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Kimberly Hardin
Abilene Christian University, kam00e@acu.edu

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FAITH INTEGRATION

Predicting Faculty Integration of Faith and Learning

Corina R. Kaul, Kimberly A. Hardin, and A. Alexander Beaujean

Baylor University, Waco, Texas, USA

ABSTRACT

Concern regarding the secularization of Christian higher education has prompted researchers to investigate the extent that faith and learning is integrated at a faculty level and what factors might predict faculty integration (Lyon, Beaty, Parker, & Mencken, 2005). This research attempted to replicate Lyon et al.'s (2005) logistic regression model predicting faculty integration of faith using survey responses gathered as part of Phase II of the Council for Christian Colleges & Universities (CCCU) Denominational Study (Rine, Glanzer, & Davignon, 2013). Respondents included 2,074 faculty from 55 institutions. The first model used in this study suggested that the most powerful predictors of faculty integration are full-time employment status, earning a degree from an institution that shares the same denominational affiliation, and a match between the faculty member's religious denominational affiliation and the institutional affiliation. A second logistic regression model added faculty academic specialization as a predictor of integration to investigate if that model was a better fit. Results suggested that religion and philosophy instructors are the most likely to integrate faith into their teaching, and professors specializing in computer science, math, and engineering were the least likely. As faculty are considered the primary influence on the integration of faith and learning, existing faculty and institutional administrators concerned with maintaining faith in the classroom may want to consider the contributing factors discussed.

History and Literature Review

The future of religious higher educational institutions has been widely debated. Historian Marsden (1994) explored the role of Protestantism in higher education from the founding of Harvard through the 20th century in the book, *The Soul of the American University*. He concluded that most of the major religiously founded American universities have succumbed to secularization and have become hostile to their original Protestant faith. Correspondingly, Hamilton (2005) suggested that Christian colleges and institutions have slid down a slippery slope to secularization that began with Harvard and "has claimed almost every once-Christian college" (p. 31). Denominational disengagement and a decreasing emphasis on integrating faith and learning often precede secularization (Burtchaell, 1998). As faith practices were

CONTACT Corina R. Kaul ✉ Corina_Kaul@baylor.edu ✉ Department of Educational Psychology, Baylor University, School of Education, One Bear Place #97301, Waco, TX 76798-7301.
Kimberly A. Hardin is presently affiliated with Abilene Christian University, Abilene, Texas, USA.

separated from academia, many academics in traditionally Protestant and Catholic colleges considered religion in higher education as extraneous to their mission (Lyon, Beaty, Parker, & Mencken, 2005). Consequently, faith-based education became less prevalent. In contrast, McMurtrie (2000) emphasized that excellent scholarship and academic quality do not require an abandonment of faith. Moreover, scholarship at Christian institutions is not inferior to that from their nonreligious counterparts (Lyon et al., 2005; Mixon, Lyon, & Beaty, 2004). Hamilton (2005) highlighted Reformation-era scholars and organizations that were turning the secular tide with a "worldview" emphasis on integrating faith and learning. Acknowledging that ongoing watchfulness is needed, Joeckel and Chesnes (2012) also assessed the situation more hopefully, emphasizing that many Christian colleges and universities have remained firmly committed to preserving their institutions' Christian character and to integrating faith and learning. Similarly, Lyon, Beaty, and Mixon (2002) suggested that authentic Christian universities do still exist. The prospect of faith-based higher education depends on how committed faculty are to integrating faith and learning (Lyon et al., 2005) because faculty preferences and practices shape institutional identity (Rine, Glanzer, & Davignon, 2013). Consequently, understanding faculty perspectives on faith and learning is essential to understanding the future of religious higher education. Thus, the purpose of this current research is to examine faculty- and university-related variables that are related to the integration of faith and learning among faculty at Christian colleges.

Faith and Learning

The practice of integrating faith and learning ultimately depends on the attitudes and practices of individual faculty. Traditionally, faculty members at Christian institutions were expected to model and foster the development of virtue and integrity in their students (Bok, 1982; Lyon et al., 2002). Throughout the 20th century, however, universities increasingly prioritized research and content knowledge over students' moral development (Jencks & Riesman, 1968). As a reaction to this trend, Christian colleges began designing workshops to equip faculty to integrate their faith into teaching. These workshops became the impetus for the formation of the Council for Christian Colleges & Universities (CCCU; Patterson, 2001). In 1976, the CCCU charter membership included 38 schools but has subsequently increased to 122 Christian member institutions and 61 affiliate campuses (CCCU, 2015).

