

Spirituality and Pedagogy: Examining the Relationship Between Faculty's Spirituality and Use of Student-Centered Approaches to Undergraduate Teaching

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Abstract

Using data from a national survey of college faculty, this study examines faculty members' preferred teaching practices as one aspect of their professional behavior that may reflect the spiritual dimension of their own lives. Findings show that faculty who are highly spiritual are more likely than their less spiritual colleagues to use student-centered pedagogy. The results have implications both for enhancing understanding of pedagogical practice and addressing faculty personal and professional development issues.

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In recent years, there has been increasing interest in issues of meaning, purpose, authenticity, and spirituality in higher education. There are numerous definitions of spirituality, but the key terms and elements from those who have written extensively about spirituality include aspects such as, seeking personal authenticity, genuineness, and wholeness; transcending one's locus of centrality; developing a greater sense of connectedness to self and others through relationships and community; deriving meaning, purpose, and direction in life; being open to exploring a relationship with a higher power that transcends human existence and human knowing; and valuing the sacred (Love & Talbot, 1999; Hill, Pargament, Hood, McCullough, Swyers, Larson, & Zinnbauer, 2000; Zinnbauer, Pargament, & Scott, 1999). While religious values may be connected to these key facets, spirituality may well exist apart from religion altogether in that religion is seen as "organized," "social," and "traditional," whereas spirituality is conceived as "personal," "transcendent," and characterized by qualities of "relatedness" (Zinnbauer, Pargament, & Scott, 1999, p. 901). As one examines these various definitions of spirituality, certain terms surface regularly: transcendence, interconnectedness, authenticity, self-awareness, and wholeness.

Irrespective of the presence or absence of clearly defined linkages between religion and spirituality, to ignore the role of spirituality in personal development and professional behavior is to overlook a potentially powerful avenue through which people construct meaning and knowledge (Tisdell, 2001). Indeed, it is the spiritual component of human beings that gives rise to questions about why we do what we do, pushes us to seek fundamentally better ways of doing it, and propels us to make a difference in the world (Zohar & Marshall, 2004). People's abilities to access, nurture, and give expression to the spiritual dimension of their lives have also been found to impact how they engage with the world and to foster within them a heightened sense of connectedness that promotes

empathy, ethical behavior, civic responsibility, passion, and action for social justice (see e.g., Astin, Astin, Lindholm, & Bryant, 2005; DeSouza, 2003; Harris & Moran, 1998). Consequently, some conceive of spirituality as an essential aspect of lifelong learning and believe that it should play a significant role in the teaching/learning process (see e.g., Duff, 2003; Lee, 1999; Lewis, 2000; Tatarowski, 1997). Thus, in designing this study, we expected to identify relationships between faculty's spirituality and aspects of their teaching practice. If spirituality involves self-awareness and interconnectedness with others, we expect that such personal qualities will play an important role in how spiritual faculty will approach their teaching and their interactions with students.

In thinking about how our values, beliefs, and ways of conceptualizing our relationships with others and the world around us affect our behavior, we were very interested in examining whether faculty who self-report to be spiritual are also more likely to behave in ways that benefit their undergraduate students. For example, if faculty self-identify as spiritual, does it make a difference in how they teach? Are spiritual faculty more other-centered, more caring and, in general, more student-centered? Do their approaches to teaching and working with undergraduate students tend to differ notably from those of their less spiritual colleagues? Using data from a recent national study of college and university faculty, this article examines faculty members' preferred teaching practices as one aspect of their professional behavior that may reflect the spiritual dimension of their own lives. Emphasis is placed on identifying the correlates of student-centered pedagogy, with a specific focus on the mediating role of self-reported spirituality. The information gleaned can be used both to enhance our understanding of pedagogical practice and to address more comprehensively faculty personal and professional development issues in undergraduate teaching and learning.

Pedagogical Practice, Spirituality, and the Professoriate

So-called "active learning," encompasses a variety of pedagogical techniques and evaluative methods and refers to a wide range of teaching/learning processes that are geared toward placing

students at the center of their learning experience (Warren, 1997). Faculty use of student-centered pedagogy—which is designed to promote students’ active engagement in the learning process—has been associated with higher grade attainment, enhanced intellectual curiosity, and the development of superior creativity, drive, and leadership skills relative to those found in students whose instructors employ more traditional pedagogical methods such as lecturing (Henson, 2003). The extent to which students engage in work that is personally meaningful and are encouraged to take ownership of their actions has been found to impact both depth of understanding and intrinsic motivation (Pederson & Williams, 2004). In an era characterized by increasing diversity among college students with respect to past educational experiences and learning styles, the merits of incorporating learner-centered approaches to teaching may be especially compelling. While data from recent national surveys of college and university faculty show an increase over time in the use of student-centered pedagogy within the overall population of faculty (see Lindholm, Szelényi, Hurtado, & Korn, 2005), there remains much to learn about the extent to which faculty employ such pedagogical techniques, which sub-populations within the professoriate are most inclined to use student-centered teaching methods, and why they elect to use such approaches.

Recent work that examined disciplinary differences in normative approaches to teaching and learning showed that women, faculty of color, and younger faculty are more inclined overall than men, White/Caucasian, and older faculty to employ student-centered approaches to teaching (Lindholm & Szelényi, 2006). Findings from that study also showed that faculty in engineering, the physical sciences, and math/statistics are generally less inclined than their counterparts in “softer” disciplines such as education, the arts, and business to adopt student-centered pedagogical practices. Just 10% or less of faculty in the former three fields registered as “high” scorers on Student Centered Pedagogy; in the latter three fields, this figure was 25% or more. Moreover, Lindholm and Szelényi (2006) found that the type of employing institution, in and of itself, has a minimal effect on use of

student-centered teaching methods, although faculty at liberal arts colleges are generally more inclined than their colleagues at comprehensive colleges and universities to adopt teaching and evaluative strategies designed to promote active learning. Not unexpectedly, the study also revealed that faculty who are civic minded and who place high value on students' personal development are more inclined toward student-centered pedagogy.

