THRIVING AND SPIRITUALITY IN DOCTORAL STUDIES

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ABSTRACT

The purpose of this study was to explore doctoral students' perceptions of personal thriving and spirituality at a private Christian, liberal arts university in the southeastern United States. Eightyone Ed.D. students from the target university responded to the Thriving Quotient for Graduate Students (Schreiner, 2010), a survey designed to measure student perceptions of personal thriving in the areas of engaged learning, academic determination, positive perspective, social connectedness, and diverse citizenship. In addition, the researcher added items to the survey to measure students' spirituality. The target students' responses to the survey were compared to the national norms of the Thriving Quotient for graduate students. The current article discusses doctoral students' perceptions of the spiritual climate at the target university and its relationship to overall student thriving. Respondents from the target university reported a higher mean score on the composite Thriving Quotient for graduate students than the mean score of respondents in the national norm group. In addition, ratings of the spiritual climate at the target university were significant predictors of the overall composite score of the Thriving Quotient. This study adds to the body of knowledge of the factors that comprise the construct of thriving in post-secondary education. The study may prove valuable to doctoral advisors, professors, and student services personnel to help doctoral students thrive on a holistic level.

Introduction and Brief Review of Literature

Historically, the mission statements of institutions of higher education have included the development of students' self-awareness and character as part of the university's mission.

Students were admonished to "know thyself" (Astin, Astin, & Lindholm, 2011b, p. 2). Early America's college curricula intentionally emphasized spiritual growth and development (Lindhlom & Astin, 2008). Today's students still seek wholeness and direction in life, and spirituality plays an essential role in developing the cognitive, affective, and spiritual domains of students' lives.

In a landmark study, Lindholm and Astin (2008) found that undergraduate students' scores on self-reflection and on helping people in need were significantly correlated to an increase in students' spiritual development after four years at university (p < .001). Recent studies (Roberts, 2009; Tran, 2010) suggest a link between spirituality and learning. "To be successful in developing whole students who are prepared for lives of meaning and purpose, colleges and universities of all types must be aware of students' spirituality and faith" (Trautvetter, 2007, p. 258). Trautvetter (2007) reported that universities have a responsibility to develop cognitive learning by expanding students' knowledge and thinking skills, but she went on to say that colleges should help students grow in the affective domain by "enhancing their moral, religious, and emotional interests" and "improving their competence in work, family, and community" (p. 238). This holistic view of education reflects the need for development of the whole person: cognitive, psychosocial, and spiritual. The purpose of this study was to explore doctoral students' perceptions of their personal thriving and spirituality at a private Christian, liberal arts university.

What is Spirituality and Why is it Important in Academia?

Spirituality is a "reliance upon a power greater than the self," and emphasizes the importance of "personal beliefs as an anchor in life" (McIntosh, 2012, p. 129). Astin et al. (2011b) defined spirituality as a "connection that brings faith, hope, peace, and empowerment" (p. 4). Faculty at Christian universities see spirituality as "a process of change or renewal" that "permeates all aspects of the individual – heart, mind, will, and spirit" (Banez, 2016, p. 5). At Christian universities, spiritual formation involves one's ongoing and developing relationship with God and others and students' openness to exploring a relationship with a higher power that "transcends human knowing" (Lindholm & Astin, 2008, p. 185).

The construct of spirituality is multidimensional and includes affective experiences that help adult students formulate an understanding of their purpose and direction in life. Spirituality also gives students the strength to persist through life's circumstances (Lindholm & Astin, 2008). Fowler (2004) suggests that educators may need to assess faith development by its "practical engagement with the life issues that threaten to overwhelm so many among us" (p. 419).

In their landmark study on collegiate spirituality, Astin et al. (2011b) analyzed 14,527 surveys of undergraduate students from 136 institutions; using factor analysis, the researchers identified factors of spirituality including searching for meaning or purpose in life, finding meaning in difficult times, and caring about others. High survey scores on spirituality were positively correlated with high self-confidence in academic ability (p < .05). Astin et al. (2011b) were concerned that university faculty did not balance the attention they gave to both the "inner and outer selves" (p. 2) of students. The researchers suggested that overall student development would be enhanced when professors emphasized students' personal and spiritual development during instruction and advising.

