College Student Thriving: Predictors of Success and Retention

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In the face of economic challenges in higher education, institutions are increasingly interested in research and interventions that can enhance student retention and institutional effectiveness. As the statistics collected by the American Council on Education and the National Center for Educational Statistics continue to demonstrate (Choy, 2002; Horn, 2006), the loss of human potential that is represented in the 48-54% percent of college students who do not complete their degrees is a reminder that much remains to be done to ensure that access to higher education is translated into success.

Recent approaches to student success have tended to focus on the behaviors that lead to learning outcomes (NSSE, 2006), the institutional supports for engagement in those behaviors (Kuh, Kinzie, Schuh, & Whitt, 2005), the programs and services that are available to students (Kramer, 2007), or the entering student characteristics that are predictive of success and persistence. Although such research has significantly advanced higher education's understanding of the overall picture of student success, contributors to individual motivation and the psychological processes that lead students to engage in and fully benefit from the college environment have been largely missing from the literature (Bean, 2005). Such processes are malleable (Robbins, Lauver, Le, Langley, Davis, & Carlstrom, 2004), meaning that strategically-

developed interventions at the individual, classroom, and programmatic levels could enable a greater percentage of entering students to not only survive, but thrive in the college environment. As higher education researchers seek to advance the next generation of scholarship on student success and retention, attention to malleable processes within students and the differential effects of such processes on student success offers opportunities for new insights into the "ill-structured problem of student departure" (Braxton, 2000, p. vii).

The goal of the current study is two-fold: (1) to address the limitations of current studies of psychosocial processes within students by adding institutional features into the equation as a control; and (2) to expand the identification of the psychosocial processes within students that are most predictive of their academic success and persistence. More specifically, the current study seeks to identify the elements of college student thriving that are predictive of academic success and persistence. We have conceptualized *thriving* as optimal functioning in three key areas that are hypothesized to contribute to student success and persistence: academic engagement and performance, interpersonal relationships, and intrapersonal well-being. The Thriving Quotient is an instrument designed to measure positive functioning in these three areas; an analysis of 4,602 college student responses to the instrument form the basis of this study.

Conceptual Framework

Theories of student departure from college were initially conceptualized as sociological models (Tinto, 1975, 1993) that began to be revised in the last decade to include psychosocial factors (Bean & Eaton, 2000; Braxton, 2000; Berger & Milem, 1999; Eaton & Bean, 1995; Milem & Berger, 1997). Psychosocial factors such as academic self-efficacy, achievement motivation, and academic discipline have gained increasing prominence in the literature as Robbins and his colleagues (2004) have conducted meta-analyses connecting these factors to

student academic success and persistence, establishing their incremental validity beyond the traditional predictors of these outcomes. These psychosocial factors are critical components of the student success equation, as they have been demonstrated to vary across students, to be malleable, and to be predictive of the differential effects of intervention programs (Robbins, Oh, Le, & Button, 2009).

Bean and Eaton (2000) maintain that student persistence is a behavior that is psychologically motivated. Their model of retention asserts that students who persist are those who are most able to interact effectively within the campus environment in ways that strengthen their sense of self-efficacy and control; such students are more likely to experience a good fit within the institution and to persist to graduation. An examination of the psychological processes Bean and Eaton outline in their model indicates that it may be useful to connect those processes theoretically to the construct of *flourishing* that has been well-researched in psychology (Keyes, 2003) and is beginning to receive attention in higher education (Ambler, 2006).

Grounded in the field of positive psychology (Seligman & Csikszentmihalyi, 2000), flourishing is conceptualized by Keyes (2003) as positive functioning manifested in healthy relationships, resilience in the face of personal challenges, and engagement with the world. The state of flourishing reflects a life lived with high levels of emotional well-being (Keyes & Haidt, 2003). Additionally, flourishing individuals have an enthusiasm for life and are productively engaged with others and in society (Keyes, 2003).

Because most of the research on flourishing has been conducted with either young children or adults in middle and late life (Keyes, 2003), we prefer to use the term *thriving* in applying the concept to college students, in order to describe a holistic construct that includes psychosocial factors identified in the literature as predictive of student academic success and

retention. Thriving implies more than just surviving in the college environment; it conveys that a student is fully engaged intellectually, socially, and emotionally, and is experiencing a sense of community and psychological well-being that contributes to success and persistence to graduation. Based on this conceptualization of college student thriving, the Thriving Quotient was developed to measure students' academic, intrapersonal, and interpersonal engagement and well-being. Each area of thriving consists of multiple psychological constructs that combine to characterize a well-rounded, high-functioning individual.

