



[Empirical Research Column]

# LEVERAGING THE QUANTITY AND QUALITY OF CO-CURRICULAR INVOLVEMENT EXPERIENCES TO PROMOTE STUDENT THRIVING

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## ABSTRACT

*Despite decades of research on student involvement, few studies have examined how co-curricular experiences promote holistic student success outcomes. Fewer still have differentiated the characteristics of co-curricular involvement to determine practices most likely to predict student success. This study investigates the relationship between the quantity and quality of student co-curricular involvement within a structural model of college student thriving. Evidence from undergraduate participants ( $n = 2,973$ ) at 13 colleges and universities indicates the quality of involvement directly predicts thriving, and quantity of involvement indirectly predicts thriving. Nearly 64% of the variation in thriving was explained by the full model. Findings suggest students would benefit from investing deeply in one or two meaningful co-curricular experiences. Student activities professionals should seek to identify visible pathways for co-curricular engagement on campus that foster student leadership, community building, and individual meaning-making.*

For the past 40 years, higher education researchers and student affairs practitioners have been promoting co-curricular involvement as a pathway to greater learning and development in college students. Numerous articles and reports have touted the benefits of involvement in contributing to student success, and the resulting proliferation of programs and activities have sought to engage students with events ranging from coffee house performers to foam dance parties. In this race to provide for the engagement and involvement of students, the research supporting the benefits of co-curricular involvement can be easily lost. Research on academic engagement can be conflated with co-curricular involvement (Wolf-Wendel, Ward, & Kinzie, 2009), even while noting that Astin (1984) defined involvement as “the amount of physical and psychological energy that a student devotes to the academic [emphasis added] experience” (Astin, 1999, p. 518). In reality, a much smaller body of literature exists specifically supporting the contribution of co-curricular involvement to student success.

Further confounding the study of student involvement is the inconsistent and narrow research methodologies too often employed. Dugan (2013) notes that:

*Existing literature ... has largely failed to account for patterns of involvement across different types of group experiences, opting instead for designs using scattershot, macro-level, or micro-level approaches. This funda-*

*mentally biases outcomes and skews the general understanding of student organizational involvement and its influences (p. 244).*

A narrow focus on one type of involvement experience, the lack of a control group, and an abundance of single-institution studies have limited the generalizable findings that can be drawn from existing research.

Both higher education researchers and student affairs practitioners can benefit from a more comprehensive study of student co-curricular involvement and success. Compelling research has been produced noting the contributions and consequences of co-curricular involvement on academic achievement (Webber, Krylow, & Zhang, 2013; Zacherman & Faubert, 2014) and leadership development (Dugan, 2011). Absent from the literature is research examining the holistic effect of co-curricular involvement on students. Higher education has long sought to advance the holistic learning and development of students, yet few researchers have sought to investigate student success from a holistic perspective (Kinzie, 2012). Emerging research on student thriving provides new evidence and techniques to understand that ways students comprehensively make the most of their college experience (Schreiner, 2010; 2016).

The purpose of this study is to investigate the relationship between the quantity and quality of student co-curricular involvement and college student thriving. The study employs multi-institutional data from the Thriving in College national research project, using the Thriving Quotient as a tool to measure the academic, emotional, and social flourishing of students in college.

## THRIVING

Grounded in the field of positive psychology (Seligman & Csikszentmihalyi, 2000), research on college student thriving seeks to identify and measure the extent that students are succeeding academically, emotionally, and socially (Schreiner, 2010; 2016). Thriving expands on positive psychology measures of well-being and flourishing (Diener et al., 2016; Ryff, 1989; Ryff & Keyes, 1995) to be encompassing of the academic challenges and successes unique to college students. Thriving is positioned as the psychological framework (Bean & Eaton, 2000) through which students experience college and pursue pathways to persistence and success.

The academic, social, and emotional framework for thriving is quantified through a five-factor model, where Thriving is observed as a second-order factor (Schreiner, 2016). Each of the five factors can be assessed through a short scale. The extent that students are academically flourishing is measured by Academic Determination and Engaged Learning. Academic Determination describes the effort students invest to overcome obstacles and persist on challenging academic tasks. Engaged Learning is exemplified by a curiosity about learning and investment in subject matter beyond the scope of an assignment. The extent that interpersonal relationships frame student success is measured through the Diverse Citizenship and Social Connectedness scales. Socially connected students engage with peers in ways that provide support and belonging. Diverse Citizenship describes an investment in the broader community while appreciating the diverse perspectives of others. The intrapersonal factor of Positive Perspective identifies the ways students approach college with a hopeful and optimistic outlook that enables them to navigate challenges.

Research on college student thriving has demonstrated a connection between college experiences, thriving, and student persistence. The framework for measuring psychosocial factors in a retention framework is grounded in the research of Braxton, Hirschy, and McClendon (2004), who posited that “the greater the level of psychological energy a student invests in various social interactions at his or her college or university, the greater the student’s degree of social integration” (p. 26). Co-curricular involvement provides the behavioral mechanisms through which students may invest in meaningful relationships that lead to psychosocial engagement and retention. Existing evidence supports the role of thriving in contributing to student persistence and GPA (Ash & Schreiner, 2016; Schreiner et al., 2015).