Proponents of constructivism a learner-centered educational theory contend that, to learn anything, each [student] must construct his or her own understanding by tying new information to prior experiences" (Henson, 2003, p. 13). A dual focus on both the individual learner and social interaction figures prominently in this approach. Combs (1962) and others including Kelly (1955) and Ausubel (1968), have argued that student-centered education is essential for healthy development because this approach is most conducive to promoting self-efficacy and positive self-concept. Based on his review of the extant literature on learner-centered education, Henson identified the following "dispositions" as centrally important: (1) education should be experience-based; (2) each individual learner's own unique qualities and dispositions should be considered when planning a curriculum; (3) the learner's perceptions should shape the curriculum; (4) the learner's curiosity should be fed and nurtured; (5) learning is best when it involves emotions; and (6) the learning environment should be free of fear.

Implementing student-centered pedagogies means more, however, than simply introducing new teaching methods that portray an increased emphasis on students' interests, backgrounds, and learning styles. Such pedagogical methods also imply a fundamental shift in the role of teachers, whereby they no longer see themselves solely—or even primarily—as “disseminators of knowledge,” but rather “construe themselves to be facilitators of student learning” (Robertson, 2005, p. 181). The term, student- or learner-centeredness, however, appears to suggest that such pedagogies simply transfer the focus from teacher to learner, without acknowledging the continuing active role of

teachers in the learning process. In order to account for the important roles played by both learner and teacher, the methods that are widely accepted in the literature as “student-centered pedagogies” are sometimes referred to “teacher/learner centeredness,” or “systemocentrism,” a theoretical conception highlighted by Robertson (1999). Importantly, “[s]ystemocentrism treats both the teacher and the learners as unique persons, not roles, and puts them in interaction. ...The professors-as-teachers in this perspective attend to these systems and the human experience at their core – that is, they attend to their own experience, to student’s experience, and to the interaction of the two – along with, of course, their fundamental content mastery” (Robertson, 1999, pp. 283-284).

Our main hypothesis in this study is that faculty’s spirituality will play a key role in the way they approach their teaching. This expectation is based primarily on findings from earlier research (see Lindholm, Astin, & Astin, 2005) which showed that faculty who self-identify as spiritual are more likely to endorse as “important” several goals for undergraduate education that can be considered to reflect a predisposition for engaging in student-centered approaches to teaching, such as enhancing students’ self-understanding, developing students’ moral character, and helping students develop personal values. Based on the extant literature, we also hypothesize that in addition to their values and beliefs, including spirituality, the faculty member’s gender, race, and disciplinary affiliation, along with characteristics of the institutions in which they work, will differentiate use of student-centered pedagogical approaches. The present study is specifically designed to address the following questions: (1) What are the personal, professional, and organizational correlates of student-centered pedagogy among college and university faculty? (2) To what extent does self-reported level of spirituality mediate faculty members’ use of student-centered pedagogy within undergraduate courses?

Methodology

The data for this study are drawn from the 2004-2005 triennial national Faculty Survey conducted by UCLA's Higher Education Research Institute (HERI) (see Lindholm, Szelenyi, Hurtado, & Korn, 2005). Survey items encompass five broad categories of faculty information: demographics, values, work-related activities, institutional perceptions, and affective measures. In Fall 2004, a four-page survey questionnaire was distributed to 172,051 faculty at 511 two- and four-year colleges and universities. After a second-wave follow-up to nonrespondents, 65,124 completed questionnaires were received, constituting a 38 percent overall response rate. The analyses presented here are based on the replies of 40,670 full-time undergraduate teaching faculty from the 414 colleges and universities that were included in HERI's nationally representative sample of institutions for the 2004-2005 survey administration.¹ The normative population includes 61 percent men and 31 percent women. The ethnic/racial distribution is: 89 percent White/ Caucasian; 5 percent Asian American/Asian; 3 percent African American/Black; 2 percent Mexican American/Chicano; 2 percent American Indian/Alaska Native; 2 percent Other Latino; 1 percent Puerto Rican; 1 percent Native Hawaiian/Pacific Islander; and 3 percent "other."² Faculty respondents were employed at public colleges (28 percent), nonsectarian colleges (16 percent), public universities (15 percent), private universities (15 percent), and two-year colleges (7 percent). An additional 8 percent were employed at Roman Catholic colleges and 13 percent at "other" religious colleges (primarily mainline Protestant-affiliated, Baptist, or Evangelical)³.

We have undertaken two types of analyses: (a) cross-tabulations that provide a descriptive profile of faculty with respect to their teaching approaches and underlying values and (b) stepwise

¹ The normative sample includes institutions that surveyed at least 35% of their full-time faculty in the case of two- and four-year colleges and 25% in the case of universities. This sample of 40,670 full-time faculty is representative of both institutions and faculty at those institutions.

² Percentages of racial/ethnic identity add to more than 100 because survey respondents were permitted to mark more than one racial/ethnic category, as applicable.

³ Percentages add to more than 100 due to rounding.

hierarchical regression analyses that enable us to explore how faculty members' individual characteristics, including spirituality, and their institutional contexts relate to their use of student-centered pedagogy. In all analyses, weights derived to correct for non-response bias based on gender, rank, and institutional type were used to approximate as closely as possible the results that would have been obtained if all full-time undergraduate teaching faculty within the United States had responded. To keep the degrees of freedom at an appropriate level for purposes of statistical inference, weights were normalized to yield the original sample sizes.

