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Measuring Spiritual Transformation for the Purpose of Continuous Quality Improvement

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MEASURING SPIRITUAL TRANSFORMATION FOR THE PURPOSE
OF CONTINUOUS QUALITY IMPROVEMENT

A thesis

Presented to

The School of Graduate Studies

Department of Higher Education and Student Development

Taylor University

Upland, Indiana

In Partial Fulfillment

of the Requirements for the Degree

Master of Arts in Higher Education and Student Development

by

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Abstract

Christian colleges seek to form the spiritual lives of students through academic and co-curricular programming. These institutions need assessment measures that will assess student achievement of their spiritual outcomes and help improve their spiritual environment and programs. This study investigated the viability of the Furnishing the Soul Inventory (FSI) as an instrument for spiritual outcomes assessment by researching the FSI's ability to detect differences in students' spiritual maturity based upon mentoring, crisis, and cross-cultural mission trip experiences. The FSI was administered to 156 students at Taylor University, a small liberal arts college in the Midwest. The results of this study confirmed that mentoring and cross-cultural mission trip experiences positively impacted FSI results. Crisis did not significantly impact student scores. This study concluded that the FSI is a valid instrument for assessment and program improvement.

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CHAPTER 1

INTRODUCTION AND RESEARCH QUESTIONS

The spiritual formation of college students has become an increasingly important research area within the past several decades. Institutions that previously limited themselves to focusing on students' cognitive development have now begun to take seriously their responsibility to appropriately form students' values and sense of purpose (Astin, 2004; Fowler, 1981; Love, 2001; Parks, 2000). While this research has informed programs and practices within all realms of higher education, it is of special significance to evangelical institutions that consider spiritual formation to be a primary task. Though much of the existing literature is not explicitly focused on Christian higher education institutions, it does describe more subjective and universal spiritual experiences that have strong applications to the Christian faith journey.

Though student spirituality has become a popular research area in higher education, the constructs and definitions used are varied. Though there are subtle differences in definitions within prior research and theoretical models, this study will utilize Hall's (2006) definition for spiritual transformation: "the Holy-Spirit enabled process of transforming the heart to the likeness of Christ" (p. 4). For the purposes of this study, Hall's construct will serve as the broad definition that encompasses the variance in other prevalent research and models.

Background

Christian colleges seek to integrate faith and learning while developing students that are dedicated to the Lordship of Jesus Christ (Beers, 2003; Budde, 2004; Hauerwas, 2007; Holmes, 1987; Palmer, 1993; Ringenberg, 2006; Smith, 2009). Both academic and student development programs seek to “partner with God to transform students into the image of Christ” (Beers, 2003, p. 30). Ma (1999) elaborates that Christian colleges devote themselves to this work so that students might experience greater connection to a community of Christian faith.

Because students’ spiritual development is central to the mission of Christian institutions, they must demonstrate their ability to produce students that are maturing spiritually. This is especially important for private colleges that previously relied upon good reputations, but are now facing more pressure for transparency and accountability from regional accreditation agencies and the federal government (Cheng, 2001; Schuh, 2009). Additionally, data that provides insight into the health of a spiritual environment and student outcomes related to spirituality are a valuable resource to improve curricula and programs (Astin, 2002; Morris, Beck, & Smith 2004; Schuh, 2009).

Hall (2008b) developed the Furnishing the Soul Inventory (FSI), formerly known as the Spiritual Transformation Inventory, in an effort to provide Christian colleges with an assessment instrument that offers quantitative measures of students’ spiritual transformation as well as comparative data for benchmarking purposes. Because the instrument is founded upon psychological models of spirituality (Hall, 2006), the instrument must be evaluated to determine if it aligns with the prevailing theoretical models

of spiritual formation in Christian higher education, as well as the intended outcomes specific to individual institutions and programs.

Christian student development professionals have relied upon several theories of spiritual transformation, especially Fowler (1981) and Parks (2000), as frameworks for helping students develop spiritually. Because these constructs have informed the goals and programs of many student development programs at Christian colleges, any assessment device intended to measure spiritual formation for the purpose of program improvement must align closely with these constructs (Rogers, 2003; Schuh, 2009).

Problem Statement

While researchers have made progress in understanding the process and predictors of spiritual formation, little has been done to establish appropriate assessment processes for institutions that seek to measure spiritual growth outcomes and the health of their spiritual environments (Holcomb & Nonneman, 2004). This study will seek to determine the value of the FSI as a valid assessment instrument to measure spiritual transformation as it relates to the theoretical models of spiritual development. Will the FSI confirm the trends found in prior research regarding the spiritual transformation of college students? Specifically, the following research questions will guide this study:

1. Will students that have had mentoring experiences during college score higher on the FSI than students that have not had mentoring experiences?
2. Will students that have had a major crisis during their college experience score higher on the FSI than students that have not had a major crisis during their college experience.

3. Will students that have had cross-cultural mission trip experiences during college score higher on the FSI than those that have not had a cross-cultural mission trip experience during college?