Faculty Perspectives

Recent scholarship has uncovered a variety of faculty faith and learning preferences, ranging from complete integration to complete separation (Ream, Beaty, & Lyon, 2004). For example, Lyon et al. (2002) reported that anywhere from 6% (Brigham Young University) to 52% (Boston College) of faculty believed that faith and learning should not be integrated. Lyon et al. (2005) surveyed faculty ($n = 1,703$) at six institutions (Georgetown College, Samford University, Boston College, Baylor University, University of Notre Dame, and Brigham Young University), and identified 49% of the faculty as integrationists and 36% of the faculty as separatists. Faculty members were categorized based on their responses to four questions that asked if courses besides those in religion should include dialogue from a Christian perspective on (a) God, (b) the nature of the universe, (c) society, or (d) humans.

Joeckel and Chesnes (2012), however, surveyed CCCU institutions and found that almost 84% of the faculty at least somewhat agreed that it was not difficult to integrate faith and

learning in their discipline, and approximately 30% of the respondents specifically chose to work at a Christian college because of the opportunity to integrate faith and learning.

Faculty Practices

Alleman, Glanzer, and Guthrie (2016) surveyed 2,313 CCCU faculty and found that more than 75% of the respondents agreed that their personal theological tradition influenced the foundation of their courses, and almost half reported it influenced their course objectives. They reported that the most common ways that faculty integrated faith and learning were by incorporating Scripture, utilizing specific interpretive views, selecting specific curriculum, employing unique methodology, cultivating personal spiritual growth, promoting ethical thoughts and behavior, assimilating a Christian worldview, and utilizing theology.

Faculty beliefs do not always transfer into faculty practices, however. As Lyon et al. (2002) reported, "the integration of faith and learning is typically more popular in theory than in practice" (p. 337). In Lyon et al.'s (2002) study with faculty from Boston College, Brigham Young, Notre Dame, and Baylor ($n \approx 1,700$), they found that approximately half of the respondents discussed faith-related questions when connected to the class material, but less than half thought they could create an academically challenging course with an explicitly Christian perspective. Approximately 20% spoke about their own religious experiences with students, and approximately 10% led their class in prayer.

Predictive Factors Associated with Integrationist Positions

Researchers have identified several factors that appear to be related to faculty integrationist perspectives on faith and learning. The most predictive factors were a faculty–institution denominational match, employment at a liberal arts institution, and academic discipline. Other less powerful integrationist predictors were academic rank, possession of a degree from the same institution, and being male (Lyon et al., 2005).

Denominational Match. One factor predictive of faith integration perspectives and practices is the match of faculty and school denominational affiliation. Lyon et al. (2002) found that faculty–institution denominational correspondence increased the likelihood that a faculty member would integrate faith activities in the classroom, support the university's spiritual aims, and agree that new faculty should share the school's religious commitments, even if that meant a search process would leave the department understaffed for a prolonged period. Furthermore, Lyon et al. (2005) reported that faculty who shared the same religious affiliation as their employer were more than twice as likely to be integrationists. Moreover, they found fewer separatist-type responses from faculty whose personal and institutional denomination were the same than from faculty who did not have such a congruency.

Institutional Type. Previous research has found that the type of institution where the faculty work is related to integration perspectives. Lyon et al. (2005) found that faculty employed at liberal arts colleges were more likely to be integrationists than those employed at more research-oriented universities, but their sample was limited to four research and two liberal arts colleges. Consequently, Ream et al. (2004) suggested the need for more research on faculty faith and learning at religious liberal arts colleges.

Academic Discipline. Another factor related to faculty integration perspectives is the area in which the faculty were employed (Lyon et al., 2002). Those who taught in the Arts and Sciences were more likely to be separatists, whereas faculty from Schools of Education or Business were more likely to adopt integrationist positions.

Purpose of the Current Study

The purpose of the current study is twofold. The first purpose is to determine whether the results from Lyon et al.'s (2005) study can be replicated in CCCU member institutions. Replicability is the foundation of the scientific process, and the results of any study need to be replicated in order to build a strong general body of knowledge in a field. Moreover, it is important to determine if a particular study's results are generalizable or if they are overly influenced by idiosyncrasies in sampling, methods, or data analysis (Asendorpf et al., 2013; Makel & Plucker, 2014; Open Science Collaboration, 2015). Consequently, replicating Lyon et al.'s (2005) general framework with a different institutional population is important to understand why faculty may choose to integrate faith and learning.