In order to fulfill the role of developing the whole person, faculty, staff, and administrators at colleges and universities should foster students' "internal lives (values, spirituality, identity, purpose, and meaning)," as well as students' exterior lives (Trautvetter, 2007, p. 238). Banez (2016) studied the influence of spirituality on undergraduate and graduate students in both religious and non-religious universities and reported that the ways an institution views and promotes spirituality influences program development and student services.

Spirituality can be incorporated in doctoral studies to foster transformative learning, and institutions can give students room to grow by creating opportunities for learners to interact with and explore questions of purpose and meaning. In Astin et al.'s study (2011b), undergraduate students reported spiritual growth and a greater sense of social connectedness when their professors encouraged conversations about the meaning and purpose of life. Gardner (2009) suggests that doctoral students experience spiritual growth when readings, discussions, and situations influenced students' ways of thinking; she goes on to recommend that universities view the pursuit of a doctoral degree as more than educational and professional training since doctoral education "entails the development of the whole self" (Gardner, 2009, p. 7).

Trautvetter (2007) surveyed faculty and students at 500 church-related colleges and universities affiliated with ten different denominations. In addition, interviews were conducted with 30 deans and provosts from the 255 undergraduate institutions that responded to the survey. Trautvetter found that undergraduate students reported the need to suppress their spiritual life or to separate their spiritual life from higher education (Trautvetter, 2007). The researcher went on to state that universities that promote a holistic view of student development are able to guide students in their efforts to develop their beliefs and "articulate their views of the world and their place in it" (Trautvetter, 2007, p. 241).

Jenney (2012) used the *College Students Beliefs and Values Survey* to investigate factors that were hypothesized to support character development in undergraduate college students at public and private colleges and universities as well as religious colleges. After analyzing responses from 3,672 students at 46 colleges and universities, Jenney's results support his hypothesis that spirituality is a significant predictor of character development in college students (p < .001). The 46 colleges and universities in his study encouraged transformative learning and sought to develop character in their students by including activities that emphasized character cultivation or spiritual growth as a goal (Jenney, 2012).

Astin et al. (2011b) asserted that higher education should encourage the development of inner qualities so that students can "live more meaningful lives and cope with life's inherent uncertainties" (p. 140). Not only did spirituality nurture a student's search for answers, but students' spiritual development also influenced their academic performance, self-concept, satisfaction, and cross-cultural relationships (Astin, Astin, & Lindholm, 2011a). Belief in a higher power enabled students to maintain a sense of calm during stressful situations (Lindholm, 2013). Spirituality served as an "internal coping strategy for navigating the complexities of life, specific to belief in a power greater than self" (McIntosh, 2012, p. 16).

Students in a doctoral program are not only seeking knowledge and skills to succeed in their fields, but they are also seeking truth. Speck and Hoppe (2007), who studied the ways that spirituality relates to the cognitive development of students, stated, "As educators, we have an obligation to guide them in both quests" (p. 287). "To ignore the role of spirituality in personal development and professional behavior is to overlook a potentially powerful avenue through which people can construct meaning and knowledge" (Lindholm & Astin, 2008, p. 186).

Humans are created in the image of God. The *imago Dei* is a holistic teaching of humanity. "We cannot separate our physical, material existence from our mental or spiritual life, nor can we regard one as being more 'real' than the other" (Estep & Kim, 2010, p. 16). Students can be encouraged to develop a Christian worldview (Stegman, 2015). Estep and Kim (2010) asserted that educators who believe that all truth is God's truth could not be merely students of the social sciences; they must also be students of theology. According to Estep and Kim (2010), faith is closely "related to the output of the intellect" (p. 77).

The implications for Christian educators are numerous. Faculty members should encourage the engagement of students' minds and hearts, because through the "process of anchoring holistic knowledge to faith... people experience spiritual growth" (Estep & Kim, 2010, p. 89). Doctoral students, like all humans, are created with a body, mind, and spirit. To thrive, all three aspects of the individual student must be nurtured (Houston, 2008).