CHAPTER 2

LITERATURE REVIEW

The Purpose of Christian Higher Education

Learning always shapes students values and beliefs (Budde, 2004; Hauerwas, 2007; Ringenber, 2006; Smith, 2009). Palmer (1993) writes, “The shape of our knowledge becomes the shape of our living” (p. 21). Accordingly, the curriculum, programs, and community of Christian higher education should “shape people in the love of God” (Hauerwas, 2007, p. 92). The knowledges and experiences gained in the Christian college setting should form students to be disciples of Jesus Christ. Christian institutions believe that the academic process is formative. Though spirituality is often relegated to student affairs, true whole-person education should seek to disciple students through a holistic environment marked by collaboration between academic and student affairs (Smith, 1996). This process occurs when there is loyalty to the Christian worldview, worship and prayer are practiced, and personal vocation—or commitment to serving the world—is explored. Spiritual formation is especially important to a generation of college students impacted by moral therapeutic deism—the belief that God wants people to be happy and is only involved in an individual’s life during traumatic experiences (Smith, 2005). Christian colleges should help students understand and practice orthodox Christian faith.

According to Smith (2009), true Christian formation occurs when Christian education is soundly based in the practices of the church. Therefore, graduates of Christian colleges should be able to articulate their calling as a global member of God's church and should be committed to "serve more fully and faithfully as a foretaste of the promised kingdom of God, on earth as it is in heaven" (Budde, 2004, p. 256). Practically, this task of Christian formation is aided by the integration of faith and learning and an intentional community of discipleship (Holmes, 1987; Ringenberg, 2006). Christian education "retains a unifying Christian worldview and brings it to bear in understanding and participating in the various arts and sciences, as well as in nonacademic aspects of campus life" (Holmes, 1987, p. 9). The community of Christian colleges supports this learning by providing a context for students to be both encouraged and challenged (Palmer, 1993). Willard (2006) calls this discipleship, or the process of becoming like Christ. Similarly, Hall (2006) defines spiritual transformation as "the Holy-Spirit-enabled process of transforming the heart to the likeness of Christ" (p. 4). In order to aid this process, these schools offer a variety of programs such as chapel, Bible studies, mentoring, and student ministries that help students connect to a community that shares their beliefs and values (Bohus, Woods, & Chan, 2005).

Taylor University, the institution represented in this study, has established spiritual activity learning objectives in keeping with its commitment "to advancing lifelong learning and ministering the redemptive love of Jesus Christ to a world in need (Taylor University, 2007, p. 1). The overall objective is to graduate students that possess an "intellectual and experiential understanding of the Christian heritage enacted in a consistent lifestyle of study, worship, service, stewardship and world outreach" (p. 94).

The eight specific general education outcomes are then categorized into knowledge, skills, and values (see Appendix A). Though developing spiritual outcomes is an appropriate first step to assessing whether Christian colleges are accomplishing their missions, techniques for quantitatively measuring progress remain unclear (Holcomb & Nonneman, 2004).

Accountability and Continuous Quality Improvement

In response to pressure from the federal government and regional accreditors, higher education institutions are “increasingly being asked to demonstrate how they make a difference in the lives of students” (Schuh, 2009, p. 2). This pressure to demonstrate student learning is applied both to academic and student development programs.

Assessment is critical for private institutions that have previously relied too heavily on reputational rankings in order to demonstrate the quality of their programs (Cheng, 2001).

Beyond the need to provide assessment data to external stakeholders, assessment is essential for the establishment of continuous quality improvement processes (CQI). Assessment data has the ability to impact retention, budgeting processes, strategic planning, and organizational effectiveness (Schuh, 2009). “The ultimate goal of student assessment...should be to use the results of the assessment to readjust the existing mission and goals, and thus provide a better institutional environment for student learning and growth” (Cheng, 2001, p. 7). These CQI concepts assume that improvement is always possible (Knight, Aitken, & Rogerson, 2000). Additionally, CQI encourages individuals and groups to take risks in order to improve and utilizes data heavily in decision-making. The Academic Quality Improvement Program (AQIP), a CQI initiative

of the Higher Learning Commission of the North Central Association of Colleges and Schools, describes high performing institutions as follows:

The quality-driven institution and its personnel seek and use data and information to assess current capacities and measure performance realistically. Faculty, staff, and administrators track progress concretely and consistently, and use performance results to set ambitious but attainable targets that increase and improve the institution's capability to meet its students' and other stakeholders' needs and expectations. Data-enriched thinking nurtures evaluation and a results-orientation concentrated on increasing the benefits and value produced for students and other stakeholders (Principles of high performance organizations, 2009).

Because the accreditors expect institutions to evaluate stakeholder needs and demonstrate improvement, it is essential that Christian colleges formulate a feasible plan for measuring and improving their spiritual environments and the spiritual development of their students and graduates.