Lyon et al.'s (2005) participants worked at four research-oriented and two liberal arts religious institutions, including only two CCCU affiliate institutions. As the CCCU mission is "advancing the cause of Christ-centered higher education" (CCCU, 2016a, para. 2), we anticipated that there would be a higher proportion of integrationists in this sample. We also expected that faculty–institution denominational correspondence and the type of university would both be strong predictors. We expected that academic rank, full-time status, possession of a degree from the same institution, and self-identified gender would not be strong predictors.

Lyon et al. (2005) did not include the faculty member's academic discipline in their study. Consequently, the second purpose of this research was to extend Lyon et al.'s study by adding discipline as a predictor to the model. We expected that those in the sciences would be more likely to be separatists and those in religion would be more likely to be integrationists.

Method

Participants

This study used data from the CCCU Denominational Study. The three phases of the CCCU study investigated the denominational affiliation at the institution (Phase I; Glanzer, Rine, & Davignon, 2013), faculty (Phase II; Alleman et al., 2016; Glanzer & Alleman, 2015; Rine et al., 2013), and student levels (Phase III; Davignon, Glanzer, & Rine, 2013). The present study focused on faculty variables that predict faith and learning, using faculty responses from Phase II.

Utilizing a convenience sample (Teddlie & Yu, 2007), survey invitations were sent to each of the 79 CCCU institutions that had participated in Phase I of the study; 2,500 faculty responded by completing at least a portion of the online questionnaire (Alleman et al., 2016; Rine et al., 2013). Responding faculty represented 55 CCCU institutions from over 15 broad denominational backgrounds. Respondents received no compensation for participation.

Table 1. Faculty descriptive statistics ($N = 2,074$).

Demographic characteristics	Sample n	Sample Percent	CCCU Member Faculty n[a]	CCCU Member Faculty Percent
Integrationist	1,645	79%	—	—
Liberal arts college	1,748	84%	11,230	92%
Male	1,226	59%	7,186	59%
Full professor	678	33%	3,983	33%
Denominational match				
Faculty–institution match	711	34%	—	—
Faculty–institution does not match	797	38%	—	—
Nondenominational institution	566	27%	—	—
Full-time	1,767	85%	12,128	99%
Earned degree from same denomination	621	30%	—	—
Discipline				
Applied sciences (engineering, computer science, math)	138	6%	—	—
Arts	164	8%	—	—
Business and law	210	10%	—	—
Education	270	13%	—	—
Hard sciences (e.g., biology, chemistry, health professions, agriculture)	364	18%	—	—
Humanities (English, history, library science)	213	10%	—	—
Multidisciplinary studies (including communication)	116	6%	—	—
Religion and philosophy	275	13%	—	—
Social sciences	329	16%	—	—

Note. CCCU: Council for Christian Colleges & Universities. —: data not available.
[a]There were 12,228 in this group.

The sample closely resembled population parameters on several demographic variables (see Table 1). Data from the U.S. Department of Education's (2015) Integrated Postsecondary Education Data System (IPEDS) indicated that the 121 CCCU (2015) member institutions employed 12,228 instructional staff as of 2013. Liberal arts (or nonresearch) institutions accounted for 92% of CCCU faculty, including 59% males ($n = 7,186$) and 33% ($n = 3,983$) who had full professor status.

Instrument

Data for this study were obtained from responses to the online questionnaire for the CCCU denominational research (Glanzer et al., 2013; Rine et al., 2013). This questionnaire included an informed consent form and 44 items regarding how faculty perceive their institutions' emphasis on denominational identity and hiring preferences for denomination members, as well as their own personal denominational affiliation, classroom practice, and personal background.

The variables used in this study, along with their descriptions and how we coded them for the data analysis, are provided in Table 2. For the outcome variable in this study, we used the item, "Does this theological tradition [that you most closely identify with] influence the foundations, worldview or narrative guiding the course of your teaching?" This item most closely parallels Lyon et al.'s (2002) prompt regarding faculty integration of faith and learning as demonstrated by "creating a syllabus for a course that I teach that includes a clear, academically legitimate, Christian perspective on the subject" (p. 337). We categorized those who responded "yes" to the item as integrationists and those who responded "no" or "don't know" as separatists.

