher education. Specifically, this perspective considers how students conduct informal cost-benefit analysis related to their college experience and the activities they choose to participate in. Braxton (2003) found that students who perceive that the value of their education is not worth the cost, are more likely to depart before completing a degree.

Through the research it is clear that there is a strong economic benefit to participation in higher education (Abel & Deitz, 2014; Haskins, Holzer, & Lerman, 2009). Abel and Deitz (2014) found that individuals with a college degree will earn 56% more than a high school graduate and on average will earn \$1 million more in their lifetime. While there is a clear economic benefit from a college education there is still a significant gap between the social and economic mobility of students based on the socioeconomic status of their families when they enter college (Haveman & Smeeding, 2006).

Despite the inequity between socioeconomic status a college education still has a significant economic impact on graduates and thus has fueled the demand for higher education (T. D. Snyder, de Brey, & Dillow, 2016). Unfortunately, trends in college pricing indicate significant increases in the cost of college over time. College Board's (2016a) annual study on college cost indicates that "...between 2006-07 and 2016-17, published in-state tuition and fees at public four-year institutions increased by an average of 3.5% per year beyond inflation, compared with average annual increases of 3.9% and 4.2% over the two prior decades" (p. 14). As an eye-opening comparison "median family income in the United States rose at an average

rate of 0.5% per year between 1986-1996 and 0.8% per year between 1996 and 2006...and 0.4% from 2005-2015 [after adjusting for inflation]" (p. 14).

If one considers that the rising trend of college cost is far surpassing the median income of families, and the widely-held perception of the value of education, then it would be assumed that the funding of higher education must be keeping pace to meet the need. Unfortunately, according to College Board's (2016b) annual study on trends in student aid, "both total federal education loans and federal loans per full-time equivalent (FTE) student declined for the fifth consecutive year in 2015-16. Total expenditures on federal Pell Grants peaked in 2010-2011 and have declined in each year since" (p. 3).

With the rising cost of attendance researchers have focused on how cost impacts the benefit of persisting. St. John, Cabrera, Nora, and Asker (2000) evaluated this cost-benefit analysis and developed a price-response theory that considered the economic factors that balance with the social and economic benefits of attending college. A key aspect of price-response theory is the perception a student holds related to their ability to afford college. Research has shown that ability to pay has a direct impact on student persistence (Cabrera, Nora, & Castañeda, 1992; Cabrera, Stampen, & Hansen, 1990). Additionally, the use of financial aid has had a positive impact on student persistence. Although the type of financial aid has varying impacts. Hossler, Ziskin, Gross, Kim, and Cekic (2009) found in their meta-analysis that grant and work-study programs had a positive impact on student persistence while loans had a negative impact on persistence. This finding shows that financial instruments that cause a student to accumulate debt impacts their ability to persist.

Research by St. John et al. (1996) resulted in the development of the choice-persistence nexus model. This model consists of a three-stage process. First, a student's academic or

socioeconomic background influences their perception of how likely college attendance really is. Second, the student weighs the cost and benefit of attending a particular college. Third, the student's college experience and events that occur during it influences his/her desire to persist and their cost-benefit analysis. St. John's model feeds into the construct of tuition worthwhileness. This construct evaluates the perception of students and if they feel the value of the college experience is worth the cost.

Expanded Vision of Student Success

As noted previously, the view of student success held by many of the theories outlined above focuses on persistence and degree attainment as the primary measure of success. By applying many of the theories contained within the discipline perspectives outlined above, institutions aim to increase the percentage of students who retain, persist, and graduate. Unfortunately, this is an oversimplification of student success and the purpose of a college education. In recent years, scholars have begun to expand their view of student success. Some of the additional metrics now being considered in the research include learning gains, talent development, student satisfaction, and student engagement (Kinzie, 2012).

According to Kinzie (2012), learning gains are the "attainment of various intellectual, personal, and social development outcomes" (p. xx). Tagg (2003) focused his work on a learning-centric view of student success where advances in a student's learning denoted student success. Tagg (2013) felt that for learning gains to occur there must be a deep approach to learning versus a surface level. Deep learning is when a student is focused on grasping the concepts and meaning of information in a way that they can relate to and apply it to his/her life, rather than taking in information superficially for exams or test only to forget it afterwards. Deep learning is often the result of an active, holistic, incremental, mindful, and enjoyable

approach to learning, as opposed to an inert, atomistic, entity, mindless, and unpleasant approach to surface learning.

Along the same lines of learning gains, talent development emphasizes how institutions expand the capacities of their students. Astin (1985) laid the foundation for institutional roles in talent development. In his I-E-O model (Input, Environment, Outcome) the environment maintained by the institution has a significant impact on student development. G. Kuh et al. (2005b) postulated that talent development assumes that all students have the capacity to learn and grow given the right conditions. With this view in mind, institutions dedicated to student success must establish learning environments that seek to support learners from a wide variety of academic, personal, and socioeconomic backgrounds.

Student satisfaction is another dimension of the explained vision of student success. Student satisfaction takes into account the student's perception of and response to how well an institution meets his/her expectations (Athiyaman, 1997). Student satisfaction can have positive and negative effects for an institution. Depending on how well an institution meets or does not meet a student's expectations also impacts a student's perception of institutional quality. As a result, this impacts how a student engages with the institution (Nelson, 2015). Research has shown various impacts of student satisfaction of the student experience such as increased retention, persistence, and graduation rates (Schreiner, 2009; Schreiner & Nelson, 2013), commitment to the institution (Alves & Raposo, 2007), increased alumni engagement (Gaier, 2005; Monks, 2003), engagement in out of classroom experiences (Astin, 1993; Billups, 2008; Strapp & Farr, 2009), and an increased communal connection (Billups, 2008; Liu & Liu, 2000). Nelson (2015) described the effect of student satisfaction as a "mediating influence that promotes a healthy academic career, ongoing institutional commitment, and a positive long-term

relationship between alumni and their alma mater” (p. 29).

The final dimension in the explained vision of student success is Kuh’s (2001, 2003) concept of student engagement. Kuh defines student engagement in two parts, first, the amount of time and energy a student dedicates to educationally purposeful activities and, second, the amount of resources an institution dedicates to these activities. G. Kuh, Kinzie, Cruce, et al. (2007) found that student engagement had a positive effect on academic performance, retention, persistence, and graduation rates. G. Kuh et al. (2005b) postulated that while student characteristics influence engagement institutions must be intentional to create opportunities for engagement.

Taking into account the foundational perspectives of student success and integrating the expanded visions for student success previously discussed, G. Kuh, Kinzie, Buckley, et al. (2007) provide a more holistic definition of student success as “academic achievement; engagement in educationally purposeful activities; satisfaction; acquisition of desired knowledge, skills, and competencies; persistence; and attainment of educational objectives” (p. 10). An expanded vision of student success takes into account a wide variety of confounding factors. Due to the complex confounding variables that impact student success, Kinzie (2012) states that there is no single solution to help students succeed, but rather a concerted campus-wide effort from all stakeholders must occur and take into account the factors outlined in this section.

Thriving

The pioneering work of Schreiner (2010c) continues to expand the view of student success in college. While Schreiner’s conceptual framework takes into account many of the expanded views outlined previously her work provides a working theory of holistic student well-being that not only supports student success, but human flourishing. Grounded in positive

psychology, Schreiner defines student thriving as student being “fully engaged intellectually, socially, and emotionally in the college experience” (p. 4). Schreiner (2010c) has found that students who are thriving tend to engage in deep learning, intentionally work towards goals, value the perspectives of others, foster healthy relationships, and overall have a positive perspective. As a result, thriving students experience personal and academic success that promotes retention, persistence, and graduation rates and ultimately are able to experience the full benefits of a college education (Schreiner, 2010c).

Humanistic/Positive Psychology Foundations

Thriving finds its roots in the humanistic tradition of psychology. Humanistic psychology, like most other modern psychologies, can be traced back to one of its ancient philosophical counter-parts. Humanistic psychology has strong roots with romanticism and existentialism. The perspectives of the romantics were that humans are not the machines making decisions only on logical and rational thinking as the empiricists, sensationalist, and rationalist would like you to think, but humans were much more than that. Romantics sought to separate themselves from “reason,” religious dogma, science, and societal law. Honestly expressed feelings were the only true way of controlling behavior. Romantics believed that humans are born naturally good and if they were not restrained by society then self-actualization is possible, but if they are held back by society then the negative aspects of human behavior manifest such as self-destructive and antisocial behavior (Hergenhahn, 2009).

The existentialists believed that the mere fact that we are humans is important enough to separate ourselves from other beings, that we have the ability to apply meaning to life, and personal subjectivity is truth. Truth was not some ultimate discovery waiting to happen but truth is something that lives inside every human being. The existentialists, especially Nietzsche,

believed that there were two ways to go about life; one a person could accept conventional morality and join the herd of humans being guided in life by invisible barriers, or, two, you could test your beliefs and tweak them to fit yourself ultimately arriving at self-actualization, or as Nietzsche put it, become supermen (Hergenhahn, 2009).

Humanistic psychology is a combination of both existentialism and romanticism and their philosophies but it also includes the psychological ideas of phenomenology and existentialism. They applied the idea of phenomenology by focusing attention on to the cognitive experiences in their unaltered form and avoiding the reduction and analysis of every mental component. The existential psychology that was applied to humanism was ideal to bring back and point out the importance of human feelings, freewill, and individuality of life (Hergenhahn, 2009).

While the humanist tradition of psychology has existed for over a half century the American Psychological Association did not recognize formal theories, such as positive psychology, as a credible research agenda until 1998 (Seligman & Csikszentmihalyi, 2000). This recognition created a shift from a reductionist approach (e.g. disease model) that focused on addressing weaknesses to a model that focused on the development of strengths. Seligman and Csikszentmihalyi (2000) stated that “human strengths act as buffers against mental illness [including strengths such as] ...courage, future mindedness, optimism, interpersonal skills, faith, work ethic, hope, honesty, perseverance, and the capacity for flow and insight” (p. 7).

The thriving construct connects to the field of positive psychology through the sub-discipline of human flourishing. Keyes (2003) feels that the goal of mental health research is to aid in human flourishing which he defines as “a state in which an individual feels positive emotion towards life and functions well psychologically and socially” (p. 294). Keyes (2003) defines the lack of mental health as the “absence of positive emotions toward life and not

functioning well psychologically and socially” (p. 294). According to Keyes (2003), these individuals are not diagnosed as depressed and as he defines it are “languishing”. The goal of positive psychology is to help enable human flourishing and elevate individuals out of languishing. In *Flourishing*, Keyes and Haidt (2003) highlighted research on human flourishing and some of core aspects of it. Some of the attributes include resilience, psychological growth in transitions, optimism, vital engagement, goal orientation, healthy relationships, creativity, fulfillment, productivity, prosocial actions, use of wisdom in life management, and, the positive emotional response to actions of virtue.