Measuring Spirituality

Because spiritual formation is so closely connected to the missions of Christian colleges, appropriate assessments must be administered in order to comply with accountability standards and improve student performance and programs based upon reliable data. An institution's spiritual climate has also been proven to significantly impact first year to second year retention (Morris, Beck, & Smith, 2004). Though it is extremely important to measure spirituality, it is difficult to quantify such a subjective experience (Holcomb & Nonneman, 2004). Measurement techniques of affective

outcomes are not as well-developed as those that quantify cognitive outcomes (Astin, 2002). Spiritual assessment instruments need to be based upon clearly defined constructs (Stanard, Sanhu, & Painter, 2000). Likewise, institutions must ensure that the constructs of instruments utilized to measure student spirituality align with the institutional mission and goals. Some spiritual assessment also suffers from a ceiling-effect when administered to evangelical populations (Genia, 2001). Properly chosen instruments should demonstrate a reasonably normal distribution of student scores. As a result, instrumentation of affective and spiritual outcomes, such as spirituality, should be chosen carefully.

Rogers (2003) suggests that beneficial assessment measures will directly and precisely measure intended outcomes related to the university's mission and educational goals. An instrument's validity is based upon how accurately it measures conceptual outcomes. For example, high chapel attendance might offer some indication that an institution is achieving its spiritual activity outcomes, but the measure does not align exactly with intended spiritual activity outcomes such as "Students will be able to move from biblical and theological study to the application of the conclusions in their homes, churches, and society, both nationally and internationally" (Taylor University, 2007, p.94).

The face validity of selected instruments should also be examined to determine if the constructs accurately represent the theoretical knowledge of a specific field (Schuh, 2009). Measures should also provide both formative and summative data with clear implications (Rogers, 2003). Ideally, these instruments should be developed locally to maintain the close connection to institutional mission. Because local assessment methods

take a great deal of time and effort to create, administer, and analyze, cooperative instruments administered through external organizations are often used. Though these instruments may not be a perfect institutional fit, they are typically reliable and provide benchmark data from peer institutions. They also allow institutions to compare themselves to both peers and aspirant institutions.

Astin's (2002) Input-Environment-Outcome (I-E-O) assessment model is also useful for institutions exploring methods to measure specific outcomes. The model demonstrates that outcomes must be measured in contrast to inputs. Because a student's change in a specific environment is largely dependent upon the student's characteristics prior to those experiences, "we need to have at least two (and probably more) snapshots of the student taken at different times in order to determine what changes have actually occurred" (p. 21).

The FSI provides formative assessment data accompanied by comparative norms from other participating schools in the Council for Christian Colleges and Universities (CCCU). The administration process does not satisfy Astin's (2002) requirements that assessment instruments measure inputs, environments, and outcomes because it only measures a single sample of students one time. Additionally, the FSI constructs are based in psychological attachment theory (Hall, 2006). Further investigation is required to determine if these constructs sufficiently align with the spiritual development theories commonly utilized by higher education and student development practitioners.

Theoretical Foundations

Fowler's Stages of Faith

Fowler (1981) suggests a 6-stage linear model of faith development. The stages track development from early childhood through the adult years. According to Love (2001) one can only emerge through Fowler's stages through some kind of dissonance or crisis, meaning an experience that causes an individual to explore new ways of seeing the world.

The stages are:

1. Projective Faith. Beliefs are uncritically accepted from parents.
2. Mythic-Literal Faith. The individual can distinguish between things that are real and things that are not. The larger community (church, teachers, etc.) informs beliefs.
3. Synthetic-Conventional Faith. The individual accepts the beliefs of a broader community. Beliefs are important to everyday life. This stage most often begins at young adolescence. Many adults never progress beyond this stage.
4. Individuative-Reflective Faith. Beliefs are no longer inherited from parents or the community but are accepted after processes of critical examination.
5. Paradoxical-Consolidated Faith. The individual accepts others faith expressions while internalizing his or her own beliefs. Few reach this stage, which is characterized by searching for God beyond theological or doctrinal boundaries.
6. Universalizing Faith. Oneness with God marked by incredible sacrificial service to others. Martin Luther King Jr. and Mother Teresa are typical examples (Fowler, 1981).

Mentoring Communities

Parks (2000) built upon Fowler's model by adding a stage between adolescence and adulthood, called "probing commitment" (p. 67), in which the young adult moves beyond moral dualisms, grapples with complexities, and develops nuanced perspectives. This stage fits between Fowler's "Synthetic-Conventional" and "Individuative-Reflective" stages. The young adult slowly moves toward independence. "One can recognize the ability to shape one's future and make decisions, while recognizing, for example, the financial resources received from parents that allow continuation of school" (Love, 2001, p. 12).

The Center for Vocational Reflection at Gustavus Adolphus College conceptualizes their mentoring community as more than the proliferation of individual mentoring relationships between faculty and staff. Instead, they are attempting to cultivate an institutional environment that encourages students to serve the common good (Johnson, 2007). A proper sense of calling includes a realization that the individual is connected to a larger community and focuses on action that benefits the community. "Reflection on the Big Questions within a mentoring community opens up the space to consider more humane and truthful ways of being in the world" (p. 5). This involves focusing on interdependence, purpose, justice, and peace.