Table 2. Coding of faculty descriptive variables.

Variable	Description	Values
Faith & Learning Integration[a]	Whether theological tradition influenced teaching	0 = Separatist 1 = Integrationist
Institution type	Type of university	0 = Research University 1 = Liberal Arts College
Gender	Male or female	0 = Female 1 = Male
Academic rank	Professor rank	0 = Assistant or Associate Professor, Adjunct, Lecturer, or Other 1 = Full Professor
Denominational match[b]	Whether faculty–institution denomination affiliation and/or attendance match	0 = Not a match 1 = Match 2 = Nondenominational[c]
Employment status	Full-time or part-time	0 = Part-time 1 = Full-time
Denominational degree	Earned degree from same denomination	0 = No degree from same denomination 1 = Earned degree from same denomination
Discipline[d]	Academic specialization	0 = Education

Note. [a]Integrationists were defined as those who answered "yes" to the item, "Does this theological tradition [that you most closely identify with] influence the foundations, worldview or narrative guiding the course of your teaching?" Separatists were defined as those who provided any other answer to the same item.
[b]We made two variables to account for the three groups. For both variables, those who were not a match were the reference group.
[c]Nondenominational institutions, as reported by faculty, were: Azusa Pacific University, Biola University, John Brown University, The King's University College, LeTourneau University, Northwestern College (MN), Oral Roberts University, Taylor University, Trinity Christian College, University of the Southwest, and Wheaton College.
[d]We made eight variables to account for the nine groups. For all variables, education faculty were the reference group.

The predictor variables used for comparison included institution type, gender, academic rank, denominational match, employment status, denominational degree, and discipline. Faculty were divided into two academic rank categories, full professor or not, which reflects Lyon et al.'s (2005) classifications. To determine institutional classification, we consulted the *Carnegie Classifications of Institutions of Higher Education* (Indiana University Center for Postsecondary Research, n.d.). Although these classifications provide multiple categories, we categorized the institutions as either research or liberal arts universities to replicate Lyon et al.'s (2005) institutional categorization. For the denominational match variable, we compared the individuals' self-identified denomination to the religious denomination that they assigned to their employing universities. If respondents reported conflicting institutional denominations (i.e., faculty from the same institution reported different institutional denominations), we used the institution's website to determine the "official" denomination. To be classified as a denominational match, respondents had to indicate that they attended (or most closely identified with) the same broad denominational tradition as that of the university. For example, *Baptist* matches included American Baptist, National Baptist, Independent Baptist, Southern Baptist, Texas Baptist, Virginia Baptist and Baptist Convention Association. Faculty employed by nondenominational institutions were coded as a third category for the variable. For the academic discipline variable, we used Education faculty as the reference group.

All variables were categorical, so we coded them using dummy codes (Wendof, 2004). Denominational match and discipline had more than two categories, so we created multiple variables to account for all possible categories. Table 2 provides the variable codes for each variable.

Data Analysis

Prior to analysis, the data were inspected to ensure there were no errors in the importing or coding process. Approximately 10% ($n = 238$) of the participants were missing responses to one or more of the predictor variables. Little's (1998) missing completely at random test indicated that the hypothesis that data were missing completely at random was tenable ($x^2 = 147$, $df = 131$, $p = 0.16$). Because of a large number of complete cases, the small percentage (10%) of cases with missing data, and the fact that data appeared to be missing completely at random, we used listwise deletion to handle the missing responses. This process resulted in a final sample size of 2,074 respondents.

Regression Models

We fit two logistic regression models to the data to address the research questions. The first model, *Replication*, attempted to replicate Lyon et al.'s (2005) model. Predictors in the *Replication* model included employment at a liberal arts institution, whether the faculty member had earned a degree from an institution of the same denomination, whether there was a faculty–institutional denominational match, and faculty rank, gender, and full-time employment status. The second model, *Discipline,* added the faculty's academic specializations to the *Replication* model.