## CO-CURRICULAR INVOLVEMENT

Astin's (1984) research on student involvement initiated a generation of scholarship on the ways students spend their time and energy in relation to their collegiate success. Later researchers adopting similar research designs used related terms such as *integration* (Tinto, 1986) or *engagement* (Kuh, Kinzie, Schuh, Whitt, & Associates, 2005). Despite unique nuances to each term, some researchers have suggested the terms are essentially polynoms to describe the same experiences leading to student success (Wolf-Wendel et al., 2009). The extent to which these theories and their associated studies have examined co-curricular involvement has been limited. Often omitted from seminal writings on engagement and integration, research on co-curricular involvement has been conducted in smaller studies, sometimes using data from national projects (Berger & Milem, 1999; Koehler, 2014; Zacherman & Faubert, 2014). A comprehensive perspective on this work leaves little doubt that co-curricular involvement and student success are closely linked (Mayhew et al., 2016).

A theoretical understanding of co-curricular involvement has long been defined as “the quantity and quality of the physical and psychological energy that students invest in the college experience” (Astin, 1999, p. 528). Quantity of involvement describes the investment of time and physical energy into an experience. Quality of involvement describes the active participation and psychological investment of energy into an organization or activity. Despite the equal weights placed on quality and quantity in involvement theory (Astin, 1984), far more research has focused on measuring co-curricular involvement as time on task. A likely explanation for this imbalance is the absence of measures of the quality of co-curricular involvement in most national research projects, including the CSEQ (Pace, 1984), CIRP (Astin, 1977, 1993), MSL (Dugan & Komives, 2007, 2010), and NSSE (Kuh, 2003).

The weight of the evidence supporting a positive association between co-curricular involvement and student success (Mayhew et al., 2016) largely relies upon research measuring quantity of involvement. However, sufficient nuance has been observed in the research to warrant additional study. Zacherman and Faubert (2014) used data from over 50,000 undergraduate National Survey of Student Engagement (NSSE) participants to demonstrate a curvilinear relationship when examining the relationship between co-curricular involvement and student GPA. Emerick (2005) found a similar relationship in a smaller two-institution study. However, Huan and Chang (2004) failed to demonstrate a curvilinear relationship between academic engagement and co-curricular participation among students in Taiwan, instead finding a positive linear relationship best fit the model. While international differences in academic and co-curricular engagement may partially be attributed to the discordant findings, evidence exists to suggest distinctive effects of co-curricular involvement on GPA as opposed to academic engagement, critical thinking (Dew, 2010), engaged learning (Vetter, 2011), and need for cognition (Nicoli, 2011). This evidence supports future research that more comprehensively measures both co-curricular involvement and student success.

Research on the quality of student co-curricular involvement often asks about student leadership roles, learning experiences, sense of commitment, or volunteering within an organization (Emerick, 2005; Tieu & Pancer, 2009; Winston & Massaro, 1987). Practical limitations to early research measuring quality of involvement may partially be to blame for its limited use in research over the past three decades. Winston and Massaro's (1987) Extracurricular Involvement Inventory (EII) measured the intensity of co-curricular involvement as the product of involvement quantity and quality. However, because the instrument required participants to respond to questions for each of their involvement experiences repeatedly, the instrument became lengthy and impractical to implement. Later revisions by Endress (2000) streamlined the instrument. Research using the EII and other measures of quality of involvement have supported its positive effect upon GPA (Emerick, 2005), leadership development (Coressel, 2014; Fitch, 1991), and the college transition (Tieu & Pancer, 2009).

The depth of research on quality and quantity of involvement is limited given the 40 years that have elapsed since the introduction of Student Involvement Theory (Astin, 1997). Calls for additional research in recent years stressed the importance of both a comprehensive measure of co-curricular involvement and holistic outcomes of student success (Dugan, 2013). The emergence of the Thriving Quotient as a conceptual model and measure of student success has the potential to reveal new insights into the contributions of frequent and meaningful involvement. Thus, the research question that guides this study is: To what extent do quantity of involvement and

quality involvement in co-curricular activities contribute to a structural model of college student thriving after controlling for campus experiences?

## METHOD

This study utilized a correlational research design to identify factors contributing to the variation in student thriving as defined by scores on the Thriving Quotient (Schreiner, 2016). Structural equation modeling (SEM) was used to measure the direct and indirect effects of college experiences on involvement, thriving, and other mediating factors. SEM is a confirmatory statistical technique (Byrne, 2016) that measures the fit of a hypothesized model using a given dataset. The extensive research on student involvement was applied alongside prior research using the TQ by McIntosh (2012) and Schreiner et al. (2015) to develop a hypothesized model (see Figure 1). The model was designed to incorporate the behavioral and non-cognitive factors most strongly associated with co-curricular involvement and student success as evidenced in the literature (Mayhew et al., 2016).

### Participants

Participants were drawn from thirteen 4-year colleges that participated in the fall 2017 Thriving in College national study. Small private institutions were over-represented in the final sample. Participation in the study was limited to 18 to 25-year-old undergraduate degree-seeking students. The measured demographic characteristics of the participants (see Table 1) indicates most participants were female, White, and reported living on campus.

Table 1  
*Participant Demographics*

	N	%
<b>Gender</b>		
Female .....	2,131	71.7%
Male .....	842	28.3%
<b>Race</b>		
Caucasian/White.....	2,278	76.6%
Students of Color .....	695	23.4%
<b>Class Level</b>		
First-Year.....	1,127	37.9%
Sophomore.....	611	20.6%
Junior.....	613	20.6%
Senior.....	622	20.9%
<b>Residence</b>		
On-Campus .....	2,169	73%
Off-Campus .....	802	27%

### Measures

An online survey consisting of the Thriving Quotient (Schreiner, 2016) and other scales was used to collect data. The Thriving Quotient is a 24-item reliable measure of students' academic, intrapersonal, and interpersonal engagement and well-being ( $\alpha=.89$ ). Test-retest reliability over a 3-6 week period indicates a high level of stability over time ( $r = .87$ ). A confirmatory factor analysis conducted on a national sample of traditional-aged undergraduate students resulted in fit indices of  $\chi^2 (260) = 2,781.32$  ( $p < .001$ ), CFI = .955, and RMSEA = .042 with 90% confidence intervals of .040 to .043 provided evidence of construct validity that supported thriving as a higher-order construct comprised of five factors: Engaged Learning ( $\alpha=.87$ ), Academic Determination ( $\alpha=.81$ ), Positive Perspective ( $\alpha=.78$ ), Social Connectedness ( $\alpha=.83$ ), and Diverse Citizenship ( $\alpha=.79$ ).