Since the 1960s, completion rates of doctoral programs have been consistently estimated to be 50 percent or less (Lovitts, 2008). The high rate of attrition in doctoral programs is problematic and should be a matter of concern for educators in higher education. The individual tailoring of doctoral programs, especially the dissertation, is very expensive for universities, and the loss of students creates an exorbitant cost (Nettles & Millett, 2006). Not only is attrition expensive for the university, but Lovitts (2001) also asserted that student attrition "can ruin individuals' lives" (p. 6). Doctoral students are typically intelligent, hard-working students who envision themselves as capable of conquering obstacles. Failure to complete a program can lead students to believe that they are failures in both their academic and personal lives (Lovitts, 2001). Ambler (2006) recommended that institutions of higher education carefully examine the factors that promote adult student success in order to increase student retention and satisfaction

rates.

Can Spirituality and Thriving Be Measured?

The study of spirituality has often been considered off-limits in scientific circles due to its very private and individual nature. However, other viewpoints point to the need "for understanding personal meaning, goal-striving, and subjective well-being" (Emmons, 2003, p. 112). Although spirituality deals with students' inner lives and is not always observable and measureable, spirituality does have definable characteristics that can be examined through quantitative analysis (Rockenback & Mayhew, 2013).

Doctoral completion rates are not the only indicators of success in a doctoral program. Other important elements of earning a doctoral degree are important to the overall progress of individual students and to their readiness for greater positions of influence in the workplace. In response to the need for research on student success, Dr. Laurie Schreiner (2010) sought to broaden the definition of success at university and developed a measure of student success known as *thriving*. Thriving students were described as "engaged intellectually, socially, and emotionally" (Schreiner, 2010, p. 4). They were academically successful and experienced "a sense of community and a level of psychological well-being that contributed to their persistence to graduation" (Schreiner, 2010, p. 4). Thriving suggests a difference between students who make the most of their educational experiences and students who simply survive their educational journey, completing requirements while minimally invested in learning (Schreiner, 2010). The construct of thriving expands the traditional idea of student success from a focus on academic growth and employability to include psychological well-being and spiritual development (Schreiner, 2010).

The *Thriving Quotient* survey developed by Schreiner (2010) provides a way to measure the construct of thriving (see Appendix A for more information on the *Thriving Quotient*). Building on the ideas related to flourishing (Keyes & Haidt, 2003), the *Thriving Quotient* was piloted in a 2008 study of 2,474 students from 13 institutions (Schreiner, Pothoven, Nelson, & McIntosh, 2009). In 2009, the *Thriving Quotient* was completed by a sample of 6,617 undergraduate students from 27 public and private colleges and universities across the United States (Schreiner, McIntosh, Nelson, & Pothoven, 2009). More than 6,000 complete undergraduate datasets were utilized for data analysis. Factor analysis revealed five factors of thriving: engaged learning, academic determination, social connectedness, positive perspective, and diverse citizenship. These five factors were subsequently used to develop the *Thriving Quotient* (TQ) composite and subscale norms.

McIntosh (2012) utilized the TQ to examine the factors that correlated to thriving of Caucasian, African American, Asian, and Latino 18-25 year old undergraduate students. He used the *Thriving Quotient* to survey 7,956 students at 59 public and private institutions of higher education (McIntosh, 2012). McIntosh's study demonstrated that thriving can be measured consistently across ethnic groups. According to McIntosh, "thriving transcends racial boundaries," and the *Thriving Quotient* "demonstrated good statistical fit for all ethnic groups measured in the sample" (McIntosh, 2012, p. 124).

The spirituality subscale of the *Thriving Quotient* (TQ) emphasizes reliance on a higher power, personal faith as an anchor in life, and personal strength derived from religious beliefs. In McIntosh's study, spirituality was a significant predictor of thriving for all students, but was a more robust predictor for minority students than for non-minority students (McIntosh, 2012). His research also suggested that spirituality was the most important factor in establishing a sense

of community among undergraduate students; within ethnic groups, spirituality contributed 35% to 49% of the variation between students' psychological sense of community (McIntosh, 2012). Spirituality, or a belief in a power greater than the self, was an important part of social connectedness for students of color, and spiritual beliefs provided a lens for students to view life's situations. McIntosh (2012) further suggested that a focus on spirituality and finding meaning in life could help build a sense of social connectedness that would help students of color thrive in higher education.