Since the outcome for both models was categorical, we used a logistic regression. Logistic regression models transform the dichotomous outcome variable to log odds. If p is the probability of being an integrationist, then the odds of being an integrationist are:

$$\text{odds} = \frac{p}{1-p}, \tag{1}$$

and log odds are

$$\log\text{ odds} = \ln\left(\frac{p}{1-p}\right), \tag{2}$$

where ln() is the natural logarithm (Cohen, Cohen, West, & Aiken, 2003). This formula results in a the logistic regression equation

$$\ln\left(\frac{p}{1-p}\right) = b_0 + \sum_{i=1}^{k} b_i X_i + e, \tag{3}$$

where e is a random error term, b_0 is the intercept, b_i are the k regression coefficients, and X_i are the k predictor variables.

The estimated regression coefficients from Equation 3 can be difficult to interpret. One way to make them easier to understand is to apply the inverse of the logarithm function once the parameters are estimated. The inverse of the logarithm function is the exponentiation function. Exponentiating the b_i in Equation 3 places them in an odds ratio (OR) metric. For our study, the OR represents the ratio of being an integrationist in one condition to the

odds of being an integrationist in another condition

$$OR = \frac{\text{odds being an integrationist in condition 1}}{\text{odds being an integrationist in condition 2}} \qquad (4)$$

ORs of 1 (or whose confidence intervals encompass 1) indicate that the odds of being an integrationist are the same across both conditions. OR values much greater than 1 indicate that being an integrationist is more likely for the condition in the numerator than the condition in the denominator; conversely, OR values much less than 1 indicate that being an integrationist is more likely for the condition in the denominator. As odds cannot be negative, OR values range from 0 to approaching positive infinity.

To compare the two models, we used two measures of model fit: Akaike's information criterion (AIC; Akaike, 1974) and the Bayesian information criterion (BIC; Schwartz, 1978). Both measures seek to find the simplest model that can describe the data well, although they use somewhat different criteria to make this determination (Burnham & Anderson, 2004). Individual AIC and BIC values are not directly interpretable because they contain arbitrary constants and are greatly affected by sample size. Thus, for both fit measures the typical interpretation is that smaller values indicate a more favored model.

Results

Descriptive Statistics

Descriptive statistics for this sample are provided in Table 1. In this study, 79% ($n = 1,826$) of the faculty were integrationists, compared to 49% in Lyon et al.'s (2005) study. Moreover, approximately one third of the respondents reported they attended a church—or had the strongest affiliation with a church—that shared the same denomination as their employing institution.

Table 3. Correlation table.

	Variable	1	2	3	4	5	6a	6b	7a	7b	7c	7d	7e	7f	7g.	7h
1	Institution type		.01	.10	.02	.14	.24	−.56	.06	.04	.01	.01	.02	−.00	−.06	−.05
2	Academic rank			.16	.17	.04	.10	−.01	.01	−.01	−.05	−.03	−.04	−.03	.08	.05
3	Employment status				.08	−.02	.05	−.08	.03	.00	−.07	.08	−,02	−.03	−.01	.04
4	Gender					.02	.09	−.00	.13	.04	.10	−.12	−.15	−.04	.21	.02
5	Denominational degree						.44	−.33	−.01	.01	−.01	−.06	−.01	.02	.05	−.03
	Denominational match															
6a	Match							−.44	.02	−.01	−.07	−.01	.01	.00	.09	−.04
6b	Nondenominational								.01	−.03	−.03	−.06	.01	.02	.09	.03
	Discipline															
7a	Applied sciences									−.08	−.09	−.12	−.09	−.06	−.10	−.11
7b	Arts										−10	−.14	−.10	−.07	−.11	−.13
7c	Business & law											−.15	−.11	−.08	−.13	−.15
7d	Hard sciences												−.16	−.11	−.18	−.20
7e	Humanities													−.08	−.13	−.15
7f	Multidisciplinary														−.10	−.11
7g	Religion/ philosophy															−.17
7h	Social Sciences															
	Standard Deviation	.36	.47	.36	.49	.46	.47	.45	.25	.27	.30	.38	.30	.23	.34	.37

Note. See Table 2 for variable coding. All correlations are phi coefficients.

The correlations (phi coefficients) among the variables are provided in Table 3. Generally, the correlations among the predictor variables were minimal to low (range: −.20 to .24). However, a denominational match was moderately correlated to earning a degree from an institution that shared the same denomination as the faculty member's current employer ($r = .44$). Additionally, employment at a nondenominational college was negatively correlated with being at a liberal arts institution ($r = −.56$).