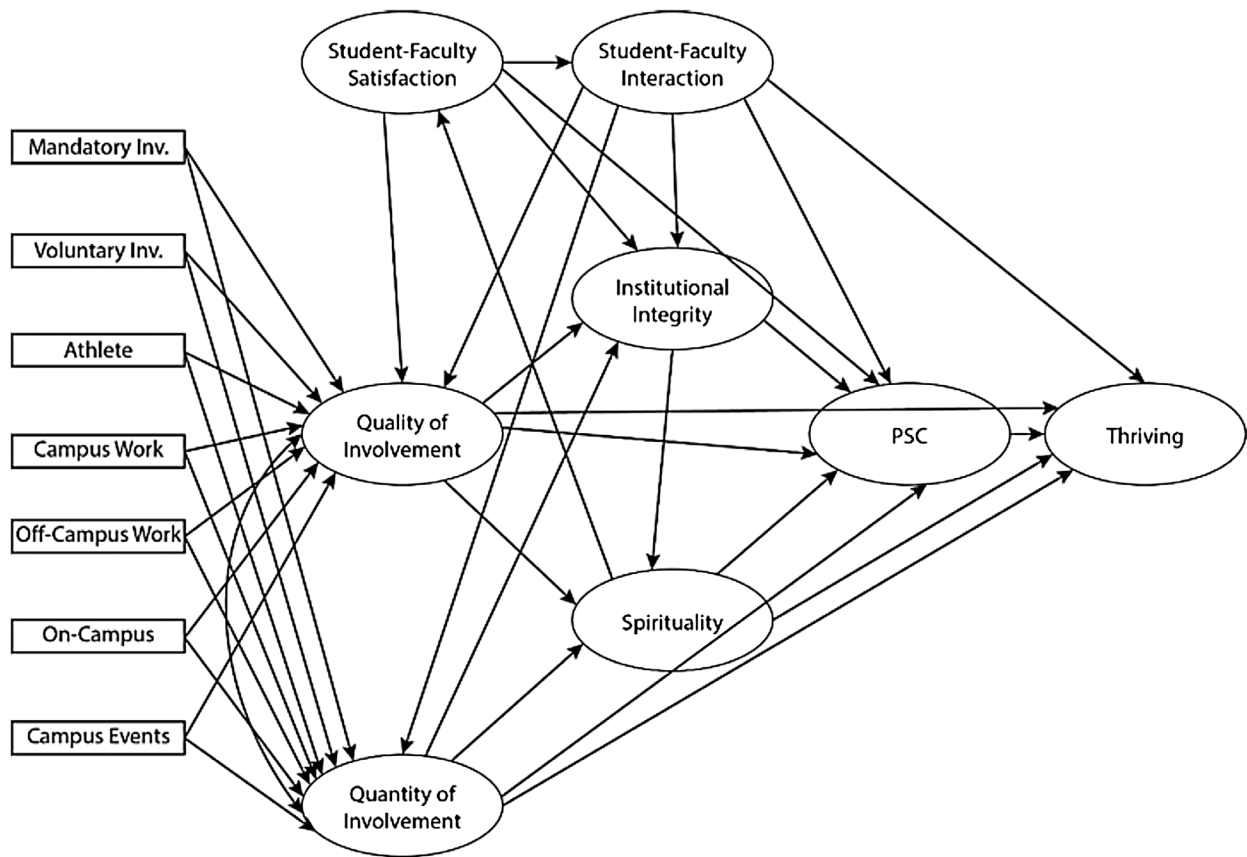


Figure 1. Hypothesized model.

Quantity of involvement was measured using a revised section of the Co-curricular Involvement Experience Index (CIEI; Endress, 2000). The CIEI is based on Winston and Massaro's (1987) Extracurricular Involvement Inventory (EII), which demonstrated a 2-week test-retest reliability of .97. Endress (2000) shortened the EII to measure quantity of involvement as the sum of hours per week of involvement in co-curricular activities and the number of appointed or elected positions held. Quality of involvement was similarly measured using a five-question subscale of the EII. The questions ask students to rate the frequency in which they engage in activities associated with student organization involvement where a depth of psychological energy and effort would be required, such as engaging in group dialogues, volunteering to complete group tasks, and representing the group outside of meetings. This study slightly alters the language of the questions regarding quality and quantity of involvement to include peer leadership roles (e.g., Resident Assistant, orientation leader) as forms of co-curricular involvement alongside student organization involvement.

Other latent variables measured in the study include Student-Faculty Satisfaction, Student-Faculty Interaction, Institutional Integrity, Spirituality, and Psychological Sense of Community. Student-Faculty Interaction measures the frequency of student engagement with faculty in different behaviors outside of class. Student-Faculty Satisfaction describes the extent that students found their faculty to respond to students needs and appreciate diverse perspectives in their classes. The congruence between how students see their college portrayed in the admission process and their lived experiences on campus are measured by Institutional Integrity. Drawing from the research of Astin et al., (2011), Spirituality assessed the extent that spiritual or religious beliefs guide student actions and values. An abbreviated *Psychological Sense of Community on Campus Index* (Schreiner, 2006), grounded in the theories of McMillan and Chavis (1986), describes the extent that students feel a sense of mattering, a sense of belonging, and a shared commitment to the institution.