Academic Thriving

Academic thriving encompasses constructs that have been linked to student academic success, such as academic self-efficacy (Chemers, Hu, & Garcia, 2001), engaged learning (Schreiner & Louis, 2006; 2008), self-regulated learning (Pintrich, 2004), investment of effort (Pintrich et al., 1993; Robbins et al., 2004) and hope (Snyder, 1995). Academic self-efficacy is strongly related to positive academic performance and adjustment to the college environment (Chemers, Hu, & Garcia, 2001). The ability to self-regulate effort and learning helps students effectively set goals, monitor their progress, and adapt their behavior to achieve those goals (Pintrich, 2004). Engaging in learning involves the ability to focus attention, participate actively, and process information meaningfully, resulting in increased satisfaction with the college experience and persistence to graduation (Schreiner & Louis, 2006; 2008). Disciplining oneself to invest the effort necessary to succeed in college is predictive of the academic success required for persistence to graduation, above and beyond academic ability (Robbins et al., 2004). This same determination is evident in hope, defined by Snyder (1995) as the motivation to set goals and the concomitant ability to envision varied options to achieve them. Accordingly, hope

requires both volition and planning, and is predictive of academic success and persistence (Snyder et al., 2002).

Intrapersonal Thriving

Student thriving requires the development of healthy attitudes toward self as well as toward the learning process. Constructs related to intrapersonal thriving include environmental mastery and coping skills (Bean & Eaton, 2000; Ryff, 1989), optimism (Luthans, Youssef, & Avolio, 2007), and subjective well-being (Diener, Suh, Lucas, & Smith, 1999).

As noted in Bean and Eaton's (2000) model of retention, coping skills also play an important role in student success and retention. Such coping skills include students' ability to handle stress and interact confidently with the environment, making choices within a given context and shaping it as required to meet one's needs, a construct Ryff (1989) terms *environmental mastery*. This construct is identified more broadly in Braxton, Hirschy, and McClendon's (2004) model of student departure as *proactive social adjustment*—the ability to respond positively and take initiative to meet the demands of the college environment.

Two additional constructs from the psychological literature, optimism and subjective well-being, were also incorporated into our conceptualization of thriving. Optimism, defined as the expectation of positive outcomes (Carver, Scheier, Miller, & Fulford, 2009), has been demonstrated to be a malleable psychosocial factor that is a significant predictor of success in adults as well as of psychological well-being and lower levels of psychological distress in college students (Burris, Brechting, Salsman & Carlson, 2009). Subjective well-being relies upon the congruency between expectation and outcome in the life of the individual (Ryan & Deci, 2001). High subjective well-being has been linked to stronger social relationships, lower levels of depression and suicidal ideation, greater job success, greater ability to cope with stress, and

has been established as an important indicator of quality of life in adults (Diener, Suh, Lucas, & Smith, 1999; Eid & Diener, 2003; Pavot & Diener, 2004).

Interpersonal Thriving

Interpersonal thriving in the higher education context comprises several factors, all of which demonstrate positive relational functioning. Braxton, Hirschy, and McClendon's (2004) model of student departure has focused on elements of interpersonal thriving that lead to social integration and are connected to student persistence, notably psychosocial engagement and communal potential. Involvement in the college environment, identified as a critical ingredient in student success outcomes by Astin (1984), as well as feeling a sense of belonging within that environment, are both predictive of student persistence (Berger, 1997).

The elements of interpersonal thriving measured in this study include a sense of community (Berger, 1997), positive relationships (Ryff, 1989), a growth mindset (Dweck, 2006), citizenship (Tyree, 1998), and openness to diversity (Miville et al,, 1999). Sense of community incorporates students' feelings of fit and belonging within their college setting, their sense of voice and contribution to that community, their active involvement within it, and their emotional connections to others within the community (DeNeui, 2003). Positive relationships are a component of psychological well-being that Ryff and Keyes (1995) have demonstrated are strongly connected to life satisfaction in adults. A *growth mindset*, also referred to as an incremental self-theory, describes a willingness to believe that individuals have the capacity to change and develop over time (Dweck, 2006). Citizenship is conceptualized as the interest in and ability to positively influence the lives of others; it has been connected to positive outcomes in college students, such as increased community service in college (Smist, 2006; Tyree, 1998). Miville et al.'s (1999) concept of a universal-diverse orientation of diversity emphasizes an

inclusive yet differentiating attitude toward all persons. This attitude is achieved by the recognition and acceptance of similarities and differences and results in increased connection with others (Fuertes, Miville, Mohr, Sadlacek, & Gretchen, 2000).

Based on these conceptualizations of college student thriving, the Thriving Quotient was developed to measure students' thriving academically, intrapersonally, and interpersonally. The instrument contains items indicative of aspects of student thriving that a review of the literature indicated are amenable to intervention and are connected to student success and persistence in college. The research question guiding the current study is to what extent do academic, intrapersonal, and interpersonal indicators of thriving predict college students' academic success and retention, after controlling for institutional and entering student characteristics?