Evangelical Models

Beers (2003) proposes an evangelical model of faith development that aligns with Fowler and Parks. His model uses concentric circles and suggests that individuals develop according to the following pattern: (a) self-centered faith, (b) the acknowledgement of the Creator, (c) faith impact personal life and decisions, and (d)

other-centered faith that focuses on joining Christ in the redemption of creation. Beers suggests that Christian spiritual formation is congruent with the construct of meaning-making used by other prominent theorists (Fowler, 1981; Love, 2001; Parks, 2000).

Gibson's (2004) model, though less commonly utilized, offers some helpful insight, as well. The model represents spiritual maturity stages similar to Kohlberg, but modeled after agape love instead of egalitarian justice. The model is integrated with scripture and suitable for evangelical populations. The first level, common in 1-2 year olds, is marked by self-centered actions motivated by corresponding rewards and punishments. Actions in level two are motivated by a reverence for authorities such as parents and the local church. People in level three are committed to the principles of a Christian worldview. In level four, which aligns closely with Fowler's (1981) stages five and six, people are committed to God's kingdom and place the interest of others above their own in order to give glory to God.

Factors of Spiritual Development

Mentoring and Community

Fowler (1981), Parks (2000), Beers (2003), and Gibson (2004) all emphasize the importance of community in an individual's faith development. Community provides models of development and helps students discern "the shape of their callings and challenges, in the community and the wider world, at each stage of their faith growth" (p. 296). Parks (2000) adds that the young adult needs to be immersed in mentoring communities that can provide support during the transitions of young adulthood. Mentors provide personal attention, encouragement, and challenges that help students navigate their spiritual journeys. They recognize that a student's spirituality is intimately

connected to learning and they “are willing to be part of the young adult’s initiation into a practical and worthy adult imagination of self, other, world, and ‘God’” (p. 128).

Lindholm (2006) has found that faculty mentoring has the potential to shape students’ beliefs and values. Additionally (Ellison, 1983) concluded that spiritual maturity is associated with strong relationships and negatively associated with: “individualism, success, and personal freedom” (p. 333). Students also perceive that their connection to a community helps them gain an increased self-understanding, thereby enhancing their own spiritual lives (Lindholm, 2006).

Love (2001) expands upon Park’s idea of mentoring communities to support students in the transitional developmental stages. “The growth that comes with critical self-awareness must be grounded in the experience of a compatible social group” (p. 13). Beers (2003) and Gibson (2004) recognize the need for student development professionals to foster mentoring communities. They cite small groups and Bible studies as common methods to build communities where meaningful conversation regarding faith may occur. Ma (2003) found that Christian college students perceive “relationships with peers” and “being in an accountability/discipleship group” (p. 330) to have a significant influence on their spiritual transformation. Additionally, Bohus, Woods, and Chan (2005) demonstrate that “praying or engaging in spiritual activities with other students” (p. 34) is positively correlated with spiritual transformation. Hall (1998) has determined that the quality of one’s interpersonal interactions is “highly associated with the nature of and quality of one’s relationship with God” (p. 5), suggesting that peer relationships and community have a significant impact on students’ spiritual lives. Student discipline may

also be an opportunity to mentor students through the consequences of poor decisions (Joblonski, 2005).

Crisis

Spiritual transformation literature also recognizes the importance of crises on a student's spiritual development. Crisis does not necessarily denote trauma, but rather the evaluation of conflicting perspectives and ideas. "Crises include anything that challenges people to examine what they believe and why" (Holcomb & Nonneman, 2004, p. 100). Fowler (1981) writes that crisis "bring disequilibrium and requires change in our ways of seeing and being in faith" (p. 101). This was confirmed by the Faithful Change Project, a longitudinal qualitative study of 240 Christian college students using Fowler's interview protocol (Holcomb & Nonneman, 2004).

This concept of crisis is similar to Parks's (2000) "probing commitment" stage in which students explore "many possible forms of truth...and their fittingness to one's own experience of self and world" (p. 67). Parks specifically refers to crises as shipwrecks that lead students to understand themselves, their circumstances, and the world in new ways. Gibson (2004) agrees that "a person does not have beliefs of his or her own until those beliefs undergo challenge" (p. 301). Shipwrecks leads to gladness, a "complex kind of knowing that is experienced as a more trustworthy understanding of reality in both its beauty and terror" (p. 30). This gladness then leads to a sense of amazement that such difficult questions and circumstances have the ability to bring about a new way of understanding the world.

Because the shipwreck process can be difficult and painful, Parks recommends that students find support during these periods. Results of the 2003 College Beliefs and Values Survey, conducted by the Higher Education Research Institute, show that 68% of

college students felt “unsettled about spiritual and religious matters” (Lindholm, 2006, p. 87). Johnson and Hayes (2003) found that 26% of college students experience emotional stress of a spiritual nature. Predictors of spiritual struggle included “confusion about beliefs and values; sexual concerns; relationships with friends, roommates, and peers; and thoughts about being punished for one’s sins” (p. 415). Bryant and Astin (2008) discovered that spiritual struggle was negatively correlated with spiritual growth in a sample of college students. These results were most likely due to the lack of support and mentoring resources for students experiencing crises. Additionally, the study only measured the relationship between spiritual growth and crisis during a three-year period. Perhaps students need more time to channel a shipwreck experience into gladness and amazement. Another explanation might be that students are not aware of the ways crisis experiences have helped them develop. Effective mentoring, accompanied by structured reflection, guides students in the midst of crisis by helping them realize their experiences are a normal part of the developmental process.