In addition to positive psychology and human flourishing, the thriving construct also pulls from Bean and Eaton’s psychological model of student success. Bean and Eaton’s (2000) model of student success postulates that a student’s reason to leave college is motivated by psychological processes. Bean and Eaton include the following psychological theories in the development of their model: attitude-behavior theory (Fishbein & Ajzen, 1975), coping behavior theory (Eaton & Bean, 1995; French et al., 1974), self-efficacy theory (Bandura, 1982, 1986, 1997), and attribution theory (Weiner, 1985). Attitude-behavior theory states that a person’s beliefs become attitudes which become intentions and ultimately behaviors. Coping behavior theory essentially describes how a person is able to evaluate and adapt to their current environment. Self-efficacy theory is defined by an individual’s perception of his/her ability to perform to achieve a specific outcome. Finally, attribution theory focuses most commonly on a person’s locus of control or how they perceive past experiences and how that perception might shape future behavior. As a result, Bean and Eaton’s model of student success takes into account student perception of his/her abilities and how the college environment shapes his/her view of college and ultimately their well-being during the college experience.

Domains of Thriving

Considering the interconnectedness of positive psychology, human flourishing, and the psychological models of student success, Schreiner (2012) conceptualized thriving as students experiencing ideal levels of academic engagement, interpersonal relationships, and psychological well-being. There are three domains of college student thriving inclusive of five composite measures: academic thriving includes the measures of engaged learning and academic determination; interpersonal thriving includes the measures of social connectedness and diverse citizenship; and intrapersonal thriving includes the measure of positive perspective.

Academic thriving. Academic thriving is the core domain that addresses the psychological processes related to student success. The first composite measure within the academic thriving domain is engaged learning. Engaged learning involves the extent to which a student is engaged in the learning process emotionally, behaviorally, and intellectually (Schreiner, 2010b; Schreiner & Louis, 2011b). Schreiner (2010b) discovered a positive correlation between levels of engaged learning and satisfaction with the learning environment along with out of class engagement with faculty members and self-reporting gains in learning. Inversely Bean (2005) stated “participating in the events without committing psychological energy to them indicates that they are unimportant to the student and thus ineffectual in changing the student” (p. 3).

Beyond academic engagement, academic determination is the construct that evaluates the level of grit and persistence a student has to overcome challenges and achieve academic goals. Academic determination is directly tied to the amount of energy and time a student is willing to dedicate towards their academic pursuits. According to Schreiner (2010b), there are four main aspects of academic determination 1) level of effort, 2) self-regulation, 3) mastery of the learning

environment, and 4) goal-oriented perspective. Ultimately, students that demonstrate academic determination are able to set realistic goals, be willing to commit time and energy into those goals, and navigate the learning environment in order to achieve their learning goals.

Interpersonal thriving. Interpersonal thriving is the domain that focuses on the types of relationships a student forms in the college environment. Students that are thriving interpersonally develop healthy relationships and participate in activities that promote a higher sense of self and make a positive impact on community (Rayle & Chung, 2007). The specific construct within interpersonal thriving is that of social connectedness. This construct measures how involved a student is in positive relationships. Schreiner (2012) defines these positive relationships for a student as having "...good friends, being in relationships with others who listen to them, and feeling connected to others so that one is not lonely" (p. 8). Additionally, Schreiner (2010a) noted that a college environment where students feels known, valued, and supported ultimately fosters the well-being of the student. Finally, in their seminal work Chickering and Reisser (1993) noted that a student's ability to foster healthy relationships is a core component of the student development process.

The second construct within interpersonal thriving is that of diverse citizenship. Schreiner (2010a) noted that in addition to having strong healthy relationships a thriving student also demonstrates respect towards the differences of others and ultimately is driven to contribute to the well-being of their local and global communities. Ultimately, through establishing diverse relationships and engaging in social action student develop a sense of belonging that in return allows them to more fully engage in the college experience (Schreiner, McIntosh, Nelson, & Pothoven, 2009).

Intrapersonal thriving. The last domain of thriving is that of intrapersonal thriving.

This domain considers the positive psychological functioning of college students including perceptions of oneself, relationships with others, the college experience, and the learning process (Schreiner, 2010c). Within the thriving domain is the construct of positive perspective. This construct was born out of the application of the optimism construct to higher education (Carver, Scheier, Miller, & Fulford, 2009a, 2009b). According to Schreiner (2012), students who are thriving interpersonally have positive perspectives in which they view challenges as momentary, not the norm, and incidental to their lives. As a result, “[students] experience more positive emotion on a daily basis, which leads to higher levels of satisfaction with the college experience” (Schreiner, 2012, p. 7). The combination of both positive perspective and satisfaction with college allows a thriving student to experience higher levels of well-being with the learning process and relationships with others.

Thriving Quotient

Based on much of the research outlined previously the Thriving Quotient (TQ) was developed as a tool to measure levels of thriving among college students (Schreiner, 2010c). The instrument was initially created with 198 items originated from the following instruments: Engaged Learning Index (Schreiner & Louis, 2011a), Academic Hope Scale (C. Snyder, Lopez, Shorey, Rand, & Feldman, 2003), Academic Self-Efficacy Scale (Chemers, Hu, & Garcia, 2001), Perceived Academic Control scale (Perry, Hladkyj, Pekrun, & Pelletier, 2001), Dweck’s (2006) mindset assessment, Psychological Well-Being Questionnaire (Ryff & Keyes, 1995), Psychological Sense of Community on Campus Index (Schreiner, 2006), the citizenship subscale of the Socially Responsible Leadership Scale (Tyree, 1998), Miville-Guzman Universality-Diversity Scale (Fuertes, Miville, Mohr, Sedlacek, & Gretchen, 2000), Subjective Well-Being Scale (Diener, Suh, Lucas, & Smith, 1999), Life Orientation Scale (Scheier & Carver, 1985),

Meaning in Life Questionnaire (Steger, Frazier, Oishi, & Kaler, 2006), and the metacognitive self-regulation subscale in the Motivated Strategies for Learning Questionnaire (Pintrich, Smith, Garcia, & McKeachie, 1993).

Following a multi-institutional study in 2008, items were eliminated that did not contribute to internal consistency or factor structure for the survey instrument (Schreiner et al., 2009). Additional regression analyses as well as factor analyses reduced the survey to 32 items (Schreiner et al., 2009). The most recent revision condensed the instrument to 24 items, designed to measure the five factors of student thriving: Engaged Learning, Academic Determination, Social Connectedness, Diverse Citizenship, and Positive Perspective (Schreiner et al., 2012).

Through studies involving more than 30,000 students at four-year institutions (Schreiner, McIntosh, Cuevas, & Kalinkewicz, 2013), thriving has been established as a valid and reliable construct, with the Thriving Quotient instrument exhibiting high reliability (Schreiner, 2012). The Cronbach's alpha reliability estimates for each factor range between $\alpha = .77$ (Positive Perspective) and $\alpha = .87$ (Engaged Learning), with the internal consistency of the instrument estimated at $\alpha = .89$ (Schreiner, 2016b). Subsequent research has generated strong fit indicators from multiple factor analyses (Schreiner, et al., 2013), demonstrating the validity and reliability of the instrument as well as the construct of thriving (Schreiner, 2016b, p. 141).

Based on research conducted with the Thriving Quotient student thriving can explain up to 34% of the variance in success measures such as student satisfaction, grade point averages, and intent to graduate (Schreiner, 2013). As a result, Schreiner (2016a) argues that thriving can serve as a student success outcome and a measure of institutional performance beyond retention, persistence, and graduations rates.

Pathways to Thriving

The research conducted using the thriving quotient have focused on four pathways that influence college student thriving: 1) psychological sense of community, 2) spirituality, 3) campus involvement, and 4) student-faculty interaction (Schreiner, 2012). Psychological sense of community (PSC) is “a feeling that members have of belonging, a feeling that members matter to one another and to the group, and a shared faith that members’ needs will be met through their commitment to be together” (McMillian & Chavis, 1986, p. 9). Much of the foundational research of psychological sense of community came out of the field of psychology based on research that indicated connections with others contributed to mental health (Sarason, 1974). Some of the first research applications of PSC to higher education occurred through the work of Lounsbury and DeNeui (1995) where they demonstrated that not only can PSC be measured on college campuses, but that groups and institutions have higher levels of PSC such as greek organization, private institutions, residential students, seniors, and females. Lounsbury and DeNeui (1995) were intentional to note that membership or association with any of the above-mentioned groups did not result in community, but that students must be intentional about developing connections within those groups. Research conducted by Strayhorn (2008a, 2008b) found that race and ethnicity impacted both the definition and pathways to PSC. Walton and Cohen (2007) conducted an experimental study in which they found that sense of belonging could be developed in students when they are led to believe that they had the ability to foster social connections versus when they are told it was not within their control. Finally, research has shown that PSC is the strongest contributor to student thriving, but that pathways to PSC varied based off of the student population being studied (Cuevas, 2015; Schreiner, 2013, 2014a).

The second identified pathway to college student thriving is that of spirituality. Since the

early 2000s there has been a proliferation of research on college student spirituality on topics such as religious practices (Bowman, Rockenback, & Mayhew, 2015), spirituality (A. Astin, H. Astin, & J. A. Lindholm, 2011a; A. Astin, H. Astin, & J. A. Lindholm, 2011b; Braskamp, Trautvetter, & K., 2006; Chickering, Dalton, & Stamm, 2006; Jablonski, 2001; G. Kuh & Gonyea, 2006), faith formation (Holcomb & Nonneman, 2004; Love & Talbot, 2009), character development, and life calling (Parks, 2011). Many consider the longitudinal work by Astin et al. (2011b) the seminal work on college student spirituality. Astin et al. found that most college students identify as spiritual which Astin et al. defined as “our sense of who we are and where we come from, our beliefs of why we are here—the meaning and purpose that we see in our work and our life—our sense of connectedness to one another and to the world around us” (2011b, p. 4). Within the research on student thriving spirituality has been defined as a “...reliance—especially in difficult times—on a power greater than self, an awareness of purpose, and a lens through which to perceive and interact with the world” (E. J. McIntosh, 2015, p. 18). In a national study using Thriving Quotient (TQ) data, spirituality was found to have an influence on thriving for all students (E. J. McIntosh, 2015). Richardson (2017) found in a multi-institutional study that compared thriving between Christian and non-Christian populations that the most significant contributor for non-Christian students thriving was spirituality.

The third pathway to thriving is campus involvement. The concept of campus involvement stems from Astin’s (1984) involvement theory and Kuh’s (2001, 2003) student engagement theory. Astin’s theory of student involvement states that the time and energy a student puts into educational and campus activities has a positive correlation to student success. Kuh’s student engagement theory takes into account how engagement in certain educationally

purposeful activities has a positive influence on student success. Recent studies by Cuevas (2015) and Seppelt (2016) both found evidence showing that campus involvement contributed significantly to college student thriving.

The final pathway to thriving is student-faculty interaction. Student-faculty interactions are one of the main elements measured in the National Survey of Student Engagement and has been identified as having a positive influence on students (G. Kuh, 2001, 2003; G. Kuh et al., 2005a). Lundberg and Schreiner (2004) conducted a predictive study on student-faculty interaction and found that quantity, quality, and type of interaction made a difference in the student success outcomes. Informally connecting with students does not appear to contribute to student thriving. Kim and Sax (2009) conducted research on student-faculty interaction using national datasets and found that student-faculty interaction impacted the cognitive development of students across majors. Specifically as it relates to student thriving, student-faculty interactions that foster a student's sense of belonging become predictors of student thriving (E. J. McIntosh, 2012; Schreiner, 2014b).