The dependent variable, "Student-Centered Pedagogy" is a composite measure of eight items included on the 2004-2005 HERI Faculty Survey that asked respondents to indicate on a four-point Likert scale ("all" to "none") the extent to which they employ selected instructional strategies and evaluation methods in their undergraduate courses. Derived through a rotated varimax factor analytic approach, the scale is specifically comprised of items that query eight instructional and evaluation strategies (cooperative learning, group projects, reflective writing/journaling, student-selected course topics, class discussions, student presentations, student self-evaluations, and student evaluations of each other's work). Cronbach's alpha reliability for the "Student-Centered Pedagogy" measure is .81. With respect to the scale's construct validity, we find that "Student-Centered Pedagogy" correlates significantly with faculty placing high value on student development ($r=.29$) and being employed at a student-centered institution ($r=.09$). On the other hand, we find a significant negative correlation between faculty's use of student-centered pedagogy and their research orientation ($r=-.08$). While contemplation and meditation have been found to affect learning (see e.g, Robinson, 2004; Hall, 1999) and it would have been interesting to include them in the teaching practices that comprised this scale, the use of secondary analysis of existing data prevented us from doing so.

The key independent variable, “Spirituality,” was also constructed using rotated varimax factor analysis and is comprised of three survey items: self-identification as a spiritual person; personal priority placed on seeking out opportunities to grow spiritually; and personal value attributed to integrating spirituality into one’s life. The Cronbach alpha for this measure is .88. Among the remaining independent variables are demographic characteristics, academic discipline/field, teaching experiences, institutional characteristics, and personal values. A complete list of the variables that were included in the analysis and their coding is provided in Appendix A.

To further explore the connections between faculty spirituality and teaching behaviors as reflected on the Student-Centered Pedagogy scale, we categorized faculty as having scored “high” or “low” on each of these two measures. On the Spirituality measure, a faculty member’s score reflects the degree to which he or she self-identifies as possessing the quality, state, or circumstance being assessed. On the Student-Centered Pedagogy measure, a faculty member’s score reflects the degree to which he or she self-reports as engaging in the particular teaching practice being queried. “High” and “low” scores on both measures were developed based on faculty members’ patterned responses to the items that comprise each scale.

Descriptive Findings

Overall, 22 percent of faculty register as “high” scorers on the Student-Centered Pedagogy measure and 21 percent are “low” scorers. Not surprisingly, as shown in Table 1, class discussions are the most prevalently used “student-centered” teaching method; eight in ten faculty report that they engage students in class discussion in “most” or “all” of the courses they teach. For many faculty, cooperative learning, student presentations, and group projects are also practical teaching techniques. Less widely used “student-centered” teaching methods include student evaluations of their own work, reflective writing/journaling, student evaluations of each other’s work, and student-selected course topics.

[Insert Table 1 about here]

Table 2 displays the proportions of faculty who score “high” and “low” on Student-Centered Pedagogy and the differential use they make of each of the teaching approaches included within the composite measure. Here, we find dramatic differences in the percentages of “high” and “low” scorers on Student-Centered Pedagogy who employ each of the teaching methods included in the composite measure in “most” or “all” of their courses. For example, nearly all “high” scorers (99%) use discussion in “most” or “all” of their courses, whereas less than one-third (31%) of “low” scorers report the same. In addition, half or more of those who score “high” on Student-Centered Pedagogy employ all but one of the teaching methods included in the composite measure—student-selected course topics—in “most” or “all” of their courses. By contrast, with the exception of class discussions, fewer than 10 percent of “low” scorers use any of the pedagogical practices included in the measure within “most” or “all” of their courses.

[Insert Table 2 about here]

Turning to the Spirituality measure, we find that over three-quarters (81%) of faculty consider themselves to be a spiritual person; more than two-thirds (69%) say that they seek out opportunities to grow spiritually; and just under half (47%) consider it “essential” or “very important” to integrate spirituality into their lives. Based on their responses to the three items, we categorized 43 percent of faculty as “high” scorers on spirituality and 15 percent as “low” scorers. While at first glance such a finding appears to be surprising given faculty’s strong stance on empirical evidence and observation, the fact remains that the sample of faculty responding to the survey is a non-biased representation of teaching faculty at U.S. colleges and universities.

Looking specifically at the pedagogical practices of “high” and “low” scorers on Spirituality, we find that just over one-quarter (28%) of those who score “high” on Spirituality are also “high” scorers on Student-Centered Pedagogy. On the other hand, just 12% of “low” Spirituality scorers are “high” scorers on Student-Centered Pedagogy. Those who score “high” on the Spirituality measure also tend to use all types of student-centered approaches more frequently than their “low” scoring colleagues. The greatest pedagogical variance between “high” and “low” Spirituality scorers is evident in the percentages who use cooperative learning in “most” or “all” of their courses (54% of “high” Spirituality scorers versus 35% of “low” scorers) (Table 3).

[Insert Table 3 about here]

Irrespective of their Spirituality score, women are more likely than men to score “high” on Student-Centered Pedagogy. Not unexpectedly, however, both women and men who are “high” scorers on Spirituality are notably more inclined than their “low” scoring, same sex colleagues to score “high” on Student-Centered Pedagogy. For example, 36 percent of women and 20 percent of men who score “high” on Spirituality also score “high” on Student-Centered Pedagogy. By comparison, just 19 percent of women and 10 percent of men who score “low” on Spirituality score “high” on Student-Centered Pedagogy.

We also compared the use of Student-Centered Pedagogy for those scoring “high” and “low” on Spirituality within each of 14 disciplinary affiliations and within 8 types of colleges and universities. Disciplinary differences in faculty members’ use of Student-Centered Pedagogy based on their spiritual self-identification are shown in Table 4. Variations in the percentages of “high” scorers on Student-Centered Pedagogy based on their Spirituality score are most pronounced in English (46% of “high” scorers on Spirituality versus 27% of “low” scorers scored “high” on

Student-Centered Pedagogy) and Health Science (29% of “high” scorers versus 9% of “low” scorers on Spirituality scored “high” on Student-Centered Pedagogy). By contrast, there was a difference of only five percentage points or less in the proportions of “high” and “low” scorers on Spirituality who scored “high” on Student-Centered Pedagogy in the biological sciences, the physical sciences, business, and math/statistics. Only in engineering did more “low” than “high” scoring faculty on Spirituality score “high” on Student-Centered Pedagogy (12% versus 11%).