Petridis (2015) conducted a factor analysis to pilot and validate a graduate version of the *Thriving Quotient* using a nation-wide sample of 1,789 graduate students; the instrument was found to be internally consistent (α = .86). She subsequently used the graduate version of the *Thriving Quotient* to examine the relationships between graduate students' thriving and family-friend support, student-faculty interaction, department climate, and psychological sense of community. In her sample of 2,918 master's and doctoral students from 11 American public and private institutions, the graduate students' *Thriving Quotient* composite score was significantly correlated (p < .001) to support of family and friends and a positive departmental climate at the learning institution. Petridis's (2015) study revealed that students thrive in graduate school based on "support of their family, friends, and faculty in the context of a departmental environment that creates a strong psychological sense of community" (Petridis, 2015, p. 104).

Research Questions

The current study was conducted to assess doctoral students' spirituality and its relationships to overall thriving at a private Christian university as measured by the graduate *Thriving Quotient*. The following research questions are addressed in this article:

- Q1: What is the relationship between the target doctoral students' spirituality and overall thriving in their program?
- Q2: Does the Thriving Quotient of doctoral students at a private Christian university differ from the national norms for graduate and doctoral students?
- Q3: Do the Thriving Quotient's spirituality subscale scores of doctoral students enrolled in a private Christian university differ from the national norms for graduate and doctoral students?

Methodology

After approval from the Institutional Review Board (IRB), doctoral students who had earned at least 12 credit hours in the Ed.D. program (n= 99) at the target Christian university were invited to complete the graduate version of the *Thriving Quotient*. To gather further information regarding students' spirituality, the researcher added six spiritual climate items using a six-point Likert scale (1 = *strongly disagree*, 6 = *strongly agree*) in order to measure the students' perceived levels of spirituality and Christian faith emphasis in the target doctoral program. For example, students were asked to rate their agreement with statements such as, "The atmosphere in my online classes has been conducive to spiritual growth." Doctoral students at the target university were also asked to rate their perceptions of whether or not members of the doctoral faculty at the target university had influenced their spiritual growth and whether the Christian worldview in the doctoral classes had contributed to their ability to thrive in the academic program. Finally, students were asked to answer an open-ended question describing the ways the doctoral program at the university had increased their overall sense of spirituality.

Results

Demographic Results

A total of 99 surveys were sent to doctoral students at the target university; 81 surveys were completed, achieving an 82% response rate. Demographic variables such as age, gender, university cohort membership, and full- or part-time enrollment status were elicited from participants in addition to the items on the TQ (see Tables 1 and 2). Thirty-one percent of the target sample's respondents were male and 69% were female. Eighty-six percent of the respondents were enrolled full-time in the doctoral program, and 14% were enrolled part-time. None of the sample's demographic variables were significantly related to the target sample's TQ composite score or the spirituality subscale items of the Thriving Quotient (p > .05).

Table 1 *Graduate TQ Survey Respondents' Age Groups (n=80)*

Age Group	n*	%
21-30	7	8.7%
31-40	15	18.8%
41-50	35	43.8%
51-60	16	20.0%
61+	7	8.7%

^{*}One missing identifier

Table 2 *Graduate TQ Survey Respondents' Ethnicities (n=79)*

Race/Ethnicity	n*	%
African-American/Black	12	15%
American Indian/Native American	-	-
Asian/Asian-American/Native	1	1%
Hawaiian/Pacific Islander		
Caucasian/White/European/American	59	75%
Hispanic	7	9%
Other	-	-

^{*}Two missing identifiers

Descriptive Results

Descriptive statistics were compiled from the sample's responses to the spirituality items added by the researcher and are presented in Tables 3 and 4. Responses to two of the items not displayed in the tables were enlightening: 1) the respondents ranked the open atmosphere for discussion of spiritual topics highest among all the spirituality items, and 2) when students were asked if they had someone connected to the university with whom they could discuss spiritual concerns or needs, 63% responded 'Yes' and 37% responded 'No'.

Table 3

Frequencies and Percentages of Responses to Religious Service Question (n =81)

Researcher- developed Item		Not at All		Once a Year		Several Times a Year		Once a Month				Every Week		lore han ice a /eek
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
How frequently do you currently attend religious services?	1	1%	1	1%	6	7%	3	4%	11	14%	41	51%	18	22%

Almost three-quarters of the students in the sample attended religious services every week or more than once a week. These results indicated that the doctoral students in this sample demonstrated strong engagement in the spiritual discipline of church attendance while in doctoral studies.