Theoretical Framework - Engagement/Involvement

The theoretical framework for this study focuses on student engagement and involvement. While the previous section noted that student success is multifaceted and cannot be defined by a single theory, researchers can better understand student success by evaluating the various theories surrounding student success. As outlined in the research on thriving, campus involvement and student faculty interactions have been identified as a pathway for student thriving. This section of the literature review will examine the foundational theories of student engagement and involvement that lead to campus involvement and student-faculty interactions. This section will start with a review on college impact theories and will end with a review of

student engagement research.

College Impact Theory

College impact theory is focused on the college student developmental process. The theory takes into account the institutional environment, student demographics, various pre-college characteristics, and how the relationships students form in college impact development (E. T. Pascarella & Terenzini, 2005; Terenzini, Springer, Yaeger, Pascarella, & Nora, 1996). College impact theory pulls from both the sociological and psychological disciplinary perspectives on student success.

The foundational sociological theory pertaining to college impact theory is Tinto's (1975, 1987, 1993) interactionist theory of student departure. In his theory, Tinto (1975) postulated that student departure from college is a "longitudinal process of interactions between the individual and the academic and social systems of the college" (p. 94). These theorized interactions are divided into three stages of student integration. The first stage is separation from a group (e.g. family/peers); second is transition where a student moves into a new environment and learns to interact with members of the college community; and the final stage is incorporation in which a student integrates into the college environment and adopts the normative behaviors and values of the group or college.

The primary psychological perspective on college student impact theory is Alexander Astin's (1975) research on college factors that influence persistence. Astin's research ultimately lead to one of the first majors psychological theories on student persistence, Astin's (1984) student involvement theory. Astin defined involvement as "the amount of physical and psychological energy that the student devotes to the academic experience" (p. 297). Astin's perspective on involvement is focused more on the behavioral aspects of involvement versus the

psychological motivation that a student may or may not display. In other words, what actions do students actually take towards engaging in their academic work versus what motivates them to do so. The introduction of involvement theory took some of the weight of student success off of the institution (curriculum, pedagogy, and resources) and empirically supported the need for students to be involved (Astin, 1985). While curriculum, pedagogy, and institutional resources are a key part of the educational experience, the amount of energy a student invests impacts his/her talent development or behavioral habits that will allow for long-term student development (e.g. life-long learning).

Student Engagement Theory

Student engagement theory focuses on how a student and institution spend their time and energy toward the college experience. Student engagement theory considers factors that impact student engagement in educationally purposeful activities that positively influence student success (G. Kuh, Kinzie, Buckley, & Associates, 2006; G. Kuh & O'Donnell, 2013; E. T. Pascarella & Terenzini, 2005). Factors that have been found to impact the college experience are pre-college characteristics, student attitudes, beliefs, and behaviors, and institutional environment. These factors show that student engagement is a shared responsibility because it is influenced by actions of both the student and the institution (G. D. Kuh, 2009).

When considering student engagement from a pedagogical perspective, Chickering and Gamson (1987) developed guidelines for *Principles of Good Practice for Undergraduate Education*. Their research noted seven core teaching and learning practices based on student engagement in educationally effective practices: student-faculty contact, cooperation among students, active learning, prompt feedback, time on task, high expectations, and respect for diverse talents and ways of learning. Their research linked theory to practice in relation to

college student engagement in the learning process. These practices have framed the research on college student success by serving as measures of student engagement in educationally purposeful activities that are known to directly impact student learning and development.

Building on this research, George Kuh developed the National Survey of Student Engagement (NSSE). The development of NSSE was funded by the Pew Charitable Trusts with the goal of providing a more authentic metric for quality as opposed to existing university ranking systems. According to G. Kuh, Kinzie, Buckley, et al. (2007), the aim in developing the National Survey of Student Engagement

...was to provide sound evidence for the effectiveness of undergraduate teaching and learning that could be used to both help colleges and universities improve, and to provide a new “lens” for looking at college quality that could help prospective students and the public get beyond prevailing resource and reputation-based measures like the rankings of U.S. News & World Report (p. 3).

In the original design of NSSE variables were grouped into five benchmarks (1) academic challenge, (2) active and collaborative learning, (3) student-faculty interaction, (4) enriching educational experiences, and (5) supportive campus environments. In the nearly two decades of administering the National Survey of Student Engagement, extensive research has been conducted on the role and impact of engagement of college student development. The research uncovered a wide variety of both student and institutional characteristics that have a consistent impact on college student success. These programs and/or activities have become known as “high-impact practices”.

This section has outlined the theoretical framework of student involvement and engagement in the college experience. Through examining the work of Tinto, Astin, and Kuh a

foundation can be laid for understanding how student engagement and involvement can impact student success in college. More specifically by evaluating the longitudinal work derived from the National Survey of Student Engagement, it is clear that selected practices appear to have a lasting impact on student success. The next section will outline research on these select practices.

Student Engagement/High Impact Practices

When George Kuh (2008) began his pioneering research into student engagement, he intentionally avoided answering the question(s) of how institutions can increase engagement and if particular practices had a more significant impact than others. Rather he focused on the overall impact these practices have on student success. Kuh felt that there was not yet enough substantial research on the topic to make overarching observations. Additionally, from the literature already reviewed, it is clear that the impact of the college experience is conditional depending on a number of mediating variables sociologically, psychologically, organizationally, culturally, and economically.

While there are numerous factors influencing the college experience, the two decades of college student engagement research by Kuh and his associates have begun to bear fruit. Kuh's research in conjunction with the National Survey of Student Engagement (NSSE) and the American Association of Colleges and Universities (AAC&U) has uncovered a select set of programs and activities that appear to engage and impact students from various backgrounds and appear to have a strong influence on success outcomes such as persistence (Universities, 2007). These practices include first-year seminars, common intellectual experiences, collaborative assignments and projects, writing-intensive courses, learning communities, service learning, undergraduate research, study abroad, and other experiences with diversity, internships, and capstone courses and projects.

First-Year Seminar/Experiences

Many institutions offer first-year seminars/experiences for new colleges students, in fact, a study by Porter and Swing (2006) indicated that over 70% of American institutions provide a first year-seminar/experience to students. First-year seminars/experiences were first developed

in the 1980s in response to low retention rates (Upcraft, Gardener, & Barefoot, 2005).

According to Wilcox (2005) “new students need support to deal with not only the academic culture shock of adapting to the higher education environment, but also the emotional shock of moving from the familiar home environment to a very different life at university” (p. 719). First year experience programs are typically taught in small groups by either upperclassmen peers or senior faculty members. The goal of the experiences/seminars is to help integrate students into the college experience personally, socially, and academically. Extensive research has been conducted on this specific activity and has been found to impact academic performance/achievement, social transitions, retention and graduation rates, and socialization (American Association of Colleges and Universities, 2010; Lotkowski, Robbins, & Noeth, 2015; E. T. Pascarella & Terenzini, 2005).

Learning Communities and Common Intellectual Experiences

Learning communities began to emerge within higher education during the 1980s in an effort to create a more holistic and integrated learning experience that would also positively impact retention and persistence (Cross, 1998). In 2018, the *Learning Community Online Directory* maintained by the Washington Center for Undergraduate Education at Evergreen State College listed over 300 learning community programs across the United States. Extensive research over the last several decades has provided significant evidence that learning communities impact a student’s sense of community by increasing his/her involvement in intellectual experiences with peers and faculty (Braxton et al., 1997; Cross, 1998; Davig & Spain, 2003; Zhao & Kuh, 2004). According to Lenning and Ebbers (1999) (as cited in Zhao and Kuh (2004)) learning communities take four generic forms:

1. Curricular learning communities are made up of students co-enrolled in two or more courses (often from different disciplines) that are linked by a common theme;
2. Classroom learning communities treat the classroom as the locus of community-building by featuring cooperative learning techniques and group process learning activities as integrating pedagogical approaches;
3. Residential learning communities organize on-campus living arrangements so that students taking two or more common courses live in close physical proximity, which increases the opportunities for out-of-class interactions and supplementary learning opportunities; and
4. Student-type learning communities are specially designed for targeted groups, such as academically underprepared students, historically underrepresented students, honors students, students with disabilities, or students with similar academic interests, such as women in math, science, and engineering (p. 116).

Through the embodiment of these generic forms there are many variations on the types of learning communities. Each community is developed based on the unique needs of the students at a particular institution, but they are often connected with similar goals. Based on Quintero (2015) review of past learning community research those goals are 1) developing peer groups; 2) creating common intellectual experiences; 3) increasing student interaction with faculty; 4) promoting engagement outside of the classroom; 5) promoting active and collaborative learning; 6) creating curricular connections across multiple classes to teach students how to effectively integrate knowledge in courses.

Experiential Learning

Of the nine high-impact practices identified four of them tend to take place outside of the classroom, although not exclusively. These specific practices are often referred to as experiential learning and include undergraduate research, diversity/global learning, service learning, and internships. Not unlike many of the high-impact practices there are decades of research that demonstrates the value of experiential learning (Kuh, 2008). Broadly speaking experiential learning has shown positive impacts on student learning, academic achievement, and persistence (Astin, 1993). Experiential learning also allows for students to build capacity in applying theory to practice, gaining work experience and career skills, researching, and finding opportunities for self-reflection (Hart Research Associates, 2013).

Undergraduate research is considered to be high-impact. Historically, undergraduate research has been confined to the science disciplines, but many colleges and universities are now providing research opportunities for students in all disciplines (G. Kuh, 2008). The goal of providing undergraduate students with the opportunity to conduct research is to "...involve students with actively contested questions, empirical observation, cutting-edge technologies, and the sense of excitement that comes from working to answer important questions" (Kuh, 2008, p. 20). Research on this particular practice has linked student engagement in undergraduate research with learning gains in critical thinking, quantitative reasoning, communication, and research methodology along with success outcomes like increased graduation rates and level of satisfaction (Hu, Scheuch, Schwartz, Gayles, & Li, 2008; Laursen, Seymour, & Hunter, 2012; Lopatto, 2006; E. T. Pascarella & Terenzini, 2005).

Diversity/global and service learning has become an emphasis for many colleges and universities. These experiences are often geared towards students gaining a broader worldview

and understanding of culture and lived experiences of others. According to Kuh (2008) the goal of diversity/global learning opportunities is to “...explore ‘difficult differences’ such as racial, ethnic, and gender inequality, or continuing struggles around the globe for human rights, freedom, and power” (p. 20). Diversity and global learning experiences have often taken the form of both short-term and long-term study abroad opportunities. These opportunities have been found to be

...a powerful experience that has the potential to allow for personal growth, to provide mobility for social action and civic engagement, to enhance skills for [one’s] professional life, and lastly the ability to further [one’s] knowledge about the world and [his or her] place within it (After Study Abroad: A Toolkit for Returning Students, 2008, p. 5).

Service learning starts with the same objectives in mind as diversity/global learning. Often times service learning is paired with an instructional technique that involves the discussion of theory and perspective in a classroom paired with the application of what they are learning in a real-world setting that allows space for collaborative reflection. According to Kuh (2008) service learning programs “model the idea that giving something back to the community is an important college outcome, and that working with community partners is good preparation for citizenship, work, and life” (p. 21).

The final experiential learning high-impact practice is internships. The goal of internships is to “...provide students with direct experiences in a work setting – usually related to their career interests – and give them the benefit of supervision and coaching from professionals in the field” (G. Kuh & O'Donnell, 2013, p. 49). A recent study found that students who participate in internships were more likely to have outcomes such as increased confidence, increased desire to attend graduate school, and increased communication skills (Thiry, Laursen,

& Hunter, 2011). Additionally, Simons et al. (2012) found that students who participate in internships saw increases in civic and personal development and multicultural skills.