## RESULTS

Responses were screened and either removed or replaced through a Missing Values Analysis using expectation maximization. To account for non-normal distributions, Spirituality and PSC were reflected and transformed for the square root. A logistic transformation was applied to the items within the Student-Faculty Interaction scale. To provide greater clarity in presenting the results, statistical values associated with the reflected variables Spirituality and PSC were reported as their inverse.

SEM was conducted and evaluated for acceptable fit using the comparative fit index (CFI) and the root mean square of error approximation (RMSEA). Acceptable fit was established at  $CFI > .95$  and  $RMSEA < .06$  (Byrne, 2016; Ullman, 2007). After an examination of parameter estimates and modification indices, several revisions were made to the model. Notably, working off campus was not found to significantly contribute to the model. The hypothesized relationship between quantity of involvement and Student-Faculty Interaction was found to better fit into the model when the direction of the relationship was reversed. Finally, several new relationships were added to the model, including a direct relationship between attending campus events and Institutional Integrity, between Mandatory Involvement and Student-Faculty Interaction, and between working on campus and student-faculty interaction. Through the use of these modifications, the final model was found to be a good fit ( $\chi^2(546) = 3,713.7, p < .001, CFI = .950, RMSEA = .044$ ).

The final model explained 64% of the variance in Thriving. Standardized regression coefficients are shown in Figure 2, and total, direct, and indirect effects are outlined in Tables 2, 3, and 4 respectively. A weak but direct relationship was observed between quality of involvement and Thriving, with additional variance in the relationship

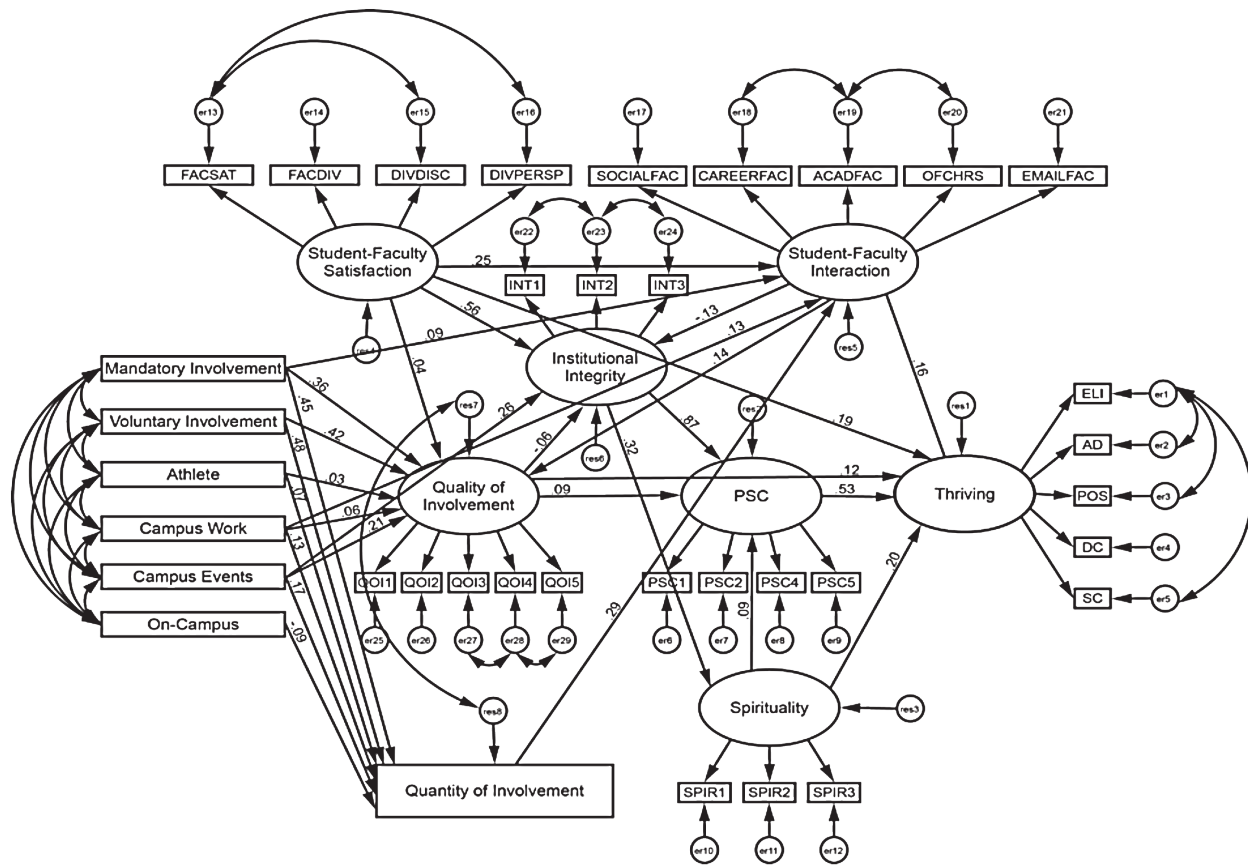


Figure 2. Final full structural equation model of student thriving.