Holcomb and Nonneman (2004) discovered that students that had experienced these crises were at more advanced stages of Fowler’s model while using Fowler’s interview protocol to investigate the faith maturity of students at Christian liberal arts colleges. Ma (2003) found that students perceived personal crises or traumatic events to have a significant impact on their spiritual development. Holcomb and Nonneman found three types of crises that positively influence students’ spiritual development: “exposure to diverse ways of thinking, extensive multicultural exposure, and general emotional crisis” (p. 100).

Cross-Cultural Experiences

Cross-cultural experiences tend to produce crises and push students toward spiritual growth. Parks (2000) adds that “it is difficult to underestimate the potential significance of travel in the formation of faith during the young adult years” (p. 184), noting that travel encourages critical thinking and the exploration of new ideas. Beers (2003) also recognizes the importance of cross-cultural experiences in helping students develop a faith that is focused on serving others and redeeming the world around them. Gibson (2004) writes that cross-cultural experiences, especially those that create an awareness of social injustices, are excellent opportunities for people to move to levels three and four of his model.

Students that participated in these trips or spent a significant amount of time in foreign cultures were more spiritually developed than their peers that lacked cross-cultural experience (Holcomb & Nonneman, 2004). Ma (2003) also found that students perceived short-term missions trips to impact their spiritual development. A study by Snyder, Bartlett, and Richards (2008) demonstrated that students participating in a one-month mission trip scored significantly higher on their spiritual activity scale than students that did not travel. The study also indicated “growth found in students who had a study abroad experience was not due to their general cognitive and emotional maturity but the intercultural experience itself” (p. 5). Cross-cultural experiences that include service-learning components have also been shown to impact students beliefs and values (Astin, 2000). Encountering people of different cultures prompts students to question previously established belief systems and to commit to new ways of thinking (Lindholm, 2006).

Summary

Christian colleges are dedicated to the spiritual formation of their students through the integration of faith and learning and a variety of student programs. Spiritual outcomes must be measured appropriately in order to improve curricula and programming, as well to maintain credibility with external stakeholders. The constructs of instruments designed to assess students' spiritual maturity should align with practitioners' understanding of spiritual development. Specifically, selected instruments should demonstrate the ability to detect the impact of key variables, such as mentoring, crisis experiences, and cross-cultural mission trip experiences, on spiritual maturity. The questions guiding this study will seek to determine if the FSI can discern the impact of mentoring, crisis experiences, and cross-cultural missions experiences on spiritual maturity.

CHAPTER 3

METHODS

Participants

Participants in this study were students from Taylor University, a small Midwestern Christian college located in a rural setting. 425 full-time undergraduate students were randomly selected and invited to participate in the survey administration.

Instrument

The FSI (formerly known as the Spiritual Transformation Inventory) contains two domains: Spiritual Meaning and Vitality (SMV) and Spiritual Commitment and Community (SCC). SMV generally measures students' relationship with God. SCC measures students' level of connectedness with a spiritual community. Each domain contains several subscales. See Appendix B for a complete list and description of the subscales used in this study.

Most questions use a six-point Likert scale that ranges from "very false of me" to very true of me" (Hall, 2008a, p. 5). The instrument also asks participants to identify programs that they have been involved in and the degree to which they have impacted their spiritual transformation. Additionally, the instrument collects a wide variety of demographic information. The mean alpha score for these domains is 0.85 (Hall, 2008b). The scales within the SMV domain averaged a 0.55 correlation with the Religious

Centrality Scale and a 0.63 correlation with the Reflection Scale. The scales within the SCC domain averaged a 0.47 correlation with the Religious Centrality Scale and a 0.6 correlation with the Reflection Scale (Hall, 2008b).

Procedures

Participants were randomly selected using a web-based randomized selection tool. Each participant was emailed four invitations to complete the FSI online. An iPod Touch, two iPod shuffles, two \$25 campus book store gift certificates, ten \$15 movie theater gift certificates, ten \$5 campus coffee shop gift certificates, and ten 2-liters of cola were offered as incentives. Each participant was informed that they would be eligible to win one of these incentives if they completed the survey.

Respondent's mentoring experiences were determined based upon respondent's indications of how many mentors impacted their lives. Respondent's crisis experiences were determined based upon the FSI item that asked, "Have any stressful events or crises occurred in your life in the past year? (For example: loss of a loved one, parents divorcing, severe illness, major conflict with others, depression, major move, starting or ending a relationship, etc.)" (Hall, 2007). Respondent's cross-cultural experiences were determined based upon the FSI item that asked if students had participated in a cross-cultural mission trip, and, if so, for how many days (Hall, 2007).