Course-Based High Impact Practice

While experiential learning opportunities tend to take place outside of the classroom there are several high impact practices that are grounded in the classroom experience such as capstone courses/projects, writing intensive courses, and collaborative assignments and projects.

Capstone courses/projects, sometimes referred to as senior capstones or culminating senior experiences, are opportunities for students to synthesize, reflect on, and demonstrate their learning throughout an academic program (Cuseo, 1998). Research based on NSSE indicates that students who participate in culminating senior experiences are more likely to engage with faculty, collaborate with peers, and demonstrate high-order learning.

Research on writing-intensive (WI) courses as a high-impact practice is limited, but there is clear evidence on the benefits of WI courses (G. Kuh et al., 2005a). One outgrowth of NSSE is an initiative called Documenting Effective Educational Practices (DEEP). Kuh lead these research teams with the goal of identifying a diverse set of institutions that demonstrated higher than expected student success outcomes as measured by NSSE and other success metrics. Much of this research laid the foundation for the field of student engagement and the effective educational practices that were observed at these exemplar institutions is outlined in Kuh's recent book *Student Success in College: Creating Conditions that Matter*. One grouping of effective practices fell into the category of academic challenge and a specific practice that was noted at exemplar institutions was extensive emphasis on writing. These exemplar institutions increased their emphasis on writing by developing writing requirements across the curriculum. Through the DEEP research initiative programs that focus on writing "...encourages

interdisciplinary efforts and challenges students to think critically and holistically about their assignments” (p. 185). In addition to these benefits, students who participate in writing intensive initiatives in their disciplines begin to think further about their career goals and the role that writing will play in their success.

The final course-based high impact practice is collaborative projects and assignments. The main goal of this practice is to encourage active and collaborative learning that accommodates diverse learning styles and engages students in the learning process (Kuh et al., 2005a). Based on research from the DEEP initiative and specific results from NSSE there are several active and collaborative learning practices that have been noted as effective they include “(1) asking questions in class or contributing to class discussions or both; (2) making class presentations, (3) working with other students on class projects inside or outside of class; (4) tutoring other students; (5) participating in a community-based project as a part of a course, and (6) discussing ideas from readings or classes with other students, family members, or others outside of class” (p. 193). According to Kuh et al. (2005a)

Students learn more when they are intensely involved in their education and have opportunities to think about and apply what they are learning in different settings.

Furthermore, when students collaborate with others in solving problems or mastering difficult material, they acquire valuable skills that prepare them to deal with the messy, unscripted problems they will encounter daily during and after college (p. 193).

While there are a variety of pedagogical approaches to employ active and collaborative practices what institutions need to keep in the forefront of their planning process that they are teaching students how to productively engage in active learning and collaboration. This can be done pedagogically, but also programmatically outside of the classroom and even physically through

intentionally designed spaces that encourage collaboration. When done well, collaborative assignments and projects can improve problem-solving skills and aid in students applying theory in the classroom to practice in multiple settings (Kuh et al., 2005a).

Characteristics of High Impact Practices

There are various shared characteristics that appear to create the high level of impact found in these practices. First, activities that are considered high-impact practices tend to require students to dedicate considerable time towards educationally purposeful activities. Second, these practices aid in the development of peer and faculty relationships over an extended period of time. Third, participating in these activities will increase the likelihood of students working with diverse others. Fourth, participation in these activities afford students to receive formal iterative feedback from faculty members. Fifth, students are able to apply the theory they have learned in the classroom to practice both on and off campus (G. Kuh, Kinzie, Cruce, et al., 2007). In addition to the five characteristics mentioned above, Kuh's (2008) research has uncovered the compounding impact that participating in multiple high-impact practices might have on a student. In response to the question "how do we raise achievement" Kuh (2008) states "make it possible for every student to participate in at least *two* high-impact activities" (p. 19).

Specifically, Kuh (2008) suggested that student should participate in one practice during their first year in college and then an additionally one later in college related to their area of study.

Effects of High-Impact Practices

There has been significant research that has documented the effects of high-impact practices across student groups. Participation in these practices are linked to increased retention, persistence, and graduation rates, deep learning gains, higher levels of engagement, and increased GPAs (Brownell & Swaner, 2009, 2010; G. Kuh, 2008). In a study on service

learning, internships, senior capstone experiences, research with faculty, and study abroad at California State University, researchers found that participation in these practices improved student grades, time to degree, and graduation rates (Huber, 2010). Brownell and Swaner (2010) studied the impact of first year seminars, learning communities, undergraduate research, service learning, and capstone projects, and they found that participation resulted in increased persistence rates, higher levels of engagement, and learning gains. Several studies have used large national datasets and have been able to confirm multiple findings on the effects of high-impact practices (Kilgo, Sheets, & Pascarella, 2014; G. Kuh, 2008). In another study, Wolniak and Engberg (2015), used longitudinal post-graduation data that revealed participation in high-impact practices led to promising results in early career indicators for success.

Limits on High-Impact Practices

While benefits from participation in high-impact practices are clear, several notable limitations on the effectiveness of these practices has been uncovered through the last decade of research. The first limit on the effectiveness of high impact practices is equitable access to them. National Survey of Student Engagement data from 2008 indicates that only a small percentage of students engage in these practices. Specifically, only 17% of students were a part of learning communities and only 36% participated in service learning. As it relates to seniors, only 19% conducted research with faculty, 18% studied abroad, and 53% took part in an internship (G. Kuh, 2008). Unfortunately, according to G. Kuh and O'Donnell (2013), the participation rates in high-impact practices are even lower for under-represented student groups. When trying to understand the cause for low participation rates, Finley and McNair (2013) found that students had barriers such as: need to work, being uninformed about various opportunities, low self-esteem about abilities, and the perceived lack of support from others.

Second, research seems to indicate that students who participate in only one high-impact practice do not benefit as much as students who participate multiple practices (G. Kuh, 2008). In addition to the positive impact that participating in two or more practices appears to provide, research by Huber (2010) seems to indicate that those who participate in a variety of high-impact practices seem to benefit more than students who participate in one practice multiple times.

The third identified barrier to the success of high-impact practices stems from the lack of institutional intentionality. If institutions are not intentional about the design and implementations of high-impact practices on their campus effectiveness of those practices on student success is not noticeable (McNair & Albertine, 2012). Through their research, Brownell and Swaner (2009) found that the effect of high-impact practices can be increased if institutions are intentional with the design and implementation of high-impact practices that align with the unique mission, culture, and needs of their institution. Additional research through the Wabash study found that it is not necessarily the specific high-impact practice that influence student success, but rather the characteristics of those practices and how well they reflected best-practices (Salisbury & Goodman, 2009). Kuh provided an accurate portrayal of a caution when he said “while high-impact practices are appealing, to engage students at high levels, these practices must be done well” (2008, p. 30).

Relationship between HIPs and Thriving

Significant research has documented the effects of high-impact practices across student groups. Participation in these practices are linked to increased retention, persistence, and graduation rates, deep learning gains, higher levels of engagement, and increased GPAs (Brownell & Swaner, 2009, 2010; G. Kuh, 2008). While research has focused on some of the expanded visions for student success it still holds to some of the traditional metrics for success

such as retention, persistence, and graduation rates. Unfortunately, this is an oversimplification of student success and the purpose of a college education. In recent years, scholars have begun to expand their view of student success. Some of the additional metrics now being considered in the research include learning gains, talent development, student satisfaction, and student engagement (Kinzie, 2012).

While the work of George Kuh on student engagement is based on this expanded vision of student success, much of the work predates Schreiner's work that conceptualized a holistic model for student success. Considering the interconnectedness of positive psychology, human flourishing, and the psychological models of student success, Schreiner (2012) conceptualized thriving as students experiencing ideal levels of academic engagement, interpersonal relationships, and psychological well-being. There are three domains of college student thriving inclusive of five composite measures: academic thriving includes the measures of engaged learning and academic determination; interpersonal thriving includes the measures of social connectedness and diverse citizenship; and intrapersonal thriving includes the measure of positive perspective.

As noted above, in addition to developing a working student success model that is built upon this expanded vision of student success, Schreiner and her team have also developed a working construct and measure for evaluating student success. Through studies involving more than 30,000 students at four-year institutions (Schreiner et al., 2013), thriving has been established as a valid and reliable construct, with the Thriving Quotient instrument exhibiting high reliability (Schreiner, 2012). The Cronbach's alpha reliability estimates for each factor range between $\alpha = .77$ (Positive Perspective) and $\alpha = .87$ (Engaged Learning), with the internal consistency of the instrument estimated at $\alpha = .89$ (Schreiner, 2016b). Subsequent research has

generated strong fit indicators from multiple factor analyses (Schreiner, et al., 2013), demonstrating the validity and reliability of the instrument as well as the construct of thriving (Schreiner, 2016b, p. 141).

Based on research conducted with the Thriving Quotient student thriving can explain up to 34% of the variance in success measures such as student satisfaction, grade point averages, and intent to graduate (Schreiner, 2013). As a result, Schreiner (2016a) argues that thriving can serve as a student success outcome and a measure of institutional performance beyond retention, persistence, and graduations rates.

As the review of literature suggests, one of the pathways to thriving is campus involvement. The concept of campus involvement stems from Astin's (1984) involvement theory and Kuh's (2001, 2003) student engagement theory. Astin's theory of student involvement states that the time and energy a student puts into educational and campus activities has a positive correlation to student success. Kuh's student engagement theory takes into account how engagement certain educationally purposeful activities has a positive influence on student success. Recent studies by Cuevas (2015) and Seppelt (2016) both found evidence showing that campus involvement contributed significantly to college student thriving. Unfortunately, these recent studies have not focused on the effects that specific high-impact practices have on student thriving nor have studies evaluated the effect that participation in high-impact practices as a whole can have on college student thriving. The purpose of this study is to examine the effects of participation in high-impact practices on college student thriving.

III. METHOD

The purpose of this study was to understand the impact of campus involvement, specifically involvement in high-impact practices, on college student thriving. While extensive research exists on student success and the positive results of participation in high-impact practices (e.g., higher grades and increased persistence/graduate rates), it was still unclear how formative these experiences can be on the holistic development of students. By evaluating the relationship between involvement in high-impact practices and student levels of thriving, the purpose of this dissertation was to fill the gap in literature and continue to expand the definition of student success beyond degree attainment. In order to address the purpose statement of this study the following research questions were posed:

1. Considering the study's sample of participants what was the manifest level of overall "Thriving" as well as the thriving "domains"?
2. Considering study participant "alternative engagement indicators", which represents the most robust, statistically significant predictor of "Overall" Thriving?
3. Considering "High Impact Practices," which represents the most robust statistically significant predictor of "Overall" Thriving?

Participants and Procedures

This single institution quantitative study was conducted at a mid-sized Christian university in the southeast region of the United States. Students enrolled in the institution represented a wide range of diverse backgrounds.

This study utilized a recently collected pre-existing dataset. Participants included within this dataset are defined as undergraduate students enrolled at a private faith-based institution located in the southeast United States. All undergraduate students enrolled at the main campus of the institution, a population of 2,465 traditional undergraduate students, received the Thriving Quotient online survey. The participants received an invitation to complete the Thriving Quotient through their institutional email address. Reminders were sent seven, 14, and 21 days after the initial announcement. Students had four weeks to complete the survey. Most students should have completed the survey within 20 to 30 minutes. A drawing for one of five \$25 Amazon gift cards was the incentive for students to participate. The survey sample (n=829) was representative of the overall student population.