The researcher also asked the respondents to rate their level of participation in spiritual disciplines and activities while in the doctoral program. The results of these analyses are presented in Table 4.

Table 4

Frequencies and Percentages of Responses to Spirituality Items (n=81)

Researcher- developed Item	N	ever	Ce	on ertain easions		nce a onth	Tin	veral nes a onth		ce a eek	Tin	veral nes a eek	Daily		Several Times a Day	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
How frequently do you currently read the Bible?	1	1%	7	9%	4	5%	15	19%	6	7%	19	23%	24	30%	5	6%
How frequently do you pray?	-	-	2	3%	-	-	-	-	1	1%	9	11%	27	33%	42	52%
How frequently do you listen to Christian music?	3	4%	5	6%	2	3%	5	6%	3	4%	18	22%	23	28%	22	27%
How frequently do you journal about spiritual growth or other spiritual topics?	24	30%	30	37%	6	7%	4	5%	5	6%	3	4%	9	11%	-	-

The majority of students in this sample read the Bible several times a week, daily, or several times a day, and 85% of the students prayed daily or several times a day. More than 75% of the respondents listened to Christian music daily or several times a day. These results

revealed that the majority of the doctoral students in this sample were frequently engaged in spiritual disciplines and activities during their doctoral studies.

Spiritual Climate at the Target University

The survey items added by the researcher related to the spiritual climate of the target university's doctoral program were ranked by the respondents on a scale of 1(Strongly Disagree) to 6 = (Strongly Agree) and are displayed in Table 5.

Table 5

Means and Standard Deviations of the University's Spiritual Climate Items (n = 81)

Spiritual Climate Item	Mean	SD
There is a strong spiritual climate in my doctoral program.	5.38	.87
The doctoral program at my university provides an open atmosphere for	5.42	.88
the discussion of spiritual topics.		
The atmosphere in my online classes has been conducive to spiritual growth.	4.79	1.17
The atmosphere in my face-to-face courses has been conducive to spiritual growth.	5.20	1.07
The faculty members in my doctoral program have greatly influenced my spiritual growth.	4.36	1.43
The Christian worldview in the doctoral classes at this university has contributed to my ability to thrive in this program.	4.84	1.31
Composite Spiritual Climate at University	5.0	.90

Note: Responses to the spiritual climate items were rated on a six-point Likert scale with 1=Strongly Disagree and 6=Strongly Agree.

While both face-to-face and online courses established an atmosphere conducive to spiritual growth, students in this sample reported that the atmosphere in the face-to-face courses was more conducive to their spirituality than the online courses.

Spiritual Climate and Thriving

The six questions from the researcher-added items were averaged in order to obtain the sample group's perceived spiritual climate of the doctoral program at the target university (see Table 3). In order to determine the relationship between the sample group's ranking of the doctoral program's spiritual climate and the sample's overall composite score on the *Thriving Quotient*, a Pearson Product Moment Correlation coefficient (r) was computed. The correlation between the sample's mean TQ composite score and the mean of the sample's spiritual climate items was statistically significant (r = .35; $R^2 = .12$; p = .002). The target students' mean score on the university's spiritual climate items explained 12% of the variability in their overall Thriving Quotient score. Although the correlation was considered weak to moderate, the significant result supports McIntosh's (2012) study of spirituality as a predictor of thriving. The results suggest the need for further investigation of the relationships between the academy's spiritual climate and doctoral students' ability to thrive.

Comparison of Sample TQ to Norm Group TQ

In order to determine whether composite scores of doctoral students at the target private Christian university differed from the national norms on the TQ for graduate students (research question 2), a single sample t-test of independent means was used to compare the mean composite TQ of the sample to the national norm group's mean TQ. The result of the analysis is displayed in Table 6.