The mentoring variable was recoded so that respondents with zero mentors and respondents with one or more mentors could be easily compared. The cross-cultural experience variable was similarly recoded into one group that indicated zero days of experience on a cross-cultural mission trip and another group that had one or more days experience on a cross-cultural mission trip. Some FSI subscale items contained missing

data which were replaced with the mean of the corresponding item. Subscales and domains were then calculated.

Analysis

Independent samples t-tests were conducted in order to determine if mentoring, crisis, and cross-cultural experience impact respondents' scores on the SMV and SCC domains at the .05 significance level. The mentoring variable had two levels (mentored and un-mentored). The crisis variable had two levels (has experienced a crisis during college or has not experienced a crisis during college). The cross-cultural mission trip experience variable had two levels (cross-cultural experience and no cross-cultural experience).

CHAPTER 4

RESULTS

Demographics

The response rate for the survey was 36%. The ages of the 156 respondents ranged from 18 to 24 years with the mean age at 20.1 and a mode age of 20. The gender of the respondents was 40.4% male and 54.5% female. 20.5% of respondents were freshmen, 23.1% sophomores, 27.6% juniors, and 28.8% seniors. Respondents identified themselves, largely, as evangelicals (83.9%), though a few indicated that they were fundamentalist (3.8%), charismatic (4.5%), mainline (5.8%), or not Christian (1.9%). The number of years respondents identified themselves as Christians ranged from 2 to 12 years with 6.1 as the mean number of years and 7 as the mode.

Mentoring

The first research question was, “Will students that have had mentoring experiences during college score higher on the FSI than students that have not had mentoring experiences?” An independent samples t-test was conducted. The results of the test demonstrated that students with one or more mentors scored significantly higher on both the SMV ($p = .028$) and SCC ($p = .007$) domains (see Table 1).

Table 1

Independent Samples T-Test of Mentoring and FSI Domains

Variable	Un-mentored Mean (n)	Mentored Mean (n)	t	df	p
SMV	263.08 (31)	285.43 (125)	-2.21	154	.028*
SCC	112.36 (31)	125.56 (125)	-2.75	154	.007**

Note. *p < .05. **p < .01.

Crisis

The second research question was, “Will students that have had a major crisis during their college experience score higher on the FSI than students that have not had a major crisis during their college experience?” An independent samples t-test was performed to analyze the data. While respondents that experienced crisis did score higher on both of the FSI domains than those that had not experienced crises, the mean differences were not statistically significant at the .05 level (see Table 2).

Table 2

Independent Samples T-Test of Crisis and FSI Domains

Variable	No Crisis (n)	Crisis (n)	t	df	p
SMV	277.93 (73)	282.86 (82)	.601	153	.548
SCC	120.34 (73)	125.01 (82)	.237	153	.237

Note. *p < .05. **p < .01.

Cross-Cultural Mission Trip Experiences

The third research question was “Will students that have had cross-cultural mission trip experiences during college score higher on the FSI than those that have not

had a cross-cultural mission trip experience during college?” An independent samples t-test was performed to analyze the data. Respondents that indicated cross-cultural experiences scored significantly higher on both the SMV ($p = .044$) and SCC ($p = .047$) domains (See Table 3).

Table 3

Independent Samples T-Test of Cross-Cultural Experiences (CCE) and FSI Domains

Variable	No CCE (n)	CCE (n)	t	df	p
SMV	269.72 (54)	286.95 (102)	-2.03	154	.044*
SCC	117.60 (54)	125.76 (102)	-2.01	154	.047*

Note. * $p < .05$. ** $p < .01$.

Domain and Subscale Reliability

The alpha score for the SMV domain was .85 compared to Hall’s (2008a) score of .84. The alpha score for the SCC domain was .86 compared to Hall’s score of .88. The mean alpha score for the FSI subscales in this study was .86. Alpha scores ranged from .72 to .91. This is very similar to the results of Hall’s study where the mean alpha score was .86. A complete list of alpha scores for each domain used in this study is available in Appendix B.

CHAPTER 5

DISCUSSION

For the purposes of this study, the FSI results indicate that both mentoring and cross-cultural experiences have significant impact on faith development, confirming prior research and practitioner models. Crisis, however, did not seem to impact respondent's scores on either of the FSI domains. Based upon these results, the FSI appears to be a valid instrument for institutional assessment.

The FSI results confirmed the theoretical literature that claimed mentoring and cross-cultural mission experiences correlated positively with spiritual growth (Fowler, 1981; Hall, 1998; Love, 2001; Ma, 2003; Parks, 2000; Snyder, Bartlett, & Richards, 2008). Students with mentoring relationships or cross-cultural mission experiences are more likely to have a vibrant relationship with God, connect to God through suffering, feel a sense of purpose in life, see connections between their experiences and their spiritual development, are more aware of God's presence, work through their doubts and are open to other spiritual perspectives, spend time in God's presence, and practice spiritual disciplines. Additionally, these students feel more connected to a spiritual community, have deeper relationships of a spiritual nature, feel supported by their spiritual environment, and are connected to others through Bible studies and discipleship

groups. Furthermore, these students are more likely to serve God by volunteering in the community, meeting others' physical needs, or other outreach ministries.