Instrument

Based on much of the research outlined in the review of literature the Thriving Quotient (TQ) was developed as a tool to measure levels of thriving among college students (Schreiner, 2010c). The instrument was initially created with 198 items originated from the following instruments: Engaged Learning Index (Schreiner & Louis, 2011a), Academic Hope Scale (C. Snyder et al., 2003), Academic Self-Efficacy Scale (Chemers et al., 2001), Perceived Academic Control scale (Perry et al., 2001), Dweck's (2006) mindset assessment, Psychological Well-Being Questionnaire (Ryff & Keyes, 1995), Psychological Sense of Community on Campus Index (Schreiner, 2006), the citizenship subscale of the Socially Responsible Leadership Scale

(Tyree, 1998), Miville-Guzman Universality-Diversity Scale (Fuentes et al., 2000), Subjective Well-Being Scale (Diener et al., 1999), Life Orientation Scale (Scheier & Carver, 1985), Meaning in Life Questionnaire (Steger et al., 2006), and the metacognitive self-regulation subscale in the Motivated Strategies for Learning Questionnaire (Pintrich et al., 1993).

Following a multi-institutional study in 2008, items were eliminated that did not contribute to internal consistency or factor structure for the survey instrument (Schreiner et al., 2009). Additional regression analyses as well as factor analyses reduced the survey to 32 items (Schreiner et al., 2009). The most recent revision condensed the instrument to 24 items, designed to measure the five factors of student thriving: Engaged Learning, Academic Determination, Social Connectedness, Diverse Citizenship, and Positive Perspective (Schreiner et al., 2012).

Through studies involving more than 30,000 students at four-year institutions (Schreiner et al., 2013), thriving has been established as a valid and reliable construct, with the Thriving Quotient instrument exhibiting high reliability (Schreiner, 2012). The Cronbach's alpha reliability estimates for each factor range between $\alpha = .77$ (Positive Perspective) and $\alpha = .87$ (Engaged Learning), with the internal consistency of the instrument estimated at $\alpha = .89$ (Schreiner, 2016b). Subsequent research has generated strong fit indicators from multiple factor analyses (Schreiner, et al., 2013), demonstrating the validity and reliability of the instrument as well as the construct of thriving (Schreiner, 2016b, p. 141).

Based on research conducted with the Thriving Quotient, student thriving can explain up to 34% of the variance in success measures such as student satisfaction, grade point averages, and intent to graduate (Schreiner, 2013). As a result, Schreiner (2016a) argues that thriving can

serve as a student success outcome and a measure of institutional performance beyond retention, persistence, and graduations rates.

In addition to the standard scales on the TQ, participants were asked to also provide information that rated their levels of participation in various campus activities and services that constitute High Impact Practices (HIPs). The instrument also collected an array of demographic and background characteristics, including gender, age, class level, enrollment status (e.g., part-time or full-time), transfer history, grades in high school, educational pursuits, household income, residency status, racial or ethnic background, and financial aid.

Variables

Independent Variables

For this study, the independent variables were derived from the additional questions on the TQ survey that measure the level of participation in High Impact Practices (HIPs). These variables reflect individual items from the survey. See Appendix A for the specific items and the complete descriptions.

Dependent Variables

To measure the contribution of High Impact Practices to student thriving, this study used the following thriving subscales (i.e., composite measures) as dependent variables: (a) Engaged Learning scale, (b) Academic Determination scale, (c) Social Connectedness scale, (d) Diverse Citizenship scale, and (e) Positive Perspective scale along with the overall Thriving Quotient mean. Scales were established by computing mean score of individual items. See Appendix A for a complete description of variables.

Definition of Terms

Thriving

The thriving construct embodies the concepts of positive psychology and their application to student development theories in higher education. Schreiner (2010c), defines thriving as “the experiences of college students who are fully engaged intellectually, socially, and emotionally in the college experience” (p. 4).

Student Engagement

Student engagement is defined as “the time and effort students devote to activities that are empirically linked to desired outcomes of college and what institutions do to induce students to participate in these activities” (G. D. Kuh, 2009, p. 683).

High-Impact Practices

According to Kuh (2008), high-impact practices are the activities that have a proven positive impact on student outcomes as a result of the considerable amount of time students are investing in the following undertakings: educationally purposeful activities, engagement with diverse others, intentional interactions and forming relationships with faculty and peers, team building, problem solving, opportunities to apply theory to practice, and receiving formal feedback on performance. Activities that have had proven records as high-impact practices include: first-year seminars/experiences, common intellectual experiences, learning communities, writing-intensive courses, collaborative assignments and projects, undergraduate research, diversity/global learning, service learning/community-based learning, internships, and capstone courses/projects. A detailed definition of each practice can be found in Appendix B.

Analysis

In order to address the stated research questions, the researcher employed both descriptive and inferential statistical techniques. Specifically, measures of central tendency, variability, and percentages were utilized for comparative purposes. To test the statistical significance of finding t-test of Independent/Dependent Means, ANOVA, and linear regression were used to analyze study data. In all cases of statistical significance testing an alpha level of .05 was employed as the threshold for the determination of statistical significance.

A variety of preliminary analyses were employed prior to the formal address of the study's research questions. Missing data, internal consistency of participant response, and essential demographic information were evaluated using both descriptive and inferential statistical techniques.

Both descriptive and inferential statistical techniques were utilized to address Research Question #1. The mean score and standard deviation of the *Thriving Quotient* and its sub-scales constitute the primary means of descriptive statistical analyses. The inferential statistical technique *Single Sample t-test* was utilized to evaluate the statistical significance of the finding in Research Question #1. Research Question #1 was used to ensure goodness of fit between existing applications of the Thriving Quotient and the sample included in this study.

The Multiple Linear Regression test statistic was used to assess the predictive robustness of “alternative engagement indicators” such as engagement with faculty, engagement in campus events/activities, community service, and level of engagement for Research Question #2.

The Multiple Linear Regression test statistic was used to assess the statistical significance of independent predictor variables in the predictive models for Research Questions #3. Stepwise

and hierarchical methods were used along with a receiver operator characteristic (ROC) curve post-hoc test to ensure appropriate depth and breadth of the regression analysis.

IV: RESULTS

A concerted effort has been taken to understand the factors that contribute to retention, persistence, and graduation rates. The historic emphasis on attainment rates is one of the most basic definitions of student success and only takes into account access to college and degree completion (Schreiner et al., 2012). This focus on student success led to research that has uncovered a vast set of confounding variables that impact persistence. The amalgamation of these variables form theories of student persistence that align with the following disciplinary perspectives: sociology, psychology, organizational, cultural and economics (Kinzie, 2012). The current investigation focused on an evaluation of the factors or practices that relate to and are predictive of undergraduate student persistence and even “thriving” within higher education. As such, the primary purpose of the study was to explore the impact of campus involvement, specifically participation in high impact practices, on university-level student thriving.

Preliminary Analyses

A variety of preliminary analyses were undertaken prior to the formal address of the study’s research questions. Missing data, internal consistency of participant response, and essential demographic information were evaluated using both descriptive and inferential statistical techniques.

The study’s response set within the five domains of the *Thriving Quotient* manifested a minimal level of missing data (0.06%). Moreover, the missing data were found to be sufficiently random (*Little’s MCAR* $\chi^2_{(4)} = 2.73; p = .60$). The internal consistency (reliability) of participant response within the five domains of the *Thriving Quotient* was established at $\alpha = .69; p < .001$). Inconsistent levels of consistency of participant response within the *Social Connectedness*

Domain appear to account for the subpar level of internal reliability. With participant responses removed from the *Social Connectedness Domain*, the internal reliability level increases to $\alpha = .73$; $p < .001$.

Nearly three in every four participants were female (73.4%), with nearly seven in 10 participants (66.4%) occupying the 18-20 age range. Participants enrolled in their first year of university matriculation comprised the largest class-size group at 35.5%. The remaining 64.5% was fairly evenly divided amongst the sophomore, junior, and senior class designations.

Analyses/Findings by Research Question

Research Question 1

Considering the study's sample of participants what was the manifest level of overall "Thriving" as well as the thriving "domains"?

Both descriptive and inferential statistical techniques were utilized to address Research Question 1. The mean score and standard deviation constituted the primary means of descriptive statistical analyses. The mean score of the overall *Thriving Quotient* for participants in the study was 4.75 (SD = 0.56).

The inferential statistical technique *Single Sample t-test* was utilized to evaluate the statistical significance of the finding in Research Question #1. Using the mean value of 4.65 from a recent national study on college student Thriving ($n=5,649$) for comparative purposes, the study's sample mean score of 4.75 was found to be statistically significant ($t_{(652)} = 4.49$; $p < .001$). The magnitude of effect (effect size) is considered "very large" ($d = 17.86$).

Both descriptive and inferential statistical techniques were utilized to address the second component of Research Question #1. The mean scores and standard deviations constituted the

primary means of descriptive statistical analyses. Mean scores for the five domains ranged from 4.17 (*Social Connectedness*) to 4.98 (*Diverse Citizenship*).

The mean scores for each of the five domains from a recent national study (n=5,649) were used for comparative purposes in the evaluation of statistical significance of finding. As a result, the mean scores for four of the five domains were found to be statistically significantly different from the national means in the analyses, with all five domains manifesting “very large” effect sizes ($d \geq 1.30$). The domain of *Academic Determination* manifested the highest participant mean score (4.98) and greatest magnitude of effect ($d = 21.21$) amongst the five domains. The domain of *Social Connectedness* manifested the lowest participant mean score (4.17), and concomitant lowest magnitude of effect ($d = 5.10$) amongst the five domains of the *Thriving Quotient*.

Table 1 contains a summary of finding for the five domain comparisons inherent in Research Question 1:

Table 1
TQ Domain Descriptive & Inferential Evaluations

TQ Domain	Mean	SD	<i>t</i>	<i>d</i>
Engaged Learning	4.85	0.88	2.16*	7.95 ^a
Academic Determination	4.98	0.67	5.52***	21.21 ^a
Positive Perspective	4.76	0.94	2.86***	11.70 ^a
Diverse Citizenship	4.98	0.60	4.68***	18.33 ^a
Social Connectedness	4.17	0.98	1.38	5.10 ^a

* $p < .05$ *** $p < .001$ ^a Very Large Effect Size ($d \geq 1.30$)

Research Question 2

Considering study participant engagement in “alternative engagement activities” which represents the most robust, statistically significant predictor of “Overall” Thriving Quotient?

The *Multiple Linear Regression* test statistic was used to assess the predictive robustness of the independent predictor variables of participant alternative engagement activities. The predictive model was viable ($F_{(11, 616)} = 11.95; p < .001$). Three of the 11 independent predictor variables (alternative engagement activities) in the predictive model were found to exert a statistically significant predictive effect with the dependent variable “Overall” Thriving Quotient. Of the three predictor variables, participant engagement in religious events and activities exerted a slight predictive effect edge over engagement in campus events and activities and community service related activity.