[Insert Table 4 about here]

Looking at type of employing institution (Table 5), we find that the greatest difference in “high” use of Student-Centered Pedagogy based on “high” or “low” Spirituality score status is evident among faculty at private 2-year colleges, private universities, Catholic colleges, and public 4-year colleges (17-19 percentage point differences for each). Markedly smaller differences (5-6 percentage points) were apparent among faculty at public universities and public 2-year colleges.

[Insert Table 5 about here]

Regression Analysis

In order to explore in greater depth the role of faculty’s spirituality in their teaching, we undertook a stepwise multiple regression analysis employing Student-Centered Pedagogy as the dependent variable. We identified forty-one variables as critical correlates of student-centered pedagogy. The selection of these variables was based on our hypotheses that certain demographic characteristics, educational experiences and practices, and types of institutions where faculty are employed will play a role in the choices they make with respect to using certain teaching and

evaluation strategies. After we controlled for these variables, we entered faculty's score on the Spirituality measure in order to assess whether self-reported spirituality differentiated faculty with respect to their pedagogy independent of their personal and professional characteristics and the characteristics of their employing institutions.

After accounting for the effects of background characteristics, work variables, institutional characteristics, and the spirituality variable, we entered an additional 15 variables that represent personal views and behaviors along with faculty's personal goals and work experiences, including stress and satisfaction levels. We entered these variables at later steps for the sole purpose of gaining a better understanding of the characteristics, values, and behaviors that are associated with the use of student-centered pedagogy. In total, thirty-one variables entered the regression equation with significant weights (Table 6). After we controlled for these variables, the faculty's spirituality score entered the equation with a highly significant weight ($\beta=.12$), indicating that faculty who self-report to be spiritual are much more likely to use a student-centered pedagogy in most or all of their courses, and that this occurs independent of their personal characteristics, their fields, or their institutional affiliations.

[Insert Table 6 about here]

As we hypothesized, women are much more likely to employ a student-centered pedagogy independent of their disciplinary affiliation or type of employing institution. Likewise, the faculty member's field of study appears to play a significant role. Irrespective of their individual characteristics and institutional circumstances, faculty in education, fine arts, English, and business are much more likely to use teaching and evaluation approaches that are student-centered. On the

other hand, faculty in math/statistics, the social sciences, biological sciences, physical sciences, and engineering are the least likely to employ a student-centered pedagogy.

Interestingly enough, older faculty, those who are more senior in their professional positions as reflected by academic rank, and those who list their political affiliation as “conservative” are much less likely to use a student-centered pedagogy compared to their colleagues who are more junior with respect to age and career status and to those who self-identify as more politically “liberal.” Moreover, faculty who engage in interdisciplinary teaching and whose academic work spans a variety of disciplines are much more likely to use a student-centered pedagogy. Also, not surprisingly, faculty who spend more hours preparing for teaching and who have been recognized with an award for outstanding teaching are much more likely to employ a student-centered pedagogy than their less teaching-oriented colleagues. In addition, faculty who indicate a strong research orientation—if they are employed at a university—are also less likely to use a student-centered pedagogy. Also noteworthy is that faculty who are employed at an institution they describe as valuing good citizenship (i.e., as reflected by indicators such as the institutional priority placed on developing a community among faculty and students, teaching students how to change society, and creating and sustaining partnerships with their local communities) are much more likely to use teaching and learning strategies that are student-centered. Experiencing a positive collegial environment, which has a positive simple correlation with student-centered pedagogy, changed signs when citizenship climate entered the equation, suggesting a suppressor effect based on the high correlation between these two variables.

After we controlled for Spirituality, we entered 12 additional variables that represent faculty’s values and personal goals, as well as their affective states. Table 7 shows those variables and their final betas in the equation. These findings were not surprising. One definitely gets a clear impression that faculty who employ a student-centered approach in their teaching are civic minded

both in the values they hold and in their actual practice. They want to be good teachers and serve as role models to their students. They also place great value on students' personal development. While they feel satisfied overall with their jobs, they are also more likely to indicate that they experience stress resulting both from their jobs and from aspects of their personal lives. Finally, those who are oriented toward using student-centered pedagogy also tend to consider it to be very important that they achieve congruence between their personal values and those of their employing institution.

[Insert Table 7 about here]

Discussion and Conclusion

Findings from the present study reinforce the notion that the teaching methods faculty primarily elect to use reflect who they are and what they believe. In particular, those who are more highly spiritual—based on their own self-identification, the personal priority they place on seeking opportunities to grow spiritually, and the personal value they attribute to integrating spirituality in their lives—are much more likely to use “student-centered” pedagogical methods when teaching undergraduate students. Most importantly, this spirituality effect is largely independent of the faculty's personal characteristics, field of study, or institutional affiliation. That said, the findings also suggest a number of potentially subtle, but important, interrelationships between faculty members' personal and professional characteristics, their spirituality, and their approaches to undergraduate teaching and learning that warrant future study. Here, we focus on the overarching importance of understanding how faculty members' spiritual inclinations may impact their teaching methods and offer recommendations for additional work aimed at advancing empirically-based knowledge within this area.

Why should we be concerned with the spiritual dimension of college and university faculty members' lives and its implications for professional practice? One reason is that faculty attitudes and behaviors are known to have important implications for student development. The actions of faculty both within and outside the classroom impact the learning and development of future teachers, lawyers, physicians and policymakers, not to mention their very own academic successors and the thousands of others whose work affects our daily lives. Interpersonal interaction with faculty enhances a wide variety of student outcomes and, as Terenzini, Pascarella, and Blimling (1996) have shown, is one of the most influential sources of undergraduate student learning.