Model Results

The model fit values (AIC and BIC) are provided in Table 4. The AIC favored the *Discipline* model, whereas the BIC favored the *Replication* model. The model fit results are equivocal, likely indicating that there is some "truth" in both models and the models' coefficients could be combined to form a final model (Burnham & Anderson, 2002).

In Table 5, we provide the regression coefficients, OR, and the 95% confidence interval for the OR for both the *Replication* and the *Discipline* models. In the *Replication* model, the only variables with 95% confidence intervals that do not encompass 1.00 are denominational match and earning a degree from an institution of the same denomination. Thus, any differences between groups formed from the remaining variables should not be interpreted too emphatically as being different. The same interpretation applies to the *Discipline* model, although some academic disciplines were more or less likely to have integrationist faculty.

For both models, after controlling for the other variables in the model, faculty who earned a degree from a school with the same denomination as their current institution or were a denominational match with their current institution were more likely to be integrationists. Specifically, the odds of being an integrationist are between 1.06 to 1.93 times higher for faculty who earned their degree from an institution of the same denomination than faculty who earned their degree from an institution with a different denomination. Likewise, odds of being an integrationist are 1.68 to 3.02 times higher for faculty who have a denominational match with their institutions than faculty who do not. Interestingly, the odds of faculty at nondenominational institutions being integrationists are 1.09 to 2.12 times higher than faculty employed by denominational schools who do *not* match their institution's denomination.

According to the *Discipline* model, faculty from some academic disciplines are more or less likely to be integrationists. After controlling for all the variables in the model, faculty from humanities, applied sciences, and hard sciences were less likely to be integrationists (at least compared to Education faculty), whereas religion and philosophy faculty were more likely to be integrationists. As the confidence intervals for all four disciplines previously mentioned overlap with confidence intervals from other disciplines, the between-discipline differences should be interpreted with some caution. It is likely that faculty in some disciplines are more or less likely to be integrationists, but there is a lot of variability within a given discipline.

Table 4. Fit values for models.

Model	AIC	BIC
Replication	2071	2116
Discipline	2035	2125

Note. AIC: Akaike's information criterion; BIC: Bayesian information criterion. All values were rounded to the nearest integer.

Table 5. Logistic regression model results predicting integration of faith and learning.

Variable	Replication Model				Discipline Model			
	b	SE	OR	95% CI of OR	b	SE	OR	95% CI of OR
Intercept	0.68	0.24	1.97	1.24–3.13	0.75	0.27	2.12	1.25–3.64
Liberal Arts	−0.02	0.18	0.98	0.68–1.40	0.06	0.19	1.06	0.74–1.53
Full Professor	0.06	0.12	1.06	0.83–1.35	0.00	0.13	1.00	0.78–1.28
Full–time	0.21	0.15	1.23	0.91–1.66	0.27	0.16	1.31	0.96–1.76
Male	0.06	0.11	1.06	0.85–1.33	−0.02	0.12	0.98	0.77–1.24
Denominational Degree	0.37	0.14	1.45	1.10–1.93	0.34	0.14	1.40	1.06–1.87
Denominational								
Match	0.80	0.15	2.23	1.68–2.98	0.81	0.15	2.26	1.70–3.02
Nondenominational	0.44	0.15	1.55	1.14–2.12	0.41	0.16	1.50	1.09–2.07
Discipline[a]								
Applied sciences					−0.78	0.25	0.46	0.28–0.75
Arts					−0.30	0.25	0.74	0.46–1.20
Business and law					−0.04	0.24	0.96	0.60–1.53
Hard sciences					−0.45	0.20	0.64	0.43–0.94
Humanities					−0.50	0.22	0.61	0.39–0.94
Multidisciplinary studies					0.31	0.31	1.36	0.75–2.55
Religion and philosophy					0.56	0.26	1.75	1.06–2.95
Social sciences					0.37	0.23	1.45	0.93–2.27

Note. All data are approximate. SE: Standard error, OR: Odds ratio, CI: Confidence interval. [a]Comparison group is Education for all disciplines.