Table 2 contains a summary of finding for the predictive analysis related to alternative engagement activities and overall thriving:

Table 2

Predicting Overall Thriving Quotient by Participant Engagement in Alternative Activity

Model	β	SE	Standardized β	d
Intercept	3.76	0.11		
Campus Events	0.06	0.02	.15***	.36
Community Service	0.06	0.02	.16***	.38
Religious Services	0.08	0.02	.17***	.42

*** $p < .001$

Research Question 3

Considering “High Impact Practices,” which represents the most robust statistically significant predictor of “Overall” Thriving? Using the Multiple Linear Regression test statistic to assess the statistical significance of independent predictor variables in the predictive model, one “High Impact Practice” variable (*Service Learning*) was found to be a statistically significant predictor of participant thriving. The predictive model was viable ($F_{(10; 624)} = 5.91; p < .001$). The confluence of independent predictor variables in the predictive model accounted for 8.7% of the explained variance in the dependent variable *Thriving Status*. Table 3 contains a summary of findings regarding the predictive abilities of “High Impact practices” with respect to *Thriving Status*:

Table 3
Predicting “Thriving” from High Impact Practices

Model	β	SE	Standardized β
Intercept	4.45	0.08	
Learning Communities	0.02	0.01	.05
First Year Seminar	0.15	0.01	.05
Writing Intensive Courses	-0.10	0.01	-.03
Course Requiring Group Project	0.01	0.02	.01
Service learning	0.07	0.02	.25***
Lecture-based Courses	0.01	0.01	.02
Field Experiences	-0.02	0.01	-.06
Study Abroad	-0.05	0.02	-.11
Conducted with Faculty	0.02	0.02	.05
Culminating Experiences	0.01	0.02	.02

*** $p < .001$

V: DISCUSSION

The purpose of this study was to understand the impact of campus involvement, specifically involvement in high-impact practices, on college student thriving. While extensive research exists on student success and the positive results of participation in high-impact practices (e.g., higher grades and increased persistence/graduate rates), it was still unclear how formative these experiences can be on the holistic development of students. By evaluating the relationship between involvement in high-impact practices and student levels of thriving, the purpose of this dissertation was to fill the gap in literature and continue to expand the definition of student success beyond degree attainment.

Major Findings

The sample for this study demonstrated a statistically higher Thriving Quotient mean when compared to the national average. Additionally, when evaluating the five domains of the Thriving Quotient, the sample demonstrated statistically higher mean scores in engaged learning, academic determination, positive perspective, and diverse citizenship. When considering “alternative engagement indicators,” three of the 11 were predictive of student thriving: campus events, community service, and religious services. As for specific high-impact practices one out of the 10 practices demonstrated predictive abilities: service learning.

Discussion of Results

Research Question 1

Research Question 1 asked “*considering the study’s sample of participants what was the manifest level of overall “thriving” as well as the thriving “domains”?*”. In conducting the

analysis, the mean score for Thriving within the sample was 4.75 (SD = 0.56). Further analysis showed that when comparing the sample mean of 4.75 (n = 829; SD = 0.56) to the national mean of 4.65 (N = 5,649; SD 0.65), the sample demonstrated a statistically significant higher Thriving Quotient.

These results indicate that certain aspects of the sample institution seem to have a positive impact on the factors that influence student thriving. The initial findings from research question one provide a strong foundation for understanding variables that might influence student thriving. It is clear that aspects of the student experience at the sample institution provide a pathway to thriving. What is unclear is what possible inputs (pre-existing characteristics) the students in the sample may have that influence their ability to thrive.

In conducting the analysis, the mean score for each of the five domains within the sample were as followed: Engaged Learning 4.85 (SD = 0.88), Academic Determination 4.98 (SD = 0.67), Positive Prospective 4.76 (SD = 0.94), Diverse Citizenship 4.98 (SD = 0.60), and Social Connectedness 4.17 (SD = 0.98). Further analysis showed that when comparing the sample means to the national means, the sample demonstrated a statistically significant higher means in four of the five domains.

The results of the analysis indicate that students within the sample population have higher levels of academic determination, diverse citizenship, engaged learning, and positive prospective. There was no statistically significant difference between the sample and the population within the domain of social connectedness. As a result of this finding, it appears that while social connectedness is a core component of college student thriving, the levels of academic determination, diverse citizenship, engaged learning, and positive prospective played

in influential role in the statistically higher levels of thriving among students at the sample institution.

Through the development of the Thriving Quotient, three domains of thriving were developed consisting of the five composite measures 1) academic thriving, 2) interpersonal thriving, and 3) intrapersonal thriving. The domain of thriving that demonstrated the strongest outcomes toward thriving at the sample institution is academic thriving which is made up of the measures of engaged learning and academic determination. Within those measures the items that demonstrated the highest mean values centered around the level of confidence the student felt when considering his/her educational goals and a perspective that what he/she is learning in college is applicable and worthwhile to his/her life. According to research by Schreiner (2010b), these results indicate that students likely have higher levels of satisfaction and self-reported learning gains at the sample institution. Additionally, the high level of academic determination found within this sample indicates that students are able to set realistic goals, are willing to commit time and energy into those goals, and navigate the learning environment in order to achieve their learning goals.

Students within the sample also demonstrated high levels of thriving within the intrapersonal domain of thriving. Students within the sample indicate that they look for the best in situations, even when things seem hopeless. The sample mean within this domain demonstrated statistically higher mean values than the national norm. This indicates higher levels of student satisfaction and in combination with a positive perspective will likely lead to higher levels of well-being within the learning process and relationships with others (Schreiner, 2012).

Finally, the third thriving domain is interpersonal thriving which includes the measures of social connectedness and diverse citizenship. The sample did not demonstrate statistically

different mean scores on social connectedness. When evaluating items that make up the social connectedness measure, it appears that while students feel that their friends care about them, students often still feel lonely because of a lack of close friendship and they view others as making friends easier than they do. This seems to indicate a lack of “unavoidable community” at the sample institution and potentially an environment that does not intentionally cultivate deep or more meaningful relationships among peers. When looking at the second measure that makes up interpersonal thriving, diverse citizenship, the sample demonstrated statistically higher means. Specifically within the sample students indicate that they see the value of understanding perspectives of those from different backgrounds along with the importance of contributing to their community and their ability to do so. These results seem to indicate that students within the sample may struggle to form healthy, meaningful relationships with their peers which may impact well-being. That being said, students show a strong desire to understand others and contribute to their community. Students within this sample are more likely to be driven to make a positive impact on the community and form relationships with diverse others. This, in-turn, will likely increase their sense of belonging to the institution and increase their engagement in the college experience (Schreiner, McIntosh, Nelson, & Pothoven, 2009).

Results for Research Question 1 demonstrates that the sample institution included in the study demonstrates high levels of college student thriving. This is reflected in each of the three thriving domains: academic, interpersonal, and intrapersonal thriving. While each domain demonstrated, at least on one measure, that there were statistically higher results among the sample, there was still one measure that did not demonstrate significance when compared to the national mean: social connectedness. This indicates a potential area for growth that encourages intentional community and meaningful peer relationships.

Research Question 2

Research Question 2 asked “*considering study participant engagement in “alternative engagement activities” which represents the most robust, statistically significant predictor of “Overall” Thriving?*” In conducting the analysis, the multiple linear regression test showed that three of the 11 “alternative engagement activities” demonstrated statistically significant predictive effect on student thriving: campus events, community service, and religious services.

This finding indicates that students who participate in campus events and activities, community service, and/or religious services or activities are more likely to thrive as a result of their participation. To better understand what aspects of thriving these alternative engagement indicators have an impact on, additional regression tests were ran for each of the thriving subscales. The results of these tests indicate that community services most influenced the diverse citizenship and academic determination components of student thriving. Campus events and activities influenced the positive prospective and social connectedness components of student thriving. Religious services and activities influenced engaged learning and diverse citizenship components of student thriving.

This study indicates that participation in campus events and activities not only statistically contributes to the overall thriving of college students, but specifically that participation in campus events and activities impacts the positive prospective of students as well as their social connectedness. Students who participate in campus activities and events tend to view life from a “glass half full” prospective and they look for the best in a situation. It is important to note that the results were not likely due to the participation in a particular event or activity, but it was the result of the time and energy the student put into participating in those activities. This aligns with Astin’s (1984) involvement theory and the specific findings of

Cuevas (2015) and Seppelt (2016) in relation to campus involvement and college student thriving. Additionally, students who participate in campus activities or events demonstrate higher levels of social connectedness, specifically, in their ability to develop close meaningful friendships.

This study indicates that participation in community services not only statistically contributes to the overall thriving of college students, but specifically that participation in community service impacts the diverse citizenship of students as well as their academic determination. Students who participate in community service develop a sense of generativity by giving back to those around them. Additionally, students begin to understand, value, and learn from people whose viewpoints are different from their own. Students who participate in community services also appear to have higher levels of academic determination. They are more confident about reaching their educational goals and develop tools to aid in their success. This is likely the result of seeing how their education can help better those around them as they find ways of applying what they learning in the classroom to real life examples.

This study indicates that participation in religious services and activities not only statistically contributes to the overall thriving of college students, but specifically that participation in community service impacts the diverse citizenship of students as well as their engaged learning. Students who participate in religious services and activities are more likely to understand the perspectives of others, value interacting with those from different backgrounds, and have expanded their knowledge or opinions based on becoming more aware of other viewpoints. Additionally, students who participate in religious activities or events are engaged in their community and have a desire to make a difference in the world around them. An unexpected outcome of participation in religious activities and events is that students have higher

levels of engaged learning. This means that students are often taking more away from their classroom experiences. They view what they learn in class as something worthwhile to them as a person. They think about what they have learned in class even when they are not in class, they are energized by what they learn, and they find ways of applying what they have learn in class to other areas of their life. Spirituality has been identified as a pathway to thriving. Much of the research on spirituality within higher education has been conducted by Alexander Astin. He defined spirituality as “our sense of who we are and where we come from, our beliefs of why we are here – the meaning and purpose that we see in our work and our life – our sense of connectedness to one another and the world around us” (Astin et al., 2011b, p.4). Given this definition, it makes sense that students who engaged in religious activities and events might demonstrate higher levels of engaged learning because they see the “bigger picture” of how their learning and growth might impact the world around them.

In summary, student participation in “alternative engagement indicators,” specifically campus events and activities, community service, and religious activities and events, are a predictor of college student thriving. Participation in these activities have a positive influence on college student perspective, social connectedness, diverse citizenship, academic determination, and engaged learning.

Research Question 3

Research Question 3 asked “*considering “High Impact Practices,” which represents the most robust statistically significant predictor of “Overall” Thriving?*”. Using the Multiple Linear Regression test statistic to assess the statistical significant of independent predictor variables in the predictive model, one “High Impact Practice” variable (*Service Learning*) was

found to be a statistically significant predictor of participant thriving. The predictive model was viable ($F_{(10; 624)} = 5.91; p < .001$).

While the results of this analysis are surprising, one high impact practice demonstrates strong predictive effects on college student thriving. As stated previously, through the development of the Thriving Quotient, three domains of thriving were developed consisting of the five composite measures 1) academic thriving, 2) interpersonal thriving, and 3) intrapersonal thriving. Through continued analysis, service learning demonstrates significant predictive power within two of the three domains of thriving: academic thriving and interpersonal thriving.