Table 2

*Standardized Total Effects on Thriving and Latent Variables*

	Thriving	PSC	Spirituality	Integrity	Quality of Involvement	Student-Faculty Interaction	Quantity of Involvement
CampusAct.....	0.174*	0.239*	0.079*	0.244*	0.213	0.047*	0.167*
OnCampus .....	-0.003*	0.003*	0.001*	0.003*	-0.004	-0.025*	-0.087*
Work_Campus.....	0.028*	-0.016*	-0.008*	-0.026*	0.084	0.169*	0.130*
Athlete.....	-0.002	-0.003*	0.000	-0.001	-0.026	0.019*	0.068*
Voluntary Involvement.....	0.073*	0.003	-0.014*	-0.042*	0.441	0.135*	0.474*
Mandatory Involvement.....	0.073*	-0.008	-0.016*	-0.049*	0.387	0.213*	0.447*
Quantity of Involvement .....	0.033*	-0.030*	-0.012*	-0.038*	0.041	0.285*	-
Student-Faculty Satisfaction .....	0.520*	0.476*	0.169*	0.523*	0.080*	0.251*	-
Student-Faculty Interaction .....	0.116*	-0.107*	-0.043*	-0.134	0.143*	-	-
Quality of Involvement.....	0.136	0.042*	-0.019*	-0.058	-	-	-
Institutional Integrity.....	0.536*	0.896*	0.322*	-	-	-	-
Spirituality .....	0.248*	0.087*	-	-	-	-	-
PSC.....	0.525*	-	-	-	-	-	-

Note. \*Values significant at  $p < .05$ .

Table 3

*Standardized Direct Effects on Thriving and Latent Variables*

	Thriving	PSC	Spirituality	Integrity	Quality of Involvement	Student-Faculty Interaction	Quantity of Involvement
CampusAct.....	-	-	-	0.262	0.206	-	0.167
OnCampus .....	-	-	-	-	-	-	-0.087
Work_Campus.....	-	-	-	-	0.060	0.132	0.130
Athlete.....	-	-	-	-	-0.029	-	0.068
Voluntary Involvement.....	-	-	-	-	0.421	-	0.474
Mandatory Involvement.....	-	-	-	-	0.356	0.086	0.447
Quantity of Involvement .....	-	-	-	-	-	0.285	-
Student-Faculty Satisfaction .....	0.185	-	-	0.560	0.044	0.251	-
Student-Faculty Interaction .....	0.163	-	-	-0.126	0.143	-	-
Quality of Involvement.....	0.118	0.093	-	-0.058	-	-	-
Institutional Integrity.....	-	0.868	0.322	-	-	-	-
Spirituality .....	0.202	0.087	-	-	-	-	-
PSC.....	0.525	-	-	-	-	-	-

Note. \*Values significant at  $p < .05$ .

Table 4

*Standardized Indirect Effects on Thriving and Latent Variables*

	Thriving	PSC	Spirituality	Integrity	Quality of Involvement	Student-Faculty Interaction
CampusAct.....	0.174*	0.239*	0.079*	-0.018*	0.007*	0.047*
OnCampus .....	-0.003*	0.003*	0.001*	0.003*	-0.004*	-0.025*
Work_Campus.....	0.028*	-0.016*	-0.008*	-0.026*	0.024*	0.037*
Athlete.....	-0.002	-0.003*	0.000	-0.001	0.003*	0.019*
Voluntary Involvement.....	0.073*	0.003	-0.014*	-0.042*	0.019*	0.135*
Mandatory Involvement.....	0.073*	-0.008	-0.016*	-0.049*	0.030*	0.127*
Quantity of Involvement .....	0.033*	-0.030*	-0.012*	-0.038*	0.041*	-
Student-Faculty Satisfaction .....	0.335*	0.476*	0.169*	-0.036*	0.036*	-
Student-Faculty Interaction .....	-0.048*	-0.107*	-0.043*	-0.008*	-	-
Quality of Involvement.....	0.018	-0.052*	-0.019*	-	-	-
Institutional Integrity.....	0.536*	0.028*	-	-	-	-
Spirituality .....	0.046*	-	-	-	-	-

Note. \*Values significant at  $p < .05$ .

explained by the mediating variable Psychological Sense of Community (PSC). PSC was found to be the strongest single predictor of Thriving. No direct relationship between quantity of involvement and Thriving was found in the model.

The model explained 49.2% of the variance in quantity of involvement and 48.7% of the variance in quality of involvement. Most of the college experience variables contributed to a similar degree to the variation in quality of involvement and quantity of involvement. However, Mandatory Involvement and working on campus were found to contribute to more of the variation in students' quantity of involvement than to their quality of involvement.

## DISCUSSION

Despite years of research on the contribution of co-curricular involvement to psychosocial outcomes (Mayhew et al., 2016), relatively little research has been conducted using a comprehensive measure of involvement and a holistic measure of student success (Dugan, 2013). The comparative analysis between quality and quantity of involvement provides new insights into what characteristics of co-curricular involvement matter in predicting student success.

Most notably, quality of involvement was found to directly predict Thriving despite the absence of a direct relationship between quantity of involvement and Thriving. Defined as an investment of psychological energy (Astin, 1984), quality of involvement describes active engagement in a student organization or leadership role. The demonstrated effect of quality involvement experiences is a closer connection to the university and an increased sense of community and belonging. Because thriving describes social, emotional, and academic dimensions of student success, quality involvement experiences can be seen as contributing holistically to student well-being and success in college.