The FSI did not detect significant differences between students that had or had not experienced a significant crisis in the past year. These unexpected results regarding the relationship between crisis and spiritual growth should not discredit the usefulness of the FSI as a valid assessment instrument. Relevant literature suggests several alternative explanations for the FSI results. While Fowler (1981), Holcomb and Nonneman (2004), and Parks (2000) suggest that crises create disequilibrium that, in turn, leads to spiritual development, it may take longer than one year to adequately process disequilibrium and to grow from those experiences (Bryant & Astin, 2008).

Additionally, the FSI defines crisis differently than Fowler, Holcomb and Nonneman, and Parks. The FSI asks respondents, "Have any stressful events or crises occurred in your life in the past year? (For example: loss of a loved one, parents divorcing, severe illness, major conflict with others, depression, major move, starting or ending a relationship, etc.)" (Hall, 2007, p. 1). The theoretical models, in contrast, define crisis as exploration prompted by specific events or experiences. For example, a crisis could result from reading a profound book or a meaningful conversation with a peer. A major life-crisis is not a requirement for disequilibrium to occur (Holcomb & Nonneman, 2004).

Implications

This study confirms the FSI's ability to assist Christian colleges in measuring the spiritual activity of their student populations. Using the FSI for institutional assessment purposes could significantly impact these schools at both the institutional and program

levels as they ask whether their students are becoming better Christians. For institutions that care deeply about nurturing the souls of their students, staff, and faculty, the FSI will be a valuable tool for informing program and environmental improvements.

The results of this study indicate that Christian colleges should continue to place a high emphasis on mentoring communities and relationships as well as cross-cultural experiences. Perhaps it would be wise to consider more structured mentoring programs, such as living-learning communities, that bridge the benefits of relational and spiritual mentoring with classroom learning. Additionally, though resources are limited, institutions should innovate ways to provide more students with the opportunity to participate in missions trips or study-abroad experiences. Because the institutional environment should properly form students to serve God, institutions should continuously seek new ways to build a culture of mentoring and global engagement.

Institutions should also use FSI data to assess the impact of student services on the overall spiritual environment. This would include ensuring that student services such as advising, registration, financial aid, and housing serve students in a manner that communicates genuine care and respect. The systems and processes that students navigate must be properly designed to facilitate a sense of connectedness with the overall campus environment. The FSI provides a rich data set which could be a great asset to administrators seeking to measure and improve their institutions' spiritual environments.

Specific programs will benefit from the FSI results as well. Programs that focus on discipleship and cross-cultural experience will find the results of this study to be immediately applicable to their intended outcomes. For example, a residence life program may encourage upperclassmen to intentionally mentor younger students. Global

engagement programs might seek opportunities for their students to engage in inter-faith dialogue or to build relationships with other diverse populations in order to produce crisis moments that will lead to growth. Other programs, such as chapel and student activities, will find relevant data within the complete FSI results that will enable them to evaluate the ways students benefit from their programming. The CCCU norms, provided as comparative data in the final FSI report, will also add value to program leaders seeking to make informed institutional improvements.

Though the FSI will be a great asset to assessment plans at Christian colleges, it will not provide adequate evidence for all spiritual outcomes. For example, Taylor University's spiritual activity outcomes include three knowledge outcomes related to Biblical literacy, church history, and contemporary theological issues. Because the FSI does not provide evidence that these outcomes are being accomplished, institutions must place the FSI within a constellation assessment model. Such a model will utilize other measurement techniques to compliment the FSI, ensuring that each outcome is being measured and that a variety of methodologies are employed. This strategy will produce a more robust data set that will better inform programmatic decisions and improvements to institutional systems and processes.

One piece of this constellation model should be course or program based assessments. For example, a Biblical studies department might commit to asking basic biblical knowledge questions to all freshmen during their first week of class and then, again, at the end of the semester in order to measure the spiritual knowledge outcomes. Administrators should consider offering incentives, such as grants, to faculty to create course or program assessments of student spirituality. Local instruments, such as

residence life surveys, senior exit surveys, and alumni surveys, enable institutions to use language specific to their intended outcomes. This technique would also allow the spiritual outcomes to be measured in relation to specific program experiences such as residence life or chapel. Although time and coding intensive, institutions may also wish to conduct longitudinal interviews, such as the Fowler interview utilized in the Faithful Change project (Holcomb & Nonneman, 2004). The qualitative data may provide more detailed explanations of trends in the quantitative data.

Limitations

The design of this study is correlational and does not allow causality to be inferred. For example, spiritually mature students may be more likely to seek mentors or participate in cross-cultural mission trips than less mature students. Additionally, the FSI was only given to one sample at one point in time. This method only allowed for the measurement of outcomes without taking into consideration input characteristics or environmental factors (Astin, 2006).

This study is also limited by its small sample size. A larger sample size would allow the FSI to better detect the impact of independent variables, especially crisis, on the SMV and SCC domains. The survey took respondents approximately 45 minutes to complete, which most likely caused students not to persist to the end. Also, for the purposes of this study, students' cross-cultural experiences were determined based upon whether or not they indicated participation in a cross-cultural mission trip. This question excludes other types of cross-cultural experiences such as study-abroad or living in another country. These results also represent only one institution with a relatively homogenous student population. Additionally, this study only measured the effect of the

independent variables on two domains and did not analyze the effect of the independent variables on each of the 22 subscales contained within the FSI.