Methods

Data Sources and Sample

In the spring of 2009 the Thriving Quotient was administered to 6,617 undergraduate students representing the full range of class levels at 27 public and private colleges and universities across the United States. Institutional participation was solicited through personal contacts at universities and through online higher education listservs. Eighteen institutions were private and nine were public; the institutions represented a broad range of Carnegie classifications, but most were moderately to highly selective. Eleven of the institutions were baccalaureate colleges, nine were master's level institutions, and seven of the institutions were research-high or very high institutions. Five of the institutions were relatively small (student population under 1500) and eight of the institutions were moderately large, with student populations above 10,000. Responses were collected via online surveys administered to students through a contact on each campus, after the institutional review board on the campus approved

the study. Each campus utilized its own method of sampling students via e-mail contacts, with response rates that ranged from 7% to 37% and averaged 18%. Incentives were provided to each campus in the form of a lottery drawing for $25 gift cards.

After deleting part-time students, students over the age of 25, and those cases with multivariate outliers, the final sample contained 4,602 full-time traditional-aged undergraduate students. Missing values were replaced with expectation maximization as recommended by Tabachnick and Fidell (2007), using SPSS' Missing Value Analysis version 18. As can be seen in Table 1, 70.8% of the students in this final sample were women. The sample included 19.4% first-generation students, and 87.6% of the sample was Caucasian. Most of the sample lived on campus.

Insert Table 1 about here

Measures

The Thriving Quotient (TQ) is a 32-item instrument developed for this study. Students respond to each item on a 6-point Likert-type scale from 1 = *strongly disagree* to 6 = *strongly agree*. A proportion of the items are reverse-scored in order to prevent response set. The TQ began as a 198-item instrument that was pilot tested on 2,474 undergraduates at 13 institutions in the spring of 2008 as an adaptation of existing measures of constructs thought to comprise academic, intrapersonal, and interpersonal aspects of college student thriving: engaged learning (Schreiner & Louis, 2006), citizenship (Tyree, 1998), openness to diversity (Fuertes, Miville, Mohr, Sadlacek, & Gretchen, 2000), mindset (Dweck, 2006), psychological well-being (Ryff & Keyes, 1995), academic self-efficacy (Chemers, Hu, & Garcia, 2001), perceived academic

control (Perry, Hladkyi, Pekrun, & Pelletier, 2001), meaning in life (Steger, Frazier, Oishi, & Kaler, 2006), mindfulness (Brown & Ryan, 2003), sense of community (Schreiner, 2006), hope (Snyder, Lopez, Shorey, Rand, & Feldman, 2003), optimism (Scheier & Carver, 1985), resiliency (Wagnild & Young, 1993), subjective well-being (Diener, et al., 1999), and self-regulated learning (Pintrich, Smith, Garcia, & McKeachie, 1993).

Items were eliminated from the pilot version of the instrument based on a number of factors: (1) a principal components analysis, (2) estimates of internal consistency reliability, (3) item-total correlations, (4) examination of variability, and (5) feedback from students who had taken the instrument and, in focus groups, critiqued it. Based on a principal components analysis with varimax rotation, items that loaded on more than one component or loaded less than .40 on any component were eliminated. Examination of Cronbach's alpha estimates for each scale resulted in the elimination of items that did not contribute significantly to the internal consistency of their respective scales. Items that correlated less than $r = .40$ with the scale total were also eliminated, as were items with standard deviations below 1.0. In addition to these adjustments, five student focus groups completed the instrument. Because many of the public domain instruments were intended for adults, focus group participants provided significant feedback on item clarity and wording that was appropriate for college students.

A confirmatory factor analysis was conducted with the current sample in the spring of 2009. Using AMOS 16.0, we determined that the Thriving Quotient consists of five factors and a second-order factor that reflects the global construct of thriving. The five factors accounted for 61.83% of the total variance and included (1) Engaged Learning, (2) Diverse Citizenship, (3) Academic Determination, (4) Positive Perspective, and (5) Social Connectedness. Cronbach's alpha reliability estimates for each scale ranged from .80 (Diverse Citizenship) to .85 (Engaged

Learning); the internal consistency of the instrument as a whole is reflected in a Cronbach's alpha of .91. The five-factor model with thriving as a second-order factor was determined to be a good fit for the data, based on an examination of the fit indices most appropriate for use with large sample sizes (RMSEA = .046, Δ_2 = .927, TLI = .920, CFI = .927).

In addition to the items to assess thriving, each participant in the current study responded to a variety of items indicative of desired outcomes of the postsecondary educational experience, such as academic performance, intent to graduate from the institution, the extent to which they would choose the same institution again, and the extent to which the institution is perceived as a good fit for them. These outcomes were utilized as dependent variables in the current study, with separate regression equations conducted for each. Measures of satisfaction with various aspects of the college experience were also included, incorporating satisfaction with the quality of interaction with faculty, advising, grades, interaction with their peers, current living situation, and physical health. In addition, levels of student involvement in specific behaviors were assessed, including frequency of interaction with faculty outside of class, involvement in campus activities, clubs and organizations, community service, and fraternities or sororities. Finally, the amount of time students spent sleeping, working on or off campus, studying, interacting with friends, watching TV, playing videogames, and being on Facebook was assessed. These variables were organized into scales based on the results of a principal components analysis with varimax rotation. The variables are outlined in Table 2, along with their response scales and coding strategies.