As the primary adult agents of socialization within the college environment, faculty have the ability to impact student experiences and outcomes both positively and negatively (see e.g. Chickering, 1969; Terenzini, Theophildes, & Lorang, 1984). Beyond influencing students' intellectual and career development, interacting with faculty has been shown to enhance students' personal identity awareness and moral development (see e.g., Bowen, 1977). In addition, student outcomes research shows that informal (i.e., out-of-class) interaction between students and faculty increases faculty influence on undergraduate students' values, beliefs, and behaviors (see e.g., Pascarella & Terenzini, 1991) and positively affects students' intellectual curiosity, interpersonal skills, and maturational development (see e.g., Astin, 1993; Terenzini & Pascarella, 1994). Faculty mentoring has also been positively associated with student inclinations toward humanitarian behavior (Kuh, 1995).

The second reason that faculty members' spirituality and is of salient consideration within the academy is that the values and beliefs of college and university faculty represent the fundamental standards by which institutional decisions are made and priorities are set. Consequently, faculty play a central role in shaping both the culture and the climate of their institutions. By extension, they lie at the heart of higher education's capacity to change.

As suggested by the results of this study, faculty who work in environments where they perceive there to be an interest in developing community among faculty and students and where they feel there is a positive institutional citizenship climate are more likely to embrace a student-centered pedagogy. Equally noteworthy is the fact that those within the professoriate who are most inclined to use a student-centered approach to teaching are also likely to place high value on achieving congruence between their own values and those of their employing institution. On the one hand, this finding can be interpreted as a penchant for activism; these faculty may feel passionate about their preferred approach to teaching and expect that others within their institutional work environments come to share their views. On the other hand, the assertion from those who employ a heavily student-centered approach to their undergraduate teaching that it is important for them to achieve congruence between their own and institutional values may simply reflect their desire to be able to express themselves authentically and, in doing so, to be accepted and embraced by those with whom they work. Most likely, these are not diametrically opposed points of views. Both of these perspectives, however, represent potentially powerful forces for change within the academy. The fact that younger faculty are more likely than their older colleagues to employ student-centered approaches to undergraduate teaching foreshadows a potentially substantial change in the coming years with respect to the normative perspectives and practices that characterize undergraduate teaching and learning.

In light of current accountability demands for learning outcomes, what significance can we attribute to faculty's adoption of student-centered pedagogical practices? Certainly, the positive student development outcomes that are typically associated with exposure to student-centered pedagogical practice are meaningful in and of themselves (see e.g., Henson, 2003; Pederson & Williams, 2004). However, especially in light of the myriad and complex challenges facing higher education and society at large today, it is also important to reflect on how the apparent connections

between faculty members' spiritual self-conceptions and their professional practice may impact undergraduate education both directly and indirectly.

While many of the core literary and philosophical traditions that comprise the liberal education curriculum are grounded in the maxim, "know thyself," there is generally little attention paid in today's secular colleges and universities to facilitating student development in the inner realm of self-understanding (Astin, 2004). Spiritual aspects of student development were cornerstones of early American college curricula. However, the Enlightenment ideals, positivistic modes of thinking, and scientific worldviews that began to exert a powerful influence on American thought in the late nineteenth century continue today to dominate societal values and individual goal orientations (see e.g., Marsden, 1994; Cohen, 1998). Rather than providing a developmental context characterized by self-reflection, open dialogue, and thoughtful analysis of alternative perspectives, many of today's college and university environments mirror instead the strong societal emphasis on individual achievement, competitiveness, materialism, and objective knowing. The ways in which our society and our higher education institutions are evolving necessitates that we reconsider long-standing expectations and deeply held assumptions about many aspects of our work as academics and their associated effects both within and beyond the academy.

Certainly, given the broad formative roles that colleges and universities play in our society, higher education represents a critical focal point for responding to the question of how we can balance the "exterior" and "interior" aspects of our lives more effectively. And, given the fundamental tenets of student- or learner-centered pedagogy, it intuitively makes sense that spiritually-inclined faculty would be more likely to engage in teaching practices that invite students to engage actively within an academic community and to help students develop their capacity for connectedness, responsiveness, and accountability. Bennett (2003), for example, writes about those within the academy who he characterizes as having "relational spiritualities," defining these

individuals as being “no less committed to the enlargement and extension of learning, but [emphasizing] openness and community rather than exclusion and separatism” (p. 11). Unafraid of change and transformation, these faculty—whom Bennett defines as “educators” as opposed to “instructors”—view students as “potential colleagues in the quest for learning” and “value the invitation to grow that attending to and caring for others involves” (p.12)⁴. In light of the current challenges we face both within the academy and beyond, such an orientation on the part of faculty may be especially instrumental in terms of reaffirming a commitment to contribute more fully to the wellbeing of their institutions, their students, and the larger community. Also important to consider, of course, is how the academic reward structure, various institutional dynamics, and general characteristics of the academic profession as a whole may, for many faculty, mediate against their embracing “non-traditional” approaches to their academic work.

From a research standpoint, with few exceptions (see e.g., Astin & Astin, 1999; Braskamp, 2003; Lindholm, Astin, & Astin, 2006), the empirical research on spirituality that has been conducted within higher education institutions has focused primarily on students, ignoring completely the experiences, attitudes, expectations, and behaviors of faculty. The result is a critical gap in our understanding of how we can create educational environments that maximize the personal and professional potential of students and faculty and that best prepare students to respond effectively to the demands of an increasingly complex and global society. The present study helps close this gap by examining one small aspect of this as yet largely untapped area of inquiry. Yet, while it is informative to know that spiritually-oriented faculty are generally more inclined than their less spiritual colleagues to employ a student-centered pedagogy when working with undergraduate students, there remains much to learn about the intersections between faculty members’ spirituality

⁴ Bennett distinguishes educators from instructors based on the roots of each word—educator from the root “educare,” to draw out and instructor from the root “instruere,” to build in (p. 2).

and their pedagogical choices. For example, findings from the present study reveal that there are many salient correlates of student-centered pedagogy and that much of the variance in faculty's use of student-centered pedagogy remains unaccounted for within the model tested here. Nonetheless, the findings presented here provide a nationally normative starting point from which to examine in greater depth a wide range of potentially relevant associations and effects.