Evidence from this study also confirms an indirect relationship between quantity of involvement and holistic student success. Not only is recent research connecting co-curricular involvement directly and linearly to student success rare (Dugan, 2013; Zacherman & Faubert, 2014), but also a majority of the research on student thriving has found quantity of involvement to be fully mediated by students' sense of community on campus or their levels of spirituality (McIntosh, 2012; Schreiner et al., 2015, 2017). Unique to this study is that the rela-



tionship between quantity of involvement and Thriving was only mediated by Student-Faculty Interaction. This finding can likely be attributed to the novel introduction of quality of involvement into the predictive model of Thriving. In this vein, the evidence supports that merely attending an organization meeting does not significantly enhance the student experience; an investment of psychological energy is needed to build the community ties that promote student success.

### *Limitations*

SEM is a robust statistical tool used for prediction, but as a cross-sectional and correlational study, the findings cannot be used to infer causal relationships. It should also be noted that demographic characteristics were not used in the structural model. In addition to the benefit of a more parsimonious model of thriving, most demographic characteristics are not hypothesized to affect the types of activities and involvements available to students; rather, minoritized groups are seen to experience those environments differently (McIntosh, 2012; Schreiner et al., 2017). Future studies might build upon this omnibus model and use multiple group analysis to identify group differences.

### *Implications*

The predominance of quality of involvement over quantity of involvement in predicting student thriving implies that co-curricular programs and activities are of greatest benefit when they encourage students to engage more deeply. Because students considered a single organization or leadership role in responding to items rating their quality of involvement, only one or two meaningful co-curricular involvement experiences may be needed to facilitate student success. This finding echoes calls by Dugan (2008), where similar advice was given to promote greater leadership development. Although it may seem counterintuitive to discourage wider student involvement on campus, research by McCabe (2016) supports this implication by observing that students with more diffuse friendship networks were less likely to feel a sense of community on campus. A focused involvement in one or two student organizations provides students with more time and energy to take on leadership roles, invest in relationships, and maximize their learning and growth.

Student activities professionals should consider promoting more focused involvement experiences by (a) providing early and consistent messaging about involvement experiences, and (b) developing greater richness and depth to co-curricular programs. The use of evidence-based strategies in these areas will enhance the capacity for students to make the most of their undergraduate experience.

Colleges often extol the number of different organizations available to students, and student affairs staff typically encourage students to get involved on campus or start a new organization. These messages not only occur explicitly during admission visits, first-year commencements, and involvement fair promotions, but also implicitly through the barrage of event and recruitment promotions that cover college campuses. Evidence from this study would suggest a refinement of these messages to encourage students instead to connect and engage deeply in their involvements. Refined involvement messaging may be achieved by clearly identifying pathways for engagement on campuses. Kuh et al. (2005) highlighted the importance of visible pathways in their study of highly successful colleges, noting that successful campuses spotlight key experiences and funnel institutional resources towards ensuring broad-reaching success. When properly identified, quality engagement in a co-curricular organization or leadership role could serve as a signpost leading students toward successful collegiate outcomes.

Student activities professionals have direct access to programs and services that would enable students to enhance the depth of their co-curricular experience. Supporting workshops and retreats that develop consistently strong student organization structures and leaders—in addition to being intrinsically beneficial to student success (Dugan & Komives, 2010)—enhances the opportunity for quality co-curricular experiences to form. Colleges should seek to develop these leadership development opportunities further and to purposefully focus efforts on student organizations that are most likely to provide quality experiences for students. Dugan (2011, 2013) demonstrated that higher student success outcomes could be tracked to the topical focus of student organization involvement, noting that involvement in organizations such as cultural groups, programming boards, student government, and academic leadership was associated with higher socially responsible leadership. While intentional efforts

should be made to provide experiences that are inclusive to the entire college community, colleges should focus energy and resources towards those areas most likely to produce quality co-curricular experiences.

Quality co-curricular experiences may be further developed by enhancing the opportunities for sustained involvement. Robertson-Kraft and Duckworth (2014) evidenced that students with a multi-year commitment to an undergraduate co-curricular experience were more likely to achieve post-graduate success than students with only short-term involvements. Often student organizations do little to entice sustained involvement or provide continually challenging ways to engage. When co-curricular experiences don't provide tangibly different experiences for first-year students and fourth-year students, the opportunity for depth of learning and growth is diminished. The Bonner Student Development Model provides a thorough example of sustained engagement and tiered outcomes in student civic and community engagement (Johnson & Hoy, 2013). The Model defines institutional practices and tiers of student involvement matched to each year of the undergraduate experience, with specific skills, values, and knowledge outcomes assessed at each yearly interval. Similar pathway models can be created for student organization leadership (Vetter & Pariano, 2015) as a means of intentionally fostering quality co-curricular involvement.

A growing body of research has identified over-involvement as a contemporary challenge for college campuses (Coressel, 2014; Couch, 2016; Gravelle, 2010; Zacherman & Foubert, 2014). The over-involvement hypothesis implies that after a certain threshold is reached, students might experience a negative impact from their involvement. However, these studies have typically focused on quantity of involvement without equal regard to the quality of those involvement experiences. Using the comparative pathway analysis of the present study, practitioners and researchers should instead observe over-involvement as an imbalance between the quality and quantity of involvement experiences. This guidance could lead to rich and rewarding student involvement in one or two student organizations or leadership roles that continually support holistic student success.

### *Directions for Future Research*

This study introduced new measurement techniques for assessing quality and quantity of involvement and introduced a new statistical method for examining the impact of co-curricular involvement within a structural model. Other researchers have researched co-curricular involvement by assessing the range (Dugan, 2013) or connectedness of involvement experiences (Emerick, 2005; Tieu et al., 2010). The findings of this study demonstrate the insights that can be gained from more purposefully identifying measurement criteria for co-curricular involvement. Future research should avoid single-item measures of involvement where the research topic suggests a greater complexity of student behavior patterns.