Insert Table 2 about here

Data Analysis

After deleting all cases with multivariate outliers, replacing missing values with the expectation maximization method, and transforming items as appropriate based on their level of skewness, we conducted a series of hierarchical multiple regression analyses. There were four criterion variables that were regressed: intent to graduate, would choose the institution again, institutional fit, and self-reported college grades.

In each case, institutional features were entered into the first block of the regression equations. These features included Carnegie classification, institutional control (public or private), selectivity, percent of females on campus, and percent of white students on campus. Student demographic characteristics were entered in the second block and included race (student of color or not), gender, first-generation status, residence (on or off campus), whether the institution had been the student's first choice at enrollment, and self-reported high school grades. The variables entered as control variables in blocks one and two were chosen due to previous research that had indicated their significant relationship to at least one of the dependent variables (Hu & Kuh, 2002; Kuh, 2003a; Kuh, Gonyea, & Palmer, 2001; Pascarella et al., 2006; Pike & Kuh, 2005).

Students' factor scores on each scale of the Thriving Quotient were entered into block three of the regression equations, followed by their factor scores on each involvement scale in block four and their levels of satisfaction with various aspects of their college experience in block five. We utilized the direct method of entering variables within each block.

Table 3 outlines the means and standard deviations of the scales of the Thriving Quotient, and Table 4 presents the results of each of the regression equations. Total variance explained by each of the models ranged from 16.2% for intent to graduate to 37.4% for college grades. After

controlling for institutional type and student demographic characteristics, scores on the Thriving Quotient accounted for an additional 8% to 18% of the variance in desired outcomes. TQ scores contributed least to the variance in self-reported college grades and most to the variance in students' perception that the institution was a good fit for them.

Insert Table 3 about here

All of the TQ scales were significant predictors of the four criterion variables. The degree to which each scale explained the variance in the criterion variables differed for each outcome, as can be seen in Table 4. The Engaged Learning and Academic Determination factors explained the most variance across the criterion variables.

Insert Table 4 about here

Discussion

Despite calls in the literature (Bean & Eaton, 2000; DeBerard, Spielmans & Julka, 2004; Pascarella & Terenzini, 2005) for an inclusive psychosocial approach to understanding outcomes such as academic performance and student retention, a dearth of comprehensive models persists. The current study sought to extend the student success literature by answering a central research question: To what extent do academic, intrapersonal, and interpersonal indicators of thriving predict college students' academic success and retention, after controlling for institutional and entering student characteristics? The results of the Thriving Quotient study demonstrate that

these indicators comprise five factors that combine to create a second-order factor. This construct, thriving, accounted for 8% to 18% of variance in outcome variables after controlling for the specified institutional and individual characteristics. The predictive power of the model indicates that thriving is correlated with several meaningful outcomes: intent to graduate, perceived institutional fit, college grades, and willingness to choose the institution again if given the opportunity. These findings affirm the legitimacy of thriving as a useful construct for understanding students' varying experiences of success in college.

The contribution of institutional and student background variables is relatively small for persistence, satisfaction, and fit outcomes, ranging from less than 1% of the variance to no more than 7%. Students attending private institutions and those attending research-high/very high doctoral-level institutions are more likely to be satisfied with their choice of institution and intend to graduate from that institution, as are those who initially identified their institution as their first choice at enrollment, had better high school grades, plan to attend graduate school, and are Caucasian. However, all these variables combined do not account for as high a proportion of the variance in persistence and satisfaction outcomes as the thriving factors do.

Institutional and student background variables account for a greater percentage of the variance in college grades, however. At the institutional level, higher selectivity is associated with lower college grades. A higher percentage of women students on campus is predictive of higher college grades. At the individual student level, high school grades is the dominant predictor of college grades, with race and first generation status moderately predictive of lower grades.

Once the thriving factors are taken into consideration, student involvement on campus and their satisfaction with various aspects of the college experience add little to the explanation

of variance in the four outcomes. This finding could be because of the strong relationship between thriving, involvement, and satisfaction, although tolerance levels were set at .30 to control for any multicollinearity in the regression analyses. Students who are thriving are also likely to be more satisfied with their lives, including aspects of their college experience, and are more likely to interact with their peers (including online social networks), be involved in campus activities, and spend less time working off campus.