Table 6

t-Test and Effect Size of Composite Graduate Thriving Quotients of the Research Sample and the National Norm Group

Group	Mean TQ	SD	ES(d)
Sample (n=80)	4.92	0.51	.52
National Norm (n=2,259)	4.39		

 $t_{(80)} = 2.86$; p = .005

Comparison of the two groups revealed that the mean TQ composite score of doctoral students at the target Christian university was significantly higher (p = .005) than the mean TQ composite score of the national graduate norm group. The effect size (d = .52) was considered medium (Gay, Mills, & Airasian, 2012). Overall, the sample group appeared to be thriving in doctoral studies at a significantly higher level than the national graduate norm group. These results are quite interesting when one triangulates the results of the spirituality items with the TQ. The target group reported high levels of engagement in spiritual disciplines (see Tables 3 and 4) as well as significantly higher levels of thriving than the norm group. One has to ask: is a Christian student who is spiritually engaged more likely to thrive during a doctoral program? These results suggest that the answer is "Yes."

Comparison of Target University and Norm Group on the TQ Spirituality Subscale

The graduate *Thriving Quotient* created by Schreiner et al. (2012) includes three survey items designed to explore the relationships between spirituality and thriving. The items are assessed on a six- point Likert response scale (1 = Strongly Disagree; 6 = Strongly Agree):

- My spiritual or religious beliefs provide me with a sense of strength when life is difficult.
- My spiritual or religious beliefs are the foundation of my approach to life.
- I gain spiritual strength by trusting in a higher power beyond myself.

In order to ascertain whether the sample of doctoral students at the target university was significantly different from the national norm group on the TQ's spirituality subscale (research question 3), a t-test of independent means was conducted to compare the two groups. The result of the analysis is displayed in Table 7.

Table 7

Comparison of Sample and National Norms on the Spirituality Subscale of TQ

Group	Mean Spirituality Domain of TQ	SD	ES(d)
Sample (n=80)	5.68*	.87	1.43
National Norm (n=2,259)	4.13		

^{*}p < .001

Students at the target university reported significantly higher mean scores on the TQ spirituality subscale than the national norm of graduate students. Results of the Cohen's d analysis indicated a very large effect size. In fact, the respondents in the sample group almost reached the ceiling on the 6-point Likert scale. In addition, more than 90% of the respondents in the target group agreed or strongly agreed that their spiritual beliefs provided them with a sense of strength when life was difficult.

Ancillary Qualitative Results

In an open-ended question added to the original TQ, the researcher asked the target students to elaborate on ways that the doctoral program influenced their overall sense of Christian spirituality. The students in the sample reported that most of the classes in the target doctoral program encouraged the discussion of Christian principles, and many assignments required scriptural references. The students appreciated the application of biblical principles to the varied disciplines embedded in the doctoral courses. A student commented that a faith component tied back to each concept presented. One student shared that it was a pleasure to

"incorporate spirituality into discussions and assignments." Another student appreciated the "opportunity to use a spiritual lens when completing projects and papers." One participant said, "Instead of giving up when hardship strikes, I press into Christ." Another said the program had "encouraged me to be strong and persevere through difficult times."

Prayer was mentioned more than a dozen times in participant responses to the openended question about spirituality. Students commented on the prayer emphasis in face-to-face classes that began or ended with prayer, and 14 students mentioned that professors prayed with them. One student said, "I love the fact that I have faithful professors who are willing to pray over me throughout this journey." Another student mentioned that professors shared Scriptures to "edify" students. Students also mentioned the influence of weekly devotions with praise and worship music that online professors included in their courses.

Students in the research sample at the target university described the faculty as "spiritually focused" and expressed appreciation for the spiritual emphasis in the program, saying "there is a vacuum that cannot be filled without God." One survey participant referred to the doctoral faculty as "amazing spiritual mentors." A student shared,

My professors pray for me even though I am an online student. . . I have felt the effects of their prayers. . . Instead of worrying and being anxious, I can cast my cares and burdens on God because I know my professors have got my back.

Another doctoral student said, "God's hand has been all over this process. He led me to this program." A different student wrote, "The teachers have served as spiritual role models . . . and demonstrate Christ's love on a regular basis." In discussing the ways that the doctoral program at this university has influenced the students' overall sense of spirituality, one student simply said, "It [spirituality] has been the overall foundation on which this program has been

based."

These voluntary comments emphasized the target students' spiritual connections to the coursework and the faculty, which, in turn, have empowered them to persevere despite the rigors of doctoral level work, especially when combined with demanding careers and personal circumstances inherent in graduate education.