## CONCLUSION

In the 30 years since Astin (1984) first theorized that involvement is characterized by both quality and quantity, extensive research has been conducted about the outcomes associated with involvement frequency. Yet the characteristics and the outcomes attributed to quality involvement experiences have been understudied and sparsely applied. The findings of this study highlight comparative strengths of quality involvement experiences in promoting student thriving in college. Students who participate in at least one student organization or leadership role are more likely to experience stronger and more varied pathways leading to student success. Student activities professionals should consider this research as evidence supporting the benefit of meaningful involvement experiences and apply the findings to their work by offering programs and experiences that foster student leadership and meaning-making. Using thriving to apply a holistic frame to student involvement can empower student activities professionals to consider the impact of their work with students broadly. Inclusive communities focused on enriching experiences are ready to be formed to actualize the potential for each student to thrive in college.

## REFERENCES

- Ash, A. N., & Schreiner, L. A. (2016). Pathways to success for students of color in Christian colleges: The role of institutional integrity and sense of community. *Christian Higher Education, 15*(1), 38-61.
- Astin, A. W. (1977). *Four critical years: Effects of college on beliefs, attitudes, and knowledge*. San Francisco, CA: Jossey-Bass.
- Astin, A. W. (1984). Student involvement: A developmental theory for higher education. *Journal of College Student Personnel, 25*, 297-308.
- Astin, A. W. (1993). *What matters in college: Four critical years revisited*. San Francisco, CA: Jossey-Bass.
- Astin, A. W. (1999). Student involvement: A developmental theory for higher education. *Journal of College Student Development, 40*, 518-529.
- Astin, A. W., Astin, H. S., & Lindholm, J. A. (2011a). *Cultivating the spirit: How college can enhance students' inner lives*. San Francisco, CA: Jossey-Bass.
- Bean, J. P., & Eaton, S. B. (2000). A psychological model of college student retention. In J. M. Braxton (Ed.), *Reworking the student departure puzzle* (pp. 48-61). Nashville, TN: Vanderbilt University Press.
- Berger, J. B., & Milem, J. F. (1999). The role of student involvement and perceptions of integration in a causal model of student persistence. *Research in Higher Education, 40*, 641-664.
- Braxton, J. M., Hirschy, A. S., & McClendon, S. A. (2004). Understanding and reducing college student departure. *ASHE-ERIC Higher Education Report, 30*(3). San Francisco, CA: Jossey-Bass.
- Byrne, B. (2016). *Structural equation modeling with AMOS: Basic concepts, applications, and programming* (3rd ed.). New York, NY: Routledge.
- Coressel, S. M. (2014). *The influence of college students' intensity of involvement in student organizations on leadership values* (Doctoral dissertation). Available from ProQuest Dissertations and Theses database. (UMI No. 3665829)
- Couch, M. M. (2016). *A phenomenological study of over-involvement in undergraduate students* (Doctoral dissertation). Retrieved from [http://rave.ohiolink.edu/etdc/view?acc\\_num=osu1466343554](http://rave.ohiolink.edu/etdc/view?acc_num=osu1466343554).
- Dew, J. R. (2010). *The positive and negative aspects of student involvement on academic achievement* (Doctoral dissertation). Available from ProQuest Dissertations and Theses database. (UMI No. 3443371).
- Diener, E., Heintzelman, S. J., Kushlev, K., Tay, L., Wirtz, D., Lutes, L. D., & Oishi, S. (2016). Findings all psychologists should know from the new science on subjective well-being. *Canadian Psychology, 58*(2), 87-104. doi:10.1037/cap0000063.
- Dugan, J. P. (2011). Students' involvement in group experiences and connections to leadership development. *New Directions for Institutional Research, 1*, 17-32.
- Dugan, J. P. (2013). Patterns in group involvement experiences during college: Identifying a taxonomy. *Journal of College Student Development, 54*, 229-246.
- Dugan, J. P., & Komives, S. R. (2007). *Developing leadership capacity in college students: Findings from a national study*. College Park, MD: National Clearinghouse for Leadership Programs.
- Dugan, J. P., & Komives, S. R. (2010). Influences on college students' capacities for socially responsible leadership. *Journal of College Student Development, 51*, 525-549.
- Emerick, S. M. (2005). *What types of out-of-classroom involvement are related to students' self-efficacy and grade point: An investigation of the constructs of quantity, quality and connectedness of involvement* (Doctoral dissertation). Available from ProQuest Dissertations and Theses Global Database.
- Endress, W. L. (2000). *An exploratory study of college student self-efficacy for relational leadership: The influence of leadership education, cocurricular involvement, and on-campus employment* (Doctoral dissertation). Available from ProQuest Dissertations and Theses Global Database.