The study's results also describe relationships between each of the TQ's five factors and the outcome variables. Two of the factors, Engaged Learning and Academic Determination, significantly predicted positive responses for all five criterion variables. Students with high scores on these factors reported higher college grades, a greater sense of fit at their current institution, a higher likelihood of choosing the same school again if given the chance, and stronger intentions to eventually graduate from the institution. Engaged Learning represents the meaningful processing, focused attention, and active participation in the learning process that Tagg (2003) describes as *deep learning*, a highly desired outcome of the college experience that leads to both academic success and persistence to graduation. Academic Determination represents the necessary goal-setting, motivation, and self-regulated investment of effort in the academic experience that also leads not only to academic success, but persistence to graduation and a sense that the college experience has been fulfilling. As Robbins and colleagues have demonstrated (2004), this psychosocial construct predicts success beyond what the traditional measures of student characteristics are able to predict. Unlike Le, Casillas, Robbins, and Langley (2005)'s Academic Discipline scale of the Student Readiness Inventory, however, Academic Determination is comprised of more than conscientiousness and discipline; it contains

an important element of goal-setting and motivation to reach academic goals, as well as key strategies to persevere.

The Positive Perspective scale explained a significant proportion of the variance in all outcomes except college grades. This factor is a combination of optimism (Carver et al., 2009) and subjective well-being (Diener et al., 1999) and is indicative of an orientation toward life characterized by a pervasive satisfaction and an expectation of positive outcomes despite difficult circumstances. Students with high scores on this scale were significantly more likely to expect to graduate from their current institution, were more likely to say they would choose their same institution again, and were more likely to report a good fit with their chosen institution. Students' positive perspective toward their college experience may reflect a motivational dimension that contributes to institutional commitment and loyalty, important constructs within most retention models (Bean & Eaton, 2000; Tinto, 1993).

The TQ's two interpersonal factors, Social Connectedness and Diverse Citizenship, were also significant predictors of all outcomes except college grades. Social Connectedness draws entirely upon students' perceptions of their interpersonal connections with others (Ryff, 1989), and this factor positively predicted all outcomes except grades. Beginning with Tinto's (1975) initial exploration of student departure behavior, the role of social integration in persistence has been reinforced in numerous studies (Braxton, Hirschy, & McClendon, 2004); that connection is illustrated in this study, as well. When viewed through the lens of interpersonal relationships, intent to graduate, institutional fit, and likelihood of selecting the same institution again could potentially be understood as reflections of perceived belonging and integration within the social fabric of the institution.

High scores on the Diverse Citizenship scale correlated positively with institutional fit, desire to choose the institution again if given a chance, and intent to graduate. The items that comprise this scale combine the concepts of citizenship (Tyree, 1998), an appreciation of differences in others (Miville et al., 1999), and a growth mindset (Dweck, 2006) that perceives human behavior as malleable with effort. Thus, students' interest in making a difference in others' lives and appreciating what others have to offer seem to be predictive of their intent to remain in college and gain the full benefit of their college experience.

Motivations, attitudes, and perceptions related to the college experience may vary widely, even among students with similar pre-college experiences and circumstances. By acknowledging the five factors that comprise thriving, higher education researchers and practitioners may better understand how to support students who seem to flourish in some aspects of their college lives while failing to thrive on a more holistic level. The identification of comprehensive constructs such as thriving helps explicate the relationship between cognitive and behavioral aspects of student success and provides means for supporting learners within the college environment.

Limitations

There are two limitations to this study, both related to the student sample and the way in which information was gathered from the students. Because institutions were not randomly selected nor were students selected randomly within the institutions, those who responded with complete information are not necessarily representative of college students nationally. Despite the large sample size and moderate response rates, a disproportionate number of responders were white and female, a common limitation of online survey research (Pike, 2008). As a result, the

findings reported here are limited to traditional-aged students at four-year institutions of at least moderate selectivity.

A second limitation is that additional demographic information normally collected in student persistence studies was not obtained in the online survey. Due to a clerical error, students were not asked to designate their class level. Asking respondents to identify themselves by class level would have allowed further analysis of potential differences among students based on class level categories. Second, the study did not collect information about students' socioeconomic status or ability to pay for college and so was unable to explore the extent to which economic factors relate to thriving or are predictive of the designated outcome variables. Despite the likelihood that many traditional-aged undergraduates may be unable to accurately report their parents' incomes, some reflection of socioeconomic status could have proved valuable. Similarly, students' perceptions of their ability to pay for college may inform their levels of thriving, the extent to which they feel their institution is a good fit for them, and their plans to graduate from the school. Being a recipient of financial aid may or may not help mitigate the potentially negative influence of economic stressors; collecting information on these topics would have allowed the study to examine the interplay of financial factors and student success.

Implications for Practice

The ability of the TQ to predict desirable institutional outcomes, its holistic nature, and its focus on assessment of malleable student characteristics allows us to make several recommendations for practice for faculty and student affairs professionals alike. Addressing the thriving factors has the potential for positive outcomes at both the individual student and institutional levels. On the individual level, offering interventions on any of the thriving factors

would theoretically improve the students' ability to experience greater fulfillment in their college experiences. Further, increasing students' ability to thrive on an individual level could potentially affect institutional outcomes by increasing student persistence, graduation rates, academic success, and student satisfaction.