Additionally, this study is limited by the unequal comparison groups. The number of mentored students was significantly greater than the number of un-mentored students. Similarly, there were significantly more students with cross-cultural mission trip experiences than students with no cross-cultural mission trip experiences. The disparity between these comparison groups may have impacted the results of the independent samples t-tests because the small comparison groups have the potential to be heavily influenced by outliers.

Further Research

A similar study should be conducted with a larger sample of students from multiple institutions. Additional independent variables, such as gender, ethnicity, and class should also be included in the study. Further research could also compare evangelical students at Christian colleges to evangelical students on secular campuses, perhaps partnering with evangelical organizations such as Campus Crusade. In keeping with Astin's (2002) IEO model, institutional assessment officers might find it helpful to administer the FSI to a cohort of freshmen and test them again as seniors in order to evaluate the FSI's ability to detect growth over time. This design would improve the external validity of the study and allow institutions to clarify whether mentoring and cross-cultural mission trip experiences actually cause spiritual development. Though the FSI is best designed for small group or classroom administration and processing, a shorter version should be developed to administer to larger populations in order to improve response rates.

Though the FSI is a promising tool for the institutional assessment of spiritual outcomes, the results will not completely measure these outcomes. Assessment representatives from Christian colleges need to participate in collaborative projects with common methodologies in order to more accurately and efficiently measure spiritual outcomes. Perhaps the Cooperative Assessment Project of the CCCU (Council for Christian Colleges and Universities, 2009) would facilitate this process of developing an instrument based upon common spiritual objectives, establishing a straight-forward and longitudinal methodology, and sharing results. Because spiritual outcomes are an essential part of these institutions' mission statements, they should collaborate and lead the academy in developing appropriate assessment methods for the spiritual activity of evangelical student populations.

Summary

The FSI results demonstrated that mentoring and cross-cultural mission trip experiences are positively associated with spiritual transformation. The FSI did not detect significant differences between students with crisis experiences and students without crisis experiences. The instrument appears to be a valuable tool to measure a campus's spiritual environment and the spiritual outcomes of specific programs. Though this study demonstrates that the instrument's constructs are valid, a well-designed assessment plan will utilize a variety of measures and methodologies in order to specifically evaluate all intended outcomes. Additionally, collaboration is needed between CCCU institutions in order to more effectively measure spiritual outcomes for the purpose of continuous quality improvement.

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APPENDIX A

Spiritual Activity Outcomes*		
Students who are spiritually active have developed an intellectual and experiential understanding of the Christian heritage enacted in a consistent lifestyle of study, worship, service, stewardship and world outreach.		
Knowledge	Skills	Values
<ul style="list-style-type: none"> • Students will process a general understanding of the Bible, including the major themes of biblical history, the different genres of biblical literature, and the structure of the Old and New Testaments. • Students will understand the biblical foundations and the philosophical and theological arguments which shaped the doctrinal understandings of the Church. • Students will understand major religious, political, philosophical, and social issues that have influenced Christian expression. 	<ul style="list-style-type: none"> • Students will be able to use their knowledge of Scripture and basic biblical interpretation techniques to study the Bible individually and in group settings, to express their beliefs to others, and to present reasoned responses to issues affecting the truth of Christianity. • Students will be able to move from biblical and theological study to the application of the conclusions in their homes, churches, and society, both nationally and internationally. • Students will be able to make moral and ethical decisions on the basis of Christian truth. 	<ul style="list-style-type: none"> • Students will demonstrate their Christian faith by active participation in the life and ministry of the local church. • Students will demonstrate their Christian faith by service to others in the community and throughout the world. • Students will demonstrate their Christian faith by developing regular habits of sharing their time, talents, and resources. • Students will place a high priority on moral and ethical lifestyles.

*(Taylor University, 1007, p. 94)

APPENDIX B

Table 4.

Alpha Coefficients of SMV and SCC Subscales

Domains and Subscales	α (Current Study)	α (Previous Studies)*
Spiritual Meaning and Vitality (SMV)	.85	.84
Prayer Type Frequency (PTF)	.84	.89
Spiritual Practices Scale Frequency (SPS_F)	.87	.73
Desolation/Consolation with God (DCG)	.91	.90
Transformational Suffering Scale (TSS)	.89	.92
Spiritual Perspective Scale (SPRS)	.88	.87
Spiritual Meaning Scale (SMS)	.88	.87
Spiritual Openness Scale (SOS)	.82	.78
Awareness Scale (A)	.88	.82
Realistic Acceptance (RA)	.85	.85
Other Centered Love (OCL)	.72	.74
Spiritual Commitment and Community (SCC)	.86	.88
Spiritual Service Scale (SSS)	.84	.85
Spiritual Community Scale (SCS)	.90	.91
Faith Centrality Scale (FCS)	.85	.87

*(Hall, 2008b)