Discussion

Model 1: Replication of Previous Research

According to Lyon et al.'s (2005) research, the greatest predictors of faith–learning integration after controlling for all other variables were: a faculty–institution denominational match, employment at a liberal arts college, employment at one specific university in the sample, full professor rank, or a degree from their current employer. Both Lyon et al.'s model and our *Replication* model converged in reporting that the best predictor for integration of faith and learning is when individuals share denominational affiliation with their school. Both studies suggest that when faculty members' personal denomination harmonizes with their employing institution's denomination, they have approximately two times the odds of integrating faith and learning than when their personal denomination differs from their employing institution. Likewise, both studies showed that faculty members who earned a degree from their employing institution had higher odds of being an integrationist. Although this effect was slightly larger in the current study than in Lyon et al.'s study, the confidence intervals for both studies overlap, so it is likely that the results are not statistically different from each other.

There were some differences between our *Replication* model and Lyon et al.'s (2005) model. Lyon et al. found a sizable effect for the type of institution (liberal arts vs. research) and faculty rank (full vs. other ranks). In our study, however, neither variable was very predictive of integrationist status.

One reason why the studies may have shown differences is the composition of the participants. Lyon et al.'s (2005) research was limited to three religious traditions (Catholic, Protestant, Mormon) at six institutions, whereas we used participants from 15 broad denominations at 55 different institutions. Although, 84% of participants in our study were employed at liberal arts colleges, 90% of the respondents in Lyon et al.'s study were from a research university. Moreover, almost half of Lyon et al.'s respondents were from one

specific research institution (BYU) where 98% of the faculty reported belonging to the same denomination, a majority of the faculty earned a degree from the school, and the respondents had "a tendency to hold an extreme position" (Lyon et al., 2005, p. 65). Thus, the between-study differences may be accounted for, at least in part, by the predominance of BYU faculty as well as the prevalence of research faculty in the Lyon et al. sample.

Another difference in the studies' samples is the percentage of faculty who were integrationists and shared the same religious affiliation as their employer. In the Lyon et al. (2005) study, 77% of the faculty shared the same religious affiliation as their employer and 49% were integrationists, whereas in the present study 34% of faculty shared a denominational affiliation with their employer and 79% affirmed an integrationist position. Given that the CCCU formed largely to instruct faculty on strategies to integrate faith and learning, it should not be surprising that a majority of the CCCU respondents claim to hold an integrationist position as they seek to incorporate their theology into the foundation and worldview of the courses they design and teach.

Model 2: Adding Academic Discipline

The results of the *Discipline* model suggest that, on average, faculty from the field of religion and philosophy are more likely to integrate faith and learning, whereas faculty from both the hard or applied sciences and humanities are less likely to integrate their faith into the classroom. This finding coincides with Lyon et al.'s (2002) study, which found that faculty in the Arts and Sciences were among the least likely to view their role as one that integrates faith and learning or encourages ethical Christian development. It is difficult to know exactly why these disciplines' faculty are less likely to be integrationists than other disciplines. Superficially, it may seem that faculty from these disciplines are less religious than other disciplines, but that is not a complete explanation. Previous research has indicated that faculty in the natural sciences can be more religious and less likely to separate their beliefs from their research than their counterparts from the social sciences and humanities (Thalheimer, 1973; Wuthnow, 1989). With respect to belief in God, Lindholm (2012) reported faculty who specialized in health sciences, education, and business were much more likely to indicate belief than faculty in physical, social, or biological sciences. Undoubtedly, between-discipline differences in faculty likelihood of integrating faith and learning is an area where much more research is needed.

Faculty from Nondenominational Institutions

An unexpected finding from this study was that faculty at nondenominational institutions were more likely to be integrationists than faculty whose own religious practice did not match their institution's denomination. The reason underlying this finding is unclear. One possible explanation may be that faculty at nondenominational institutions have an increased sense of freedom to express a broader range of religious views than faculty at denominationally affiliated institutions. Another plausible explanation is that faculty who desire to integrate faith and learning and are unable to find a position at a denominationally congruent institution are drawn to nondenominational schools. This potential explanation may be supported by Rine et al.'s (2013) finding that faculty denominational preferences did not strongly inform their institutional employment preferences.

As a post-hoc analysis, we examined if there were differences in our predictor variables for integrationists who matched, did not match, and worked at nondenominational institutions. The only differences we saw were that faculty at nondenominational institutions were more likely than faculty at denominational institutions to work at research universities (49% vs. 3%–4%) and were less likely to have earned their degree from an institution of the same denomination (6% vs. 24%–59%). In addition, nonmatching faculty were less likely to come from a religion or philosophy discipline (7%) than the other two groups (19%–20%). Although we cannot rule out sampling error as the cause of this finding for faculty at nondenominational institutions, it could be the case that working at an institution with a different denominational affiliation or a strong research focus somehow either draws faculty who are integrationist or influences the likelihood that hired faculty want to integrate faith and learning—at least more than faculty who work at nonmatching institutions. This area represents one that is ripe for future faith-learning integration research.