Goal setting and goal orientation should be addressed by both faculty and student affairs professionals in an effort to positively affect college student thriving. The setting of effective mastery goals and identification of paths to goal achievement are well documented in the literature for their role in hope, learning, and student success (Pintrich, 2003; Snyder, 2000). Faculty could contribute to the shaping of mastery goals by creating syllabi and classroom environments that foster responsible goal setting and the pursuit of learning demonstrated by mastery of the material rather than achievement of a particular grade (McKeachie & Svinicki, 2006). Orientation programs or first-year seminars offer excellent arenas to help students learn to articulate their personal and academic goals and to construct pathways to goal achievement through the identification of personal strengths and campus resources.

Service learning, community outreach, or study abroad programs are examples of existing venues with great potential for impacting thriving by addressing the factors of diverse citizenship and social connectedness. Service learning placements that empower students to positively influence the lives of others while simultaneously making social connections with fellow students and instructors can foster student thriving. When linked with a formal academic program, a service learning experience might provide a student with the opportunity to make a difference in the life of someone who is less fortunate; learning is then enhanced though required reflection or classroom discussions about the experience. A co-curricular community outreach

club or a residence hall service day might offer similar experiences in a less formal environment; if well-facilitated, events of this type could be equally as effective.

Interventions that could positively affect thriving constructs can be easily integrated into existing structures and programs on campus. Residence hall programs emphasizing communication and involvement can foster social connectedness. Counseling services could encourage thriving by helping students develop a positive perspective, or *learned optimism* (Seligman, 1990) through which positive outcomes are expected despite hardships. Each of the thriving factors could also be addressed by faculty in myriad ways such as providing timely, constructive feedback on assignments, facilitating group projects, or engaging students in the learning process (Schreiner & Louis, 2008).

This investigation into college student thriving has just begun to explore its potential for influencing institutional outcomes. Exploring the predictive value of the Thriving Quotient with more diverse student populations and within less selective institutions, as well as within community college settings, is a necessary next step. Further directions for research should include analyses using thriving as the criterion variable and identification of predictive constructs. More detailed studies that disaggregate the data by minority student status, gender, or first-generation student status should also be conducted. The TQ can provide faculty and administrators with a holistic picture of student thriving that can be a catalyst for dialogue about effective instructional and programmatic enhancements that could have significant impact on both individual student success and institutional outcomes.

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Table 1

Demographic Characteristics of Participants

Characteristic	n	%
Gender		
Female	3253	70.8
Male	1341	29.2
Institution was first choice at enrollment		
Yes	3106	67.8
No	1472	32.2
Generation		
First generation	891	19.4
Not first generation	3700	80.4
High School Grades		
Mostly A's	2239	48.7
A's and B's	1726	37.6
Mostly B's	372	8.1
B's and C's	219	4.8
Mostly C's	29	.6
C's and D's	8	.2
Hours worked off campus per week		
None	3219	70.5
Less than 5	245	5.4
6-10	312	6.8
11-15	262	5.7
16-20	290	6.3
21-25	167	3.7
26-30	37	.8
More than 30	35	.8
Hours worked on campus per week		
None	2562	56.0
Less than 5	292	6.4
6-10	826	18.1
11-15	580	12.7
16-20	200	4.4
21-25	51	1.1
26-30	17	.4
More than 30	45	1.0
Housing		
On-campus	3255	70.9
Off-campus	1306	28.4

Race/Ethnicity		
African-American	74	1.6
American Indian/Alaska Native	16	.4
Asian American/Pacific Islander	214	4.7
Caucasian	3960	87.6
Hispanic	128	2.8
Multiracial	116	2.6
International	11	.2