Qualitative follow-up research that is aimed at understanding how faculty view the role that their spirituality plays in their interactions with students and colleagues would be especially useful. Building on findings from our earlier research which shows that students who enter college today are actively engaged in a spiritual quest and that they have high expectations for the role their colleges and universities will play in their spiritual and emotional development (see Astin, Astin, Lindholm, & Bryant, 2005), it is also important to examine how the curricular content of faculty members' courses—in conjunction with their pedagogical style—support students' developmental interests and needs within this realm. Future research that employs qualitative and quantitative methodologies to explore the current state of faculty beliefs and behaviors related to undergraduate students' spiritual development can contribute substantially to our understanding of how—within different types of campus contexts—to most appropriately and most effectively create and implement curricular programming that incorporates spiritual issues and perspectives.

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Table 1: Student-Centered Pedagogy: Faculty Use of Various Methods in “Most” or “All” Courses

Student-Centered Indicator	Percent
Class discussions	81.7
Cooperative learning (small groups)	47.8
Student presentations	44.7
Group projects	33.3
Student evaluations of their own work	19.4
Reflective writing/journaling	18.0
Student evaluations of each other’s work	16.0
Student-selected course topics	15.0

Table 2. Use of Various Teaching Methods Among “High” and “Low” Scorers on Student-Centered Pedagogy (in percentages)¹

Student-Centered Indicator	Student-Centered Pedagogy		Difference
	High Scorers	Low Scorers	
Class discussions	99.0	31.2	+67.8
Cooperative learning	91.3	4.2	+87.1
Student presentations	90.1	8.3	+81.8
Group projects	74.3	2.0	+72.3
Student self evaluation	62.4	0.7	+61.7
Student evaluation of each other’s work	55.0	0.2	+54.8
Reflective writing/journaling	53.6	1.1	+52.5
Student-selected course topics	44.6	0.8	+43.8

¹Percent who use selected method in “all” or “most” of their courses.

Table 3. Use of Various Student-Centered Teaching Methods Among “High” and “Low” Scorers on Spirituality (in percentages)¹

Student-Centered Indicator	Spirituality		Difference
	High Scorers	Low Scorers	
Class discussions	84.5	76.3	+8.2
Cooperative learning	53.6	35.4	+18.2
Student presentations	48.6	36.5	+12.2
Group projects	37.0	24.3	+12.7
Student evaluation of each other’s work	24.8	10.8	+14.8
Student self evaluation	24.8	10.8	+14.0
Reflective writing/journaling	23.9	10.0	+13.9
Student-selected course topics	17.8	10.2	+7.6

¹Percent who use selected method in “all” or “most” of their courses.

Table 4. Percentages of “High” and “Low” Scorers on Spirituality Who Score “High” on Student-Centered Pedagogy, by Discipline (in percentages)

Discipline	Spirituality		Difference
	High Scorers	Low Scorers	
English	46.1	27.3	+18.8
Education	42.9	34.5	+8.4
Fine Arts	36.7	26.7	+10.0
Other (Unspecified) Major	33.2	15.6	+17.6
Health Science	29.1	8.7	+20.4
Business	23.9	20.1	+3.8
Humanities	21.8	11.7	+10.1
Social Science	19.3	6.0	+13.3
Agriculture/Forestry	18.4	5.3	+13.1
Biological Science	12.9	7.6	+5.3
Other (Unspecified) Technical Field	12.4	4.2	+8.2
Engineering	10.8	12.3	-1.5
Physical Science	8.1	3.5	+4.6
Math/Statistics	5.1	2.0	+3.1

Table 5. Percentages of “High” and “Low” Scorers on Spirituality Who Score “High” on Student-Centered Pedagogy, by Type of Employing Institution (in percentages)

Institutional Type	Spirituality		Difference
	High Scorers	Low Scorers	
Catholic 4-year College	32.3	14.6	+17.7
Nonsectarian 4-year College	29.7	15.4	+14.3
Public 4-year College	29.2	12.1	+17.1
Other Religious 4-year College	28.0	14.0	+14.0
Private 2-year College	27.2	8.2	+19.0
Private University	26.8	8.9	+17.9
Public University	25.0	9.4	+5.6
Public 2-year College	22.4	17.4	+5.0

Table 6. Correlates of Student-Centered Pedagogy

	<u>r</u>	<u>Beta in</u>	<u>Final Beta</u> ^{1,2}
Sex: Female	.24	.24	.13
Political Orientation	.06	.04	.10
Race: Asian American	-.04	-.03	-.04
Race: White	-.01	-.05	-.03
Age	-.07	-.04	-.06
Race: Latino	.01	-.03	-.02
Single	.03	-.02	-.03
Field: Education	.22	.20	.12
Multi-disciplinary work	.16	.17	.12
Field: Fine Arts	.11	.14	.05
Field: English	.13	.14	.06
Field: Math/Statistics	-.18	-.11	-.16
Field: Physical Science	-.16	-.10	-.14
Field: Social Science	-.12	-.11	-.16
Field: Biological Science	-.10	-.10	-.10
Taught interdisciplinary course	.12	.08	.07
Research Orientation	-.11	-.08	.00
Received award for outstanding teaching	.06	.06	.05
Field: Business	.03	.05	.02
Academic Rank	-.14	-.06	-.05
Held academic administrative post	.04	.05	.05
Hours per week spent preparing for teaching	.06	.04	.04
Field: Humanities	.00	-.05	-.07
Taught ethnic studies course	.10	.04	.03
Highest degree held	-.12	-.04	-.03
Field: Other Technical	-.04	-.03	-.04
Field: Engineering	-.04	-.04	-.03
Field: Health Science	.02	-.02	-.03
Field: Forestry/Agriculture	-.02	-.03	-.02
Institutional citizenship climate	.20	.13	.12
Institutional type: University	-.11	-.06	-.06
Positive collegial environment	.02	-.03	-.03
Spirituality	.21	.12	.12