- Fitch, R. T. (1991). The interpersonal values of students at differing levels of extracurricular involvement. *Journal of College Student Development*, 32, 24-30.
- Gravelle, C. A., (2010). *The over-involved college student* (Master's thesis). Retrieved from <http://digitalcollections.carrollu.edu/cdm/singleitem/collection/edthesis/id/66/rec/9>.
- Huang, Y., & Chang, S. (2004). Academic and cocurricular involvement: Their relationship and the best combinations for student growth. *Journal of College Student Development*, 45, 391-406. doi:10.1353/csd.2004.0049.
- Johnson, M. & Hoy, A. (2013). Introduction – Deep, pervasive, and integrated: Developmental frameworks for students, partnerships, faculty engagement, and centers. In M. Johnson & A. Hoy, (Eds.), *Deepening community engagement in higher education: Forging new pathways* (pp. 1-26). New York, NY: Palgrave Macmillan.
- Kinzie, J. (2012). Introduction: A new vision of student success. In L. A. Schreiner, M. C. Louis, & D. D. Nelson (Eds.), *Thriving in transitions* (pp. xi-xxx). Columbia, SC: University of South Carolina, National Resource Center for The First-Year Experience and Students in Transition.
- Koehler, J. H. (2014). *Overwhelmed and under pressure: The influence of extracurricular over-involvement on academic success and student-faculty relationship*. (Doctoral dissertation). Retrieved from <http://hdl.handle.net/10415/4218>.
- Kuh, G. D. (2003). What we're learning about student engagement from NSSE. *Change*, 35(2), 24-32.
- Kuh, G. D., Kinzie, J., Schuh, J. H., Whitt, E. J., & Associates. (2005). *Student success in college: Creating conditions that matter*. San Francisco, CA: Jossey-Bass.
- Mayhew, M. J., Rockenbach, A. N., Bowman, N. A., Seifert, T. A., Wolniak, G. C., Pascarella, E. T., & Terenzini, P. T. (2016). *How college affects students: 21st century evidence that higher education works* (Vol. 3). San Francisco, CA: Jossey-Bass.
- McCabe, J. M. (2014). *Connecting in college: How friendship networks matter for academic and social success*. Chicago, IL: University of Chicago Press.
- McIntosh, E. J. (2012). *Thriving in college: The role of spirituality and psychological sense of community in students of color* (Doctoral dissertation). Available from ProQuest Dissertations and Theses database.
- McMillan, D. W., & Chavis, D. M. (1986). Sense of community: A definition and theory. *Journal of Community Psychology*, 14(1), 6-23.
- Nicoli, G. T. (2011). *The impact of co-curricular involvement on college students' need for cognition* (Doctoral dissertation). Available from ProQuest Dissertations and Theses database. (UMI No. 3494085).
- Pace, C. R. (1984). *Measuring the quality of college student experiences*. Los Angeles, CA: Center for the Study of Evaluation, UCLA.
- Robertson-Kraft, C. & Duckworth, A. L. (2014). True grit: Trait-level perseverance and passion for long-term goals predicts effectiveness and retention among novice teachers. *Teachers College Record*, 116(3), 1-27.
- Ryff, C. D. (1989). Happiness is everything, or is it?: Explorations on the meaning of psychological well-being. *Journal of Personality and Social Psychology*, 57, 1069-1081.
- Ryff, C. D., & Keyes, C. L. M. (1995). The structure of psychological well-being revisited. *Journal of Personality and Social Psychology*, 69, 719-727.
- Schreiner, L. A. (2006). [Psychological sense of community on campus index]. Unpublished raw data.
- Schreiner, L. A. (2016). Thriving: Expanding the goal of higher education. In D. W. Harvard (Ed.), *Well-being and higher education: A strategy for change and the realization of education's greater purpose* (pp. 135-148). Washington, DC: Bringing Theory to Practice (American Association of Colleges and Universities).
- Schreiner, L. A., Kalinkewicz, L., McIntosh, E. J., & Cuevas, A. E. P. (2015). *Advancing a psychosocial model of college student success: The role of thriving*. Manuscript submitted for publication.
- Schreiner, L. A., Louis, M., Vetter, M. K., & Vance, R. (2017, November). *Moments that matter: The role of "microaffirmations" in the ability of students of color to thrive in college*. Paper presented at the annual meeting of the Association for the Study of Higher Education, Houston, Texas.

- Seligman, M. E. P., & Csikszentmihalyi, M. (2000). Positive psychology: An introduction. *American Psychologist*, 55(1), 5-14.
- Tabachnick, B. G., & Fidell, L. S. (2007). *Using multivariate statistics*. Boston, MA: Pearson Education.
- Tieu, T. T., & Pancer, S. M. (2009). Cocurricular involvement and first-year students' transition to university: Quality vs. quantity of involvement. *Journal of The First-Year Experience & Students in Transition*, 21(1), 43-63.
- Tinto, V. (1986). Theories of student departure revisited. In J. Smart (Ed.), *Higher education: Handbook of theory and research* (pp. 359-384). New York, NY: Agathon Press.
- Ullman, J. B. (2007). Structural equation modeling. In B. G. Tabachnick & L. S. Fidell (Eds.), *Using multivariate statistics* (5th ed., pp. 676-780). Boston, MA: Pearson Education.
- Vetter, M. K. (2011). Fraternity and sorority thriving: A residential perspective. *Oracle: The Research Journal of the Association of Fraternity/Sorority Advisors*, 6(2), 54-75.
- Vetter, M. K. & Pariano, N. K. (2015, March). *Balance this!: Rethinking student involvement on campus*. Presented at the meeting of American College Personnel Association (ACPA), Tampa, FL.
- Webber, K. L., Krylow, R. B., & Zhang, Q. (2013). Does involvement really matter? Indicators of college student success and satisfaction. *Journal of College Student Development*, 54, 591-611. doi:10.1353/csd.2013.0090.
- Winston, R. B., & Massaro, A. V. (1987). Extracurricular involvement inventory: An instrument for assessing intensity of student involvement. *Journal of College Student Personnel*, 28, 169-175.
- Wolf-Wendel, L. Ward, K., & Kinzie, J. (2009). A tangled web of terms: The overlap and unique contribution of involvement, engagement, and integration to understanding college student success. *Journal of College Student Development*, 50, 407-428.
- Zacherman, A., & Foubert, J. (2014). The relationship between engagement in co-curricular activities and academic performance: Exploring gender differences. *Journal of Student Affairs Research and Practice*, 51, 157-169.