Note: N = 4,594

Table 2

Description of Variables

Dependent Variables:	**Defintion**
College Grades	Self-reported variable with response options on a 6-point scale where 1=mostly A's 2= A's and B's 3=mostly B's, 4= B's and C's 5=mostly C's 6=below a C average. Reverse scored.
Institutional Fit	Response to item: "Given my current goals, this institution is a good fit for me." Measured on a 6-point scale: 1=strongly disagree, 6=strongly agree.
Intent to Graduate	Response to item: "I intend to graduate from this university." Measured on a 6-point scale: 1=strongly disagree, 6=strongly agree.
Re-choose Institution	Response to item: "If I had it to do over again, I would choose a different college/university to attend." (Reverse-scored). Measured on a 6-point scale: 1=strongly disagree, 6=strongly agree.
Institutional Variables	**Definition**
Carnegie classification	Categorical variable coded 1=baccalaureate, 2=master's, and 3=doctoral
Institutional control	Dummy variable coded 0=no, 1=yes for private universities.
Percent female	The percentage of female students in the undergraduate student body
Percent white	The percentage of Caucasian students in the undergraduate student body
Selectivity	Categorical variable assessing the percentage of the entering class with high school GPA in the bottom 75% (1), bottom 50% (2), top 25% (3), or top 10% (4)
Student Background Variables	**Definition**
First-generation	First in immediate family to attend college=1; not first to attend college=0
First choice of college	Dummy variable coded 1=yes 0=no for institution was first choice at enrollment
Gender	Female=1, male=0
Graduate school plans	Dummy variable. Plan to attain an advanced degree at any point in life, coded 0=no, 1=yes.
High school grades	Self-reported variable with response options on a 6-point scale where 1=mostly A's 2= A's and B's 3=mostly B's, 4= B's and C's 5=mostly C's 6=below a C average. Reverse scored.
On-campus	Live on campus, coded 1=yes, 0=no
Race/ethnicity	Dummy variable coded 1=student of color, 0=white
Independent Variables	**Definition**
Academic Determination	Factor score of seven items: (1) When course work is difficult, I give up or only study the easy parts (reverse scored), (2) Even when course materials are dull and boring, I manage to keep working until I finish, (3) I am good at managing the many responsibilities of my daily life, (4) I am good at managing my time so that I can fit everything in that needs to be done, (5) I am motivated to do well in school, (6) I actively pursue my educational goals, (7) When I become confused

	about something I'm reading for class, I go back and try to figure it out. Each item is measured on a 6-point scale: 1=strongly disagree, 6=strongly agree. (α = .83)
Diverse Citizenship	Factor score of eight items: (1) I give time to making a difference for someone else, (2) I have the power to make a difference in my community, (3) I value opportunities that allow me to contribute to my community, (4) I am willing to act for the rights of others, (5) Knowing how a person differs from me greatly enhances our friendship, (6) I can best understand someone after I get to know how he/she is both similar and different from me, (7) I would like to join an organization that emphasizes getting to know people from different cultures, and (8) No matter what kind of person you are, you can always change substantially. Each item is measured on a 6-point scale: 1=strongly disagree, 6=strongly agree. (α = .80).
Engaged Learning	Factor score of nine items: (1) I often discuss with my friends what I'm learning in class, (2) I regularly participate in class discussions, (3) I feel as though I am learning things in my classes that are worthwhile to me as a person, (4) It's hard to pay attention in many of my classes (reverse scored), (5) I can usually find ways of applying what I'm learning in class to something else in my life, (6) I ask my professors questions during class if I do not understand something, (7) I am bored in class a lot of the time (reverse scored), (8) I find myself thinking about what I'm learning in class even when I'm not in class, and (9) I feel energized by the ideas I'm learning in most of my classes. Each item is measured on a 6-point scale: 1=strongly disagree, 6=strongly agree. (α = .85).
Positive Perspective	Factor score of five items: (1) When things are uncertain for me, I usually expect the best, (2) I always look on the bright side of things, (3) I'm optimistic about what will happen to me in the future, (4) I am satisfied with my life, and (5) The conditions of my life are excellent. Each item is measured on a 6-point scale: 1=strongly disagree, 6=strongly agree. (α = .83).
Social Connectedness	Factor score of three items, all of which are reverse-scored: (1) Other people seem to have more friends than I do, (2) I often feel lonely because I have few close friends with whom to share my concerns, and (3) I don't have many people who want to listen when I need to talk. Each item is measured on a 6-point scale: 1=strongly disagree, 6=strongly agree. (α = .81).
Call home/study	Factor score of two items: (1) How often do you call or text home while you are on campus? (1=never, 2=once a week or less, 3=two to three times a week or so, 4=about once a day, 5=two to three times a day, 6=four or more times a day) and (2) How much time per week do you spend studying for classes? (1=never, 2=less than one hour per week, 3=one to seven hours per week, 4=8-14 hours per week, 5=15-21 hours per week, 6=more than 21 hours per week).
Campus Involvement	Factor score of five items: How often do you participate in (1) student organizations on campus, (2) campus events or activities, (3) fraternities or sororities, (4) community service, (5) leadership responsibilities in student organizations. Each item is scored on a 6-point scale: 1=never, 6=frequently.
Computer/TV time	Factor score of three items: How much time each week do you spend on (1) online social networking (Facebook, etc.), (2) internet or video games, (3) watching TV or movies. Each item is scored on a 6-point scale: 1=never, 2=less than one hour per week, 3=one to seven hours per week, 4=8-14 hours per week, 5=15-21 hours per week, 6=more than 21 hours per week.
Work/Sleep	Factor score of three items: How much time each week do you spend (1) working for pay off campus, (2) working for pay on campus (1=never, 2=less than one hour per week, 3=one to seven hours per week, 4=8-14 hours per week, 5=15-21 hours per week, 6=more than 21 hours per week), and (3) How often do