¹Bolded coefficients are significant (p<.01)

²“Final” step reflects beta at step when Spirituality entered the regression equation

Note: R²=.27

Table 7: Faculty Values and Goals As They Relate to Student-Centered Pedagogy

	<u>r</u>	<u>Beta in</u>	<u>Final Beta</u> ^{1,2}
Civic-minded practice	.36	.26	.21
Diversity advocate	.34	.16	.11
Experiencing work stress	.18	.07	.06
Goal: Serve as a role model for students	.23	.06	.03
Holding civic-minded values	.36	.07	.04
Goal: Be a good teacher	.18	.05	.04
Focus on students' personal development	.30	.05	.05
Opinion: Individual can do little to change society	-.19	-.03	-.03
Experiencing personal stress	.16	.03	.03
Overall job satisfaction	.02	.03	.03
Goal: Have congruence between personal and institutional values	.21	.02	.02
Opinion: College increases earning power	-.05	-.02	-.02

¹Bolded coefficients are significant (p<.01)

² "Final" step reflects beta at last step of the regression equation

Note: R²=.3

Appendix A: Variable Definitions and Coding Schemes

Dependent Variable

‘Use of Student-Centered Pedagogy’

Eight-item⁵ factor scale ($\alpha=.81$)

Independent Variables

Background Characteristics

Sex: Female

Dichotomous variable: 1=*no*, 2=*yes*

Age

10-point scale: 1<30 to 10=70+

Race: White/Caucasian

Dichotomous variable: 1=*no*, 2=*yes*

Race: African American/Black

Dichotomous variable: 1=*no*, 2=*yes*

Race: Latino/a⁶

Dichotomous variable: 1=*no*, 2=*yes*

Race: Asian American/Asian

Dichotomous variable: 1=*no*, 2=*yes*

Race: American Indian/Alaska Native

Dichotomous variable: 1=*no*, 2=*yes*

Race: Native Hawaiian/Pacific Islander

Dichotomous variable: 1=*no*, 2=*yes*

Race: Other

Dichotomous variable: 1=*no*, 2=*yes*

Marital Status: Single

Dichotomous variable: 1=*no*, 2=*yes*

Marital Status: Married

Dichotomous variable: 1=*no*, 2=*yes*

Marital Status: Living with Partner

Dichotomous variable: 1=*no*, 2=*yes*

Political Orientation

5-point scale: 1=*Far Right*,
5=*Far Left*

Work-Related Variables

‘Research Orientation’

Three-item⁷ factor scale ($\alpha=.76$)

Engage in work spanning multiple disciplines

Dichotomous variable: 1=*no*, 2=*yes*

Degree earned

4-point scale: 1=*none* to 4=*doctorate or professional*

Major: Agriculture/Forestry

Dichotomous variable: 1=*no*, 2=*yes*

Major: Biological Sciences

Dichotomous variable: 1=*no*, 2=*yes*

Major: Business

Dichotomous variable: 1=*no*, 2=*yes*

Major: Education

Dichotomous variable: 1=*no*, 2=*yes*

Major: Engineering

Dichotomous variable: 1=*no*, 2=*yes*

Major: English

Dichotomous variable: 1=*no*, 2=*yes*

Major: Fine Arts

Dichotomous variable: 1=*no*, 2=*yes*

Major: Health Sciences

Dichotomous variable: 1=*no*, 2=*yes*

Major: Humanities

Dichotomous variable: 1=*no*, 2=*yes*

Major: Math/Statistics

Dichotomous variable: 1=*no*, 2=*yes*

Major: Physical Sciences

Dichotomous variable: 1=*no*, 2=*yes*

⁵ Factor includes: Teaching Practice: ‘Cooperative learning,’ ‘Group projects,’ ‘Student presentations,’ ‘Student evaluations of each other’s work,’ ‘Class discussions,’ ‘Reflective writing/journaling,’ ‘Student evaluations of their own work,’ ‘Student-selected course topics.’

⁶ Latino/a includes: Mexican/Chicano, Puerto Rican, and Other Latino.

⁷ Factor includes: Hours per Week: ‘Research and scholarly writing’; Primary Interest: ‘Research’; and Work Activity: ‘Number of professional writings published/accepted for publication in past two years.’

Major: Social Sciences	Dichotomous variable: 1= <i>no</i> , 2= <i>yes</i>
Major: Other Technical Field	Dichotomous variable: 1= <i>no</i> , 2= <i>yes</i>
Major: Other Major	Dichotomous variable: 1= <i>no</i> , 2= <i>yes</i>
Taught an interdisciplinary course	Dichotomous variable: 1= <i>no</i> , 2= <i>yes</i>
Taught a women's studies course	Dichotomous variable: 1= <i>no</i> , 2= <i>yes</i>
Academic Rank	4-point scale: 1= <i>lecturer/instructor/other</i> to 4= <i>full professor</i>
Held academic administrative position	Dichotomous variable: 1= <i>no</i> , 2= <i>yes</i>
Hours per week spent preparing for teaching	9-point scale: 1= <i>none</i> , 9= <i>45+</i>
Received award for outstanding teaching	Dichotomous variable: 1= <i>no</i> , 2= <i>yes</i>

Institutional Characteristics

Institutional control: Private	Dichotomous variable: 1= <i>no</i> , 2= <i>yes</i>
Institutional selectivity	Average SATM + SATV
Number of undergraduate students	Continuous variable: 72 to 37,605
Institutional type: University	Dichotomous variable: 1= <i>no</i> , 2= <i>yes</i>
'Institutional citizenship climate'	Five-item ⁸ factor scale ($\alpha=.79$)
'Positive collegial environment'	Fifteen-item ⁹ factor scale ($\alpha=.87$)