Within the domain of academic thriving, service learning demonstrated predictive power within both the composite measures of engaged learning and academic determination. Students that participate in service learning appear to be learning more from their classroom experiences. They view what they learn in class as something worthwhile to them as a person. They think about what they have learned in class even when they are not in class, they are energized by what they learn, and they find ways of applying what they have learn in class to other areas of their life. Not only are students who participate in service learning academically engaged, but they demonstrate strong academic determination. They are more confident about reaching their educational goals and develop tools to aid in their success. The strong influence of participation in service learning on a student's levels of engaged learning and academic determination is not surprising. Service learning tends to be paired with an instructional technique that involves the discussion of theory and perspectives in a classroom paired with the application of what they are learning in a real-world setting that allows space for collaboration reflection. This results in a clear alignments with the measures of engaged learning and likely increases the level of academic determination of the student.

In addition to being predictive of academic thriving, service learning is also predictive of interpersonal thriving, specifically diverse citizenship. Students who participate in service learning are more likely to understand the perspectives of others, value interacting with those from different backgrounds, and have expanded their knowledge or opinions based on becoming more aware of other viewpoints. Additionally, students who participate in service learning are engaged in their community and have a desire to make a difference in the world around them. This aligns with the work of Kuh (2008) in which he stated that service learning programs “model the idea that giving something back to the community is an important college outcome, and that working with community partners is good preparation for citizenship, work, and life” (p. 21).

Summary of Research Question Discussion

In summary, participation in the high-impact practice of service learning is predictive of college student thriving. Additionally, through participation in alternative engagement indicators such as campus events and activities, community service, and religious services and events, students are more likely to thrive. Through meaningful engagement of time and effort in these practices/activities, students should embody the characteristics of thriving that Schreiner (2010c) defined as students being “fully engaged intellectually, socially, and emotionally in the college experience” (p. 4). In alignment with Schreiner’s research, these students tend to engage in deep learning, intentionally work towards goals, values the perspectives of others, foster healthy relationships, and overall have a positive prospective. As a result, thriving students experience personal and academic success that promotes retention, persistence, and graduation rates and ultimately are able to experience the full benefits of a college education.

Limitations

The scope of this study was limited to a single institution study. The results may not be generalizable to all institutions of higher learning. This is especially true with the findings of research question one that the sample population demonstrated statistically significantly higher thriving quotients. While pre-college characteristics were controlled for in the analysis institutional characteristics were not. In order to have a clear picture on the impact of student involvement following Astin's (1985) I (input)-E (environment) -O (outcome) model the environment has a significant impact on student development. While this study measured a significant component of the environment (HIPs), it did not control for other characteristics of the environment such as size, institution type, selectivity, etc.

Additionally, the only variable on high-impact practices were student self-reported frequencies. The study did not take into account factors that impact the quality of the high-impact practices. Multiple studies have shown that institutional characteristics, program characteristics, co-curricular practices, and institutional intentionality surrounding high-impact practices impact the effectiveness of said practices (Porter, 2015; Quintero, 2015; & Perez 2016).

Research is also limited on the effects that high-impact practices have on under-represented student groups. Most developmental theories and research on the application of those theories are based on the majority white population. While recent research has been conducted on the impact of high-impact practices for under-represented groups, the effectiveness of such practices are still unclear (Quintero, 2015).

Additional limitations of this study include the limited analysis on other factors that influence student success and student thriving. As the literature review showed, student success is multifaceted and complex. There are many variables that can influence college student

thriving and as a result of not controlling for those variables in this study the findings could have been impacted.

Finally, the amount of time/energy students actually contribute towards the high impact practices or alternative engagement indicators was not evaluated as a part of this study. While the frequency and diversity of practices were evaluated, the study failed to account for the actual amount of time or emotional, psychological, or intrapersonal energy put into participation. Astin's (1984) theory of student involvement outlined the significance of the amount of time and energy a student puts towards his/her involvement. In addition to not accounting for the quality of the high-impact practices, the amount of student time and energy put towards the practices could have equally impacted the results.

Implications for Practice

Results from this study confirm that student engagement impacts the development of college students and ultimately their ability to thrive. While there is limited impact from involvement in specific high-impact practices, the results show that engagement in the college experience has a significant impact on college student thriving. Institutions should be intentional to not only provide opportunities for students to be involved, but to highly encourage involvement by all college students during their college career.

While findings were not wide ranging on the types of high-impact practices that influence college student thriving, it was clear that student participation in service learning demonstrated predictive power on college student thriving. This is likely due to the nature of service learning activities as they often involved applying theory to practice in the real-world that have a direct impact on the local community. There is clearly something powerful about this practice. Institutions of higher learning should make service learning activities available to as many

students as possible. While the specific practice of service learning should be encouraged, institutions should not limit their students purely to service learning activities. The results of this study indicate that activities that encourage the practice of applying theory to practice can impact both a student engaged learning and academic determination. Other activities that allow students to apply what they have learned in the classroom to the “real world” have the potential to impact college student thriving.

The Association of American Colleges and Universities (AAC&U) and other organizations could aid future research by developing not only a broader definition of what high-impact practices are, but a formal taxonomy surrounding them. While the list of high-impact practices used in this study was informative and well-researched, it might be beneficial for practitioners to have a list of characteristics that make practices high-impact. This would allow for more flexibility and creativity at institutions when developing practices unique to that institution and for under-represented student groups.

Findings from this study also indicated that college student thriving might not be impacted by a singular practice, but by the broader notion of student involvement overall. When evaluating alternative engagement indicators, it was clear that involvement in campus event and activities, community service, and religious services and events were predictive of college student thriving. The implication this has for practice is that institution should encourage student involvement in the college experience no matter the specific activity. If the institution is intentional in the design of integrative and purposeful activities and the student dedicated time and energy towards those activities then it should have a positive impact on college student thriving.

This study also adds to the growing body of research that advocates to the broadening definition of student success. Student success has grown beyond the simple metric of retaining, persisting, and graduating. While those metrics are important, a college education is about more than simply attaining a credential; it is about the holistic growth and development of individuals. This study demonstrates some of the pathways that exist within a college environment that enables college student thriving. Practitioners should continue to expand their definition of student success and find ways to help college students thrive.

Future Research

While this study contributes to the existing body of research, there is an expansive opportunity for future research within this topic. Since is the one of the first studies on the effect of high-impact practice on college student thriving, there are numerous consideration for future research in the area. Outlined below are several salient points for future researchers to consider:

1. **Quality of High-Impact Practice.** Existing research, including this study, focused on purely the ideal of binary participation (did or did not) in high-impact practice. Future research must consider the quality of the said practice. This would include how the institution develops the practice, integrates it into their curriculum and culture, and how they encourage reflective participation.
2. **The Quality of Student Engagement.** While this study evaluated the frequency of student involvement in high-impact practice, future studies should consider the quality of student involvement in these practice. This include the amount of time and energy a student devotes to a particular practice.
3. **Longitudinal Studies.** Researchers should consider longitudinal studies. It would be recommended that a future study consider at least a four to six year study on the same

sample. This would allow for a true evaluation of the effects of high-impact practices. A researcher could then identify a more accurate frequency of participation and how participation in certain practice at certain stages of the college career could impact college student thriving.

4. **Underrepresented Student Groups.** Future research should consider the effects of high-impact practice on college student thriving from the perspective of underrepresented student groups. The existing research is focused on the majority white populations of college campus. As college student bodies are becoming more diverse, it would be advantageous for researchers to consider not only how high-impact practice impact student thriving, but how larger developmental theories may or may not be applicable to underrepresented student groups.
5. **Qualitative Research.** While this quantitative study has added to the research on this topic it has also demonstrated the rich nature of college student thriving. Due to the complex nature of this topic, quantitative research alone can only uncover so much. A qualitative study of the effects of high-impact practice on college student thriving would provide a rich contribution to the field.

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Appendix A: Thriving Quotient Survey

Psychosocial Items (Agreement: 1-Strongly Disagree 6 to Strongly Agree)	
(ELI1)	I feel as though I am learning things in my classes that are worthwhile to me as a person.
(ELI2)	I can usually find ways of applying what I'm learning in class to something else in my life.
(AD1)	I am confident I will reach my educational goals.
(ELI3)	I find myself thinking about what I'm learning in class even when I'm not in class.
(AD4)	Even if assignments are not interesting to me, I find a way to keep working at them until they are done well.
(ELI4)	I feel energized by the ideas I am learning in most of my classes.
(AD5)	I know how to apply my strengths to achieve academic success.
(AD6)	I am good at juggling all the demands of college life.
(AD7)	Other people would say I'm a hard worker.
(PSC1)	I feel like I belong here.
(SC1)	Other people seem to make friends more easily than I do.
(PSC2)	Being a student here fills an important need in my life.
(DC1)	I spend time making a difference in other people's lives.
(PSC4)	I feel proud of the college or university I have chosen to attend.
(SC3)	I don't have as many close friends as I wish I had.
(PSC5)	There is a strong sense of community on this campus.
(DC3N)	I value interacting with people whose viewpoints are different from my own.
(SC2N)	I feel like my friends really care about me.
(DC2)	I know I can make a difference in my community.
(SC4N)	I feel content with the kinds of friendships I currently have.

(SPIR1)	My spiritual or religious beliefs provide me with a sense of strength when life is difficult.
(AD8)	When I'm faced with a problem in my life, I can usually think of several ways to solve it.
(POS1)	My perspective on life is that I tend to see the glass as "half full" rather than "half empty."
(SPIR2N)	My spiritual or religious beliefs give meaning and purpose to my life.
(SC6)	It's hard to make friends on this campus.
(DC4)	It's important for me to make a contribution to my community.
(POS3N)	I look for the best in situations, even when things seem hopeless.
(DC6N)	My knowledge or opinions have been influenced or changed by becoming more aware of the perspectives of individuals from different backgrounds.
(SC5N)	I often feel lonely because I have few close friends with whom to share my concerns.
(SPIR3)	My spiritual or religious beliefs are the foundation of my approach to life.
(TUITIONWORTH)	I am confident that the amount of money I'm paying for college is worth it in the long run.
(REENROLL)	I intend to re-enroll at this institution next year (graduating seniors please leave this blank!).
(GRADUATE)	I intend to graduate from this institution.
(FIT)	Given my current goals, this institution is a good fit for me.
(CHOOSE)	If I had to do it over again, I would choose a different university to attend.
(ENJOY)	I really enjoy being a student here.
(INTEGRITY1)	My experiences on this campus so far have met my expectations.
(INTEGRITY2)	The institution was accurately portrayed during the admissions process.
(INTEGRITY3)	Overall, the actions of faculty, staff, and administrators on this campus are consistent with the mission of the institution.