	you get less than four hours of sleep in a night? (1=never, 2=rarely, 3=occasionally, 4=fairly often, 5=frequently, 6=almost always).
Faculty Interaction	Response to the item: "How often do you interact with faculty outside of class?" Measured with a 6-point scale, 1=never, 6=frequently.
Major Certainty	Response to item "How sure are you of major?" Measured with a 6-point scale: 1=very unsure, 6=very sure.
Academic Advising Satisfaction	Response to the item: "Rate your satisfaction with the academic advising you have received on this campus." Measured with a 6-point scale, 1=very dissatisfied, 6=very satisfied.
Faculty Satisfaction	Response to the item: "Rate your satisfaction with the kinds of interaction you have had with faculty on this campus." Measured with a 6-point scale, 1=very dissatisfied, 6=very satisfied.
Grade Satisfaction	Response to the item: "Rate your satisfaction with the grades you are earning in college." Measured with a 6-point scale, 1=very dissatisfied, 6=very satisfied.
Health Satisfaction	Response to the item: "Rate your satisfaction with your current level of physical health." Measured with a 6-point scale, 1=very dissatisfied, 6=very satisfied.
Living Situation Satisfaction	Response to the item: "Rate your satisfaction with your current living situation." Measured with a 6-point scale, 1=very dissatisfied, 6=very satisfied.
Peer Satisfaction	Response to the item: "Rate your satisfaction with the kinds of interaction you have with other students on this campus." Measured with a 6-point scale, 1=very dissatisfied, 6=very satisfied.

Table 3

Means and Standard Deviations for Satisfaction Measures and TQ Scales

Item	Mean	SD
Satisfaction with: Academic Advising	4.18	1.39
Satisfaction with: Quality of interaction with faculty	4.54	1.04
Satisfaction with: Grades you are earning	4.25	1.19
Satisfaction with: Current level of physical health	4.43	1.16
Satisfaction with: Current living situation	4.47	1.33
Satisfaction with: Experiences with your peers	4.74	1.06
How sure are you of your major?	5.04	1.25
Positive Perspective Scale	4.30	0.80
Engaged Learning Scale	4.20	0.72
Diverse Citizenship Scale	4.54	0.60
Academic Determination Scale	4.62	0.68
Social Connectedness Scale	4.03	1.16

Note: N = 4,602

Table 4

Summary of Hierarchical Regression Analysis for Variables Predicting Outcomes of Postsecondary Experience

	College Grades	Re-choose Institution	Fit	Intent to Graduate
Variable	β	β	β	β
Step 1				
Institutional control	.05*	.09**	.09**	.06*
Selectivity	-.13*	-.03	-.01	.04*
Percent female	.17*	-.03	.01	.00
Percent white	.08*	.01	.01	-.01
Carnegie classification	-.05	.08***	.09***	.07**
R^2	**.025**	**.007**	**.009**	**.006**
Step 2				
First generation	-.08*	.02	.03*	.03
Gender (female)	.01	.04*	-.04**	-.02
First choice of college	.04	.22***	.14***	.09***
Living on campus	-.03	.04*	-.01	.02
High school grades	.49***	.07***	.11***	.10***
Student of color	-.06*	-.06***	-.02	-.05**
Graduate school plans	.04	.07**	.07***	.05***
R2 Change	**.264**	**.065**	**.038**	**.027**
Step 3				
Social Connectedness Scale	.00	.11***	.17***	.13***
Engaged Learning Scale	.14***	.18***	.23***	.16***
Diverse Citizenship Scale	-.02	.07***	.19***	.15***
Positive Perspective Scale	.04	.12***	.19***	.11***
Academic Determination	.25***	.25***	.22***	.15***
R^2 Change	**.081**	**.12**	**.184**	**.089**
Step 4				
Faculty interaction (amount)	-.04	.02	.05**	.01
Sure of major	-.01	.07***	.11***	.12***
Work/Sleep	-.08***	-.06***	-.06***	-.04*
Computer/TV Time	.06*	.07***	.01***	.07***
Call home/study	-.04	-.02	-.01	.00
Campus involvement	.03	.02	.01	.00
R^2 Change	**.012**	**.013**	**.025**	**.018**
Step 5				
Living situation satisfaction	.01	.08***	.07***	.06**
Acad Advising satisfaction	-.04	.08***	.09***	.03*
Peer satisfaction	-.04	.19***	.19***	.15***
Faculty satisfaction	.09**	.07***	.11***	.07**

Grade satisfaction	--	.00	.01	.01
Health satisfaction	.01	-.01	.00	.00
R^2 Change	**.005**	**.049**	**.058**	**.028**
Total R^2	**.374**	**.248**	**.309**	**.162**

N = 4,602 * *P* < .05; ** *p* < .01; *** *p* < .001