Spirituality

'Spirituality'	Three-item ¹⁰ factor scale ($\alpha=.88$)
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Faculty Values, Perceptions, and Goals

Personal Goal: Become an authority in my field	4-point scale: 1= <i>not important</i> , 4= <i>essential</i>
Personal Goal: Help others in difficulty	4-point scale: 1= <i>not important</i> , 4= <i>essential</i>
Personal Goal: Have congruence between personal values and institutional values	4-point scale: 1= <i>not important</i> , 4= <i>essential</i>
Personal Goal: Be very well-off financially	4-point scale: 1= <i>not important</i> , 4= <i>essential</i>
Personal Goal: Obtain recognition from colleagues	4-point scale: 1= <i>not important</i> , 4= <i>essential</i>
Personal Goal: Be a good teacher	4-point scale: 1= <i>not important</i> , 4= <i>essential</i>
Personal Goal: Serve as a role model to students	4-point scale: 1= <i>not important</i> , 4= <i>essential</i>

⁸ Factor Includes: Institutional Priority: 'Develop a sense of community among students and faculty,' 'Develop leadership ability in students,' 'Teach students how to change society,' 'Provide resources for faculty to engage in community-based teaching/research,' 'Create/sustain partnerships with surrounding communities.'

⁹ Factor Includes: Institutional Opinion: 'My research is valued by faculty in my department,' 'My teaching is valued by faculty in my department,' 'There is adequate support for faculty development,' 'My department mentors new faculty well,' 'Faculty are involved in campus decision-making,' 'The criteria for advancement and promotion are clear,' 'My values are congruent with institutional values,'; Institutional Description: 'Faculty here respect each other,' 'There is respect for diverse values and beliefs,' 'Faculty are typically at odds with administrators' (recoded); Institutional Priority: 'Mentor new faculty'; and Satisfaction: 'Professional relations with faculty,' 'Social relations with faculty,' 'Competency of colleagues,' 'Relationships with administrators.'

¹⁰ Factor includes: Personal Characteristics: 'Consider yourself a spiritual person' and 'Seek opportunities to grow spiritually'; and Personal Objective: 'Integrate spirituality into my life.'

Personal Goal: Be involved in programs to clean up the environment	4-point scale: 1= <i>not important</i> , 4= <i>essential</i>
'Focus on Personal/Spiritual Development'	Six-item ¹¹ factor scale ($\alpha=.88$)
'Civic Minded Values'	Eight-item ¹² factor scale ($\alpha=.80$)
'Civic Minded Practice'	Seven-item ¹³ factor scale ($\alpha=.71$)
'Positive Outlook'	Five-item ¹⁴ factor scale ($\alpha=.78$)
'Diversity Advocate'	Five-item ¹⁵ factor scale ($\alpha=.78$)
'Personal Stress'	Twelve-item ¹⁶ factor scale ($\alpha=.71$)
'Work Stress'	Ten-item ¹⁷ factor scale ($\alpha=.72$)
Belief: Individuals can do little to change society	4-point scale: 1= <i>disagree strongly</i> . 4= <i>agree strongly</i>
Belief: I have to work harder than my colleagues to be perceived as a legitimate scholar	3-point scale: 1= <i>not at all</i> , 3= <i>to a great extent</i>
Belief: The chief benefit of college is that it increases earning power	4-point scale: 1= <i>disagree strongly</i> to 4= <i>agree strongly</i>
Overall job satisfaction	4-point scale: 1= <i>not satisfied</i> to 4= <i>very satisfied</i>

¹¹ Factor includes: Goals for Undergraduates: 'Develop moral character,' 'Provide for emotional development,' 'Help develop personal values,' 'Enhance self-understanding,' 'Enhance spiritual development,' and 'Facilitate search for meaning/purpose in life.'

¹² Factor includes: Personal Objectives: 'Influence social values,' 'Influence political values'; Goals for Undergraduates: 'Instill a commitment to community service,' 'Prepare for responsible citizenship'; General Opinions: 'Colleges should be actively involved in solving social problems,' 'Colleges are responsible for working with surrounding communities,' 'Colleges should encourage students to be involved in community service,' 'Community service as part of a course is a poor use of resources' (recoded).

¹³ Factor includes: General Activities: 'Collaborated with the local community in research/teaching,' 'Used your scholarship to address local community needs,' 'Engaged in public service/professional consulting without pay'; Hours per Week: 'Community/public service'; Teaching Practice: 'Community service as a part of coursework,' 'Taught a service learning course,' 'Advised student groups in community service.'

¹⁴ Factor includes: Personal Characteristics: 'Experience joy in your work,' 'Feel good about the direction in which your life is headed,' 'Achieve a healthy balance between your personal and professional life,' 'Feel that your work adds meaning to your life,' 'Experience close alignment between your work and personal values.'

¹⁵ Factor includes: Institutional Opinion: 'This institution should reflect diversity more strongly in the curriculum'; General Opinions: 'A racially/ethnically diverse student body enhances the educational experiences of all students,' 'Promoting diversity leads to the admission of too many underprepared students' (recoded); Personal Objective: 'Promote racial understanding'; Goal for Undergraduates: 'Enhance knowledge of/appreciation for other racial/ethnic groups.'

¹⁶ Factor includes: Source of Stress: 'Household responsibilities,' 'Child care,' 'Care of elderly parent,' 'My physical health,' 'Health of spouse/partner,' 'Personal finances,' 'Children's problems,' 'Marital friction,' 'Being part of a dual-career couple,' 'Self-imposed high expectations,' 'Lack of personal time,' 'Subtle discrimination.'

¹⁷ Factor includes: Source of Stress: 'Committee work,' 'Faculty meetings,' 'Job security,' 'Change in work responsibilities,' 'Working with underprepared students,' 'Research/publishing demands,' 'Institutional procedures and 'red tape',' 'teaching load,' 'keeping up with information technology,' 'review/promotion process.'