Engagement Items (Frequency: 1-Never to 6-Frequently)

(CAMPUSACT)	Campus events or activities
(SOCIALFAC)	Interaction with faculty outside of class
(FRATSOR)	Fraternity/Sorority
(COMMSERV)	Community Service
(RELIGIOUS)	Religious services or activities
(ETHNICORGS)	Campus ethnic organizations (such as Black Student Association)
(ADVFREQ)	Met with your academic advisor
(CAREERFAC)	Discussed career or grad school plans with faculty
(ACADFAC)	Discussed academic issues with faculty
(OFCHRS)	Met with faculty during office hours
(EMAILFAC)	E-mailed, texted, or Facebooked faculty

High-Impact Practice Items (*Frequency: 1-Never to 6-Frequently*)

(LEARNCOM)	Participated in a learning community or some other formal program where groups of students take two or more classes together
(FIRSTYRSEM)	Participated in a first-year seminar
(WRITING)	Taken writing-intensive courses
(GROUP)	Taken courses that required a group project
(SERVICELRN)	Taken courses that included a community-based project (service learning)
(LECTURE)	Taken courses that relied solely on lecture
(INTERN)	Participated in an internship, co-op, field experience, student teaching, or clinical placement
(STUDYABROAD)	Studied abroad
(FACRES)	Conducted research with a faculty member
(CAPSTONE)	Participated in a culminating experience, such as a capstone course, senior project or thesis, art exhibit, senior recital, or portfolio

Involvement	
INVOLVE_HOURS	<p>Please indicate the number of hours per week that you devoted to your involvement in a student organization or student leadership role during this semester:</p> <ul style="list-style-type: none"> • 0 (0) • 1-5 (1) • 6-10 (2) • 11-15 (3) • 16-20 (4) • 21-25 (5) • 26-30 (6) • more than 30 (7)
INVOLVE_MANDATE	<p>Please indicate how many of your hours per week devoted to student organizations or leadership roles are incentivized or mandated (i.e., stipend, hourly pay, scholarship-dependent, etc.).</p> <ul style="list-style-type: none"> • 0 (1) • 1-5 (2) • 6-10 (3) • 11-15 (4) • 16-20 (5) • 21-25 (6) • 26-30 (7) • more than 30 (8)
LEADER	<p>Please indicate the number of elected or appointed positions you have held during this semester (e.g., president/chairperson/captain/editor, secretary, treasurer, committee/project chairperson, Resident Assistant (RA), orientation leader, etc.):</p> <ul style="list-style-type: none"> • 0 (0) • 1 (1) • 2 (2) • 3 (3) • 4 (4) • 5 or more (5)

Organizational Engagement Quality Items (*Frequency_2: 1-NA to 5-Very Often*)

(QUALITY1)	When I attended organization meetings, I expressed my opinion and/or took part in discussion.
(QUALITY2)	When I was away from members of the group/organization, I talked with others about the organization and its activities, or wore a shirt or button to let others know about my involvement.
(QUALITY3)	When the group/organization sponsored a program or activity, I made an effort to encourage other students and/or members to attend.
(QUALITY4)	I volunteered or was assigned responsibility to work on something that the group or organization needed to have done.
(QUALITY5)	I fulfilled assigned duties or responsibilities to the group or organization on time this semester.

Satisfaction Items (*Satisfaction: 1-Very Dissatisfied to 6-Very Satisfied*)

(LEARNSAT)	The amount you are learning in your classes.
(OVERSAT)	Your overall experiences at this university.
(FACINT)	The amount of contact you have had with faculty this year.
(ADVSAT)	The academic advising you have received this year.
(PEERSAT)	The kinds of interaction you have had with other students this year.
(FACSAT)	The quality of the interaction you have had with faculty so far this year.
(DIVSAT)	The interactions you have had this year with students of different ethnic backgrounds.
(PAYSAT)	The amount of money you personally have to pay to attend college here.
(FACDIV)	Faculty sensitivity to the needs of diverse students.
(DIVDISC)	Faculty encouragement for students to contribute diverse perspectives in class discussions.
(DIVPERSP)	The degree to which faculty include diverse perspectives in the curriculum.
(HEALTHSAT)	Your physical health right now.
(FINANCIALAID)	The amount of financial aid I have received.

Demographic	
FIRSTGEN	Did either of your parents attend college? <ul style="list-style-type: none"> • Yes (1) • No (2)
GENDER	Gender: <ul style="list-style-type: none"> • Female (1) • Male (0) • Other (99)
AGE	Age: <ul style="list-style-type: none"> • 17 or younger (1) • 18-20 (2) • 21-23 (3) • 24-26 (4) • 27-30 (5) • 31-34 (6) • 35-38 (7) • 39-42 (8) • 43-46 (9) • 47-50 (10) • over 50 (11)
LEVEL	Class level: <ul style="list-style-type: none"> • First-year (1) • Sophomore (2) • Junior (3) • Senior (4) • Other (Please Specify) (5)
STATUS	Enrollment Status <ul style="list-style-type: none"> • Full-time student (1) • Part-time student (0)
TRANSFER	Did you transfer into this institution? <ul style="list-style-type: none"> • Yes (1) • No (0)

HSGRADES	<p>How would you describe your grades in high school?</p> <ul style="list-style-type: none"> • mostly A's (6) • mostly A's and B's (5) • mostly B's (4) • mostly B's and C's (3) • mostly C's (2) • below a C average (1)
DEGREEGOAL	<p>What is the HIGHEST degree you intend to pursue in your lifetime?</p> <ul style="list-style-type: none"> • none (1) • bachelor's (2) • teaching credential (3) • master's degree (4) • doctorate (5) • medical or law degree (6) • other graduate degree (specify) (7)
INCOME	<p>What is your best guess about your household income level?</p> <ul style="list-style-type: none"> • less than \$30,000 a year (1) • \$30,000 to \$59,999 (2) • \$60,000 to \$89,999 (3) • \$90,000 to 119,999 (4) • \$120,000 and over (5)
ONCAMPUS	<p>Do you live on campus?</p> <ul style="list-style-type: none"> • Yes (1) • No (0)
WORK	<p>Do you work for pay?</p> <ul style="list-style-type: none"> • no (0) • on campus (1) • off campus (2) • both on and off campus (3)

RACE	<p>Collecting information about race and ethnicity assists colleges to understand the varying needs of students on campus. How do you identify your racial or ethnic family background?</p> <ul style="list-style-type: none"> • African-American / Black (1) • American Indian / Alaskan Native (2) • Asian-American/Asian/Native Hawaiian/Pacific Islander (3) • Caucasian / White (4) • Latino / Hispanic (5) • Other (specify) (6) • Prefer not to respond (7)
INTL	<p>Are you an international student?</p> <ul style="list-style-type: none"> • Yes (1) • No (2)
FIRSTCHOICE	<p>When you chose to enroll in this institution, was it your first choice?</p> <ul style="list-style-type: none"> • Yes (1) • No (0)
ATHLETE	<p>Are you a member of an intercollegiate athletic team on this campus?</p> <ul style="list-style-type: none"> • Yes (1) • No (0)
MAJORSURE	<p>How sure are you of your major?</p> <ul style="list-style-type: none"> • Very Unsure (1) • Unsure (2) • Somewhat Unsure (3) • Somewhat Sure (4) • Sure (5) • Very Sure (6)
FINDIFF	<p>Considering the financial aid you've received and the money you and your family have, how much difficulty have you had so far in paying for your school expenses?</p> <ul style="list-style-type: none"> • No difficulty (1) • A little difficulty (2) • Some difficulty (3) • A fair amount of difficulty (4) • Great difficulty (5)

COLLGRADES	<p>How would you describe your grades in college so far?</p> <ul style="list-style-type: none"> • mostly A's (6) • mostly A's and B's (5) • mostly B's (4) • mostly B's and C's (3) • mostly C's (2) • below a C average (1)
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Self-Perceived Thriving

THRIVING	<p>We are interested in what helps students thrive in college. Thriving is defined as getting the most out of your college experience, so that you are intellectually, socially, and psychologically engaged and enjoying the college experience. Given that definition, to what extent do you think you are THRIVING as a college student this semester?</p> <ul style="list-style-type: none"> • not even surviving (1) • barely surviving (2) • surviving (3) • somewhat thriving (4) • thriving most of the time (5) • consistently thriving (6)
THRIVINGEVENTS	<p>What has happened this semester that has led to your perception of whether you are thriving or not? [Open Ended]</p>

Scale(s):

Agreement

1. Strongly Disagree
2. Disagree
3. Somewhat Disagree
4. Somewhat Agree
5. Agree
6. Strongly Agree

Frequency_2

1. N/A
2. Never
3. Occasionally
4. Often
5. Very Often

Appendix B: High-Impact Educational Practices (G. Kuh & O'Donnell, 2013)

First-Year Seminars and Experiences

Many schools now build into the curriculum first-year seminars or other programs that bring small groups of students together with faculty or staff on a regular basis. The highest-quality first-year experiences place a strong emphasis on critical inquiry, frequent writing, information literacy, collaborative learning, and other skills that develop students' intellectual and practical competencies. First-year seminars can also involve students with cutting-edge questions in scholarship and with faculty members' own research.

Common Intellectual Experiences

The older idea of a "core" curriculum has evolved into a variety of modern forms, such as a set of required common courses or a vertically organized general education program that includes advanced integrative studies and/or required participation in a learning community (see below). These programs often combine broad themes—e.g., technology and society, global interdependence—with a variety of curricular and cocurricular options for students.

Learning Communities

The key goals for learning communities are to encourage integration of learning across courses and to involve students with "big questions" that matter beyond the classroom. Students take two or more linked courses as a group and work closely with one another and with their professors. Many learning communities explore a common topic and/or common readings through the lenses of different disciplines. Some deliberately link "liberal arts" and "professional courses"; others feature service learning.

Writing-Intensive Courses

These courses emphasize writing at all levels of instruction and across the curriculum, including final-year projects. Students are encouraged to produce and revise various forms of writing for different audiences in different disciplines. The effectiveness of this repeated practice "across the curriculum" has led to parallel efforts in such areas as quantitative reasoning, oral communication, information literacy, and, on some campuses, ethical inquiry.

Collaborative Assignments and Projects

Collaborative learning combines two key goals: learning to work and solve problems in the company of others, and sharpening one's own understanding by listening seriously to the insights of others, especially those with different backgrounds and life experiences. Approaches range from study groups within a course, to team-based assignments and writing, to cooperative projects and research.

Undergraduate Research

Many colleges and universities are now providing research experiences for students in all disciplines. Undergraduate research, however, has been most prominently used in science disciplines. With strong support from the National Science Foundation and the research community, scientists are reshaping their courses to connect key concepts and questions with students' early and active involvement in systematic investigation and research. The goal is to involve students with actively contested questions, empirical observation, cutting-edge

technologies, and the sense of excitement that comes from working to answer important questions.

Diversity/Global Learning

Many colleges and universities now emphasize courses and programs that help students explore cultures, life experiences, and worldviews different from their own. These studies—which may address U.S. diversity, world cultures, or both—often explore “difficult differences” such as racial, ethnic, and gender inequality, or continuing struggles around the globe for human rights, freedom, and power. Frequently, intercultural studies are augmented by experiential learning in the community and/or by study abroad.

Service Learning, Community-Based Learning

In these programs, field-based “experiential learning” with community partners is an instructional strategy—and often a required part of the course. The idea is to give students direct experience with issues they are studying in the curriculum and with ongoing efforts to analyze and solve problems in the community. A key element in these programs is the opportunity students have to both apply what they are learning in real-world settings and reflect in a classroom setting on their service experiences. These programs model the idea that giving something back to the community is an important college outcome, and that working with community partners is good preparation for citizenship, work, and life.

Internships

Internships are another increasingly common form of experiential learning. The idea is to provide students with direct experience in a work setting—usually related to their career interests—and to give them the benefit of supervision and coaching from professionals in the field. If the internship is taken for course credit, students complete a project or paper that is approved by a faculty member.

Capstone Courses and Projects

Whether they’re called “senior capstones” or some other name, these culminating experiences require students nearing the end of their college years to create a project of some sort that integrates and applies what they’ve learned. The project might be a research paper, a performance, a portfolio of “best work,” or an exhibit of artwork. Capstones are offered both in departmental programs and, increasingly, in general education as well.