Limitations

Several limitations should be considered when interpreting results from this study. First, the research method depended upon voluntary institutional cooperation in the CCCU survey (Rine et al., 2013). Whereas the respondents were similar to the CCCU population on many variables, we could not determine similarity for a denominational match, earning a degree from the same denomination, or academic discipline. Second, self-selection and self-report are other limitations inherent to survey research. As participants responded voluntarily and were not chosen randomly, data may be biased; participants interested in the topic may have been more likely to respond than uninterested participants. Third, no questionnaire item addressed if the institution had hiring requirements related to specific religious practices, which would influence denominational match and could influence other variables as well. Fourth, this research only investigated the integration of faith and learning within academic practices and did not examine any other areas where faculty may demonstrate such integration (e.g., extracurricular activities, student life).

Another limitation of this study is the lack of an established operational definition of the integration of faith and learning (Weeks & Isaak, 2012), which could lead to dissimilar findings across studies. Ream et al.'s (2004) research indicated that faculty integration of faith and learning may be on a continuum, so classifying respondents as either separatists or integrationists may place them in artificially dichotomized groups. In addition, affirming an integrationist position does not necessarily equate to practicing integration in the classroom, as other factors beyond faculty preferences appear to influence classroom practice, such as years working in academia (Lyon et al., 2002; Weeks & Isaak, 2012). Finally, there may be other pertinent predictors such as length of employment, political affiliation, departmental leadership, and degree of commitment to their religious affiliation that were not included in our models that should be investigated in future studies.

Implications for Practice

Two broad themes emerge from this research. First, faculty agree that their personal faith traditions influence their teaching. Contrary to Hamilton's (2005) description of the increasing secularization of Christian institutions, 79% of faculty from this study indicated that

their theological traditions influenced their worldviews or the foundational narratives that guide their teaching. Alleman et al.'s (2016) research provided a fuller description of how CCCU faculty practice integrating faith into their course objectives, and Glanzer and Alleman (2016) outlined how these faculty members' theological traditions inform their classroom behavior.

Second, if faculty integration of faith and learning is a key component to maintaining authentic faith-based higher education (Lyon et al., 2005) and if this integration is a priority for an institution's stakeholders, then faculty and administrators who make hiring decisions would do well to consider what prospective faculty characteristics predict such integration. The best predictors of this integration of faith and learning appear to be faculty–institution denominational match and whether they earned a degree from a same-denominational institution. These results should be interpreted with some caution, however, as the sample was one of convenience and only collected at a single point in time. Therefore, the results may not be generalizable to all religious higher education institutions and we cannot infer causality among our variables. For example, faculty integrationists could be purposefully selecting institutions that match their personal religious views; conversely, working at an institution that shares the faculty's denominational affiliation could influence some faculty to become integrationists. Thus, this study's results may be useful for institutional leaders for low-stakes decisions, such as planning faculty development activities or developing institutional policies. More research needs to be conducted in faith-learning integration before these findings should be used to support more high-stakes decisions, such as hiring, tenure and promotion, or annual and merit evaluations.

Although disciplinary expertise and publication history typically take precedence over religious affiliation in hiring new faculty (Lyon et al., 2002), some have argued that hiring faculty who share the school's religious tradition is the best way to maintain faith influences in the classroom (Burtchaell, 1998; Lyon et al., 2002; Wolfe, 2000). Although CCCU faculty perceived that denominational emphasis had a medium-to-high level of influence in hiring decisions at 65% of the CCCU schools, Rine et al. (2013) suggested that administrators generally considered a candidate's denominational identity to be more important than faculty did. Some faculty members suggested potentially negative implications of this emphasis. For example, 25% of the faculty members indicated their institution's denominational identity hindered its ability to attract high-quality faculty, and 21% perceived that it also hindered public perceptions of their institution's academic quality. Furthermore, although many denominational colleges predominantly hire individuals from particular religious backgrounds, empirical evidence is lacking that describes