Discussion

The results of this research study revealed that students in the Ed.D. program at the target Christian university were 1) highly engaged in spiritual disciplines and 2) thriving at a significantly higher level than students in the comparison national norm group on both the composite *Thriving Quotient* and the spirituality subscales. These results support Lindholm and Astin's (2008) contention that reflection is an important part of spiritual development. This finding also supports research that suggests a link between spirituality and learning in which spirituality was positively correlated to activities related to student outcomes in higher education (Roberts, 2009; Tran, 2010).

What did the target university do to establish the spiritual climate for thriving in the doctoral program? The results of this study indicated that a number of intentional practices at the university influenced student thriving: the integration and application of Biblical principles across the curriculum; authentic Christian professors who mentored students in both academic and personal matters; and faculty who supported students academically, socially, emotionally, and spiritually. These practices created a strong spiritual climate for thriving in the target doctoral program.

Implications for Practice

The Latin root of *education* means to "pull forth that which is deepest" in students "in

order to develop mind, skill, knowledge, and character" (Houston, 2008, p. 70). In addition to the cognitive, academic elements of earning the doctoral degree, students also develop affectively and spiritually (Nettles & Millet, 2006). Many of the life principles that provide doctoral students with the energy, drive, and desire for quality work have spiritual roots (Sokolow & Houston, 2008). Spiritual principles can serve as habits of mind and guide students in the tasks of the doctoral journey. This research study points to the importance of the spiritual dimension of graduate education and its overall relationship to the students' ability to thrive.

University faculty should provide learning experiences that encourage spiritual growth in their students' lives. Christian universities in particular have a responsibility to provide an educational experience that ministers to students' minds and spirits (Banez, 2016). Christian universities should also expose students to different methods of integrating faith into students' professional lives (Stegman, 2015). Advisors should strive to see the divine qualities in students; through their own transparency, advisors can foster spiritual growth in advisees. Professors can highlight spiritual principles and analogies in courses and encourage students to have open hearts and minds. Doctoral students are receptive to discussions about spiritual principles required in leadership roles and are open to dialogue about spiritual principles that are essential in their professions.

Educators and administrators in institutions of higher learning can integrate activities that provide students with opportunities to reflect on spiritual matters. Students can write reflections about the spiritual characteristics of any type of learning (Sokolow & Houston, 2008). Students in Astin and Astin's study (2004) who had opportunities in their classrooms to participate in self-reflection to advance their inner development experienced growth academically and in personal leadership abilities.

Many doctoral programs at public or secular institutions face challenges from faculty and administrators regarding the ways that spirituality is defined and whether or not it should be promoted on campuses. However, "the scholarly study of spirituality, marked by genuine inquisitiveness" provides learning opportunities in students' "search for truth" (Speck & Hoppe, 2007, p. 287).

Astin and Astin (2004) suggested that undergraduate students' spiritual qualities could grow during college by exposing students to service learning opportunities, interdisciplinary coursework, and self-reflection. Rude (2015) stressed that institutions can establish learning communities that encourage spiritual development and that focus on developing the whole student. As Palmer (2007) has noted, "As I teach, I project the condition of my soul onto my students, my subject, and our way of thinking together" (p. 31). Professors can model spiritual growth for their students as they continue to develop their own relationships with God. A participant in this study reported, "My doctoral program is a breath of fresh air, and it gives me strength and hope."

Institutions of higher education can purposely generate conditions and opportunities that promote spiritual growth. Leaders of doctoral programs should view their programs, faculty, and students holistically. Leaders can invite other leaders to analyze their doctoral programs and to look at the whole, the parts, and the relationships of each part to the whole in order to ensure that holistic education is indeed promoted and valued.

Conclusion

The spiritual dimension of thriving includes a reliance on a higher power when life is difficult or challenging, a vital concern for doctoral students. Institutions should work to establish an environment that encourages doctoral students to thrive throughout the journey (Schreiner, Louis, & Nelson, 2012). Such an environment requires an authentic commitment to holistic wellness and growth by considering students' cognitive, affective, and spiritual dimensions holistically and with intentionality.

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Appendix A

Information on the Thriving Quotient

Readers can learn more about the Thriving Quotient at http://www.thrivingincollege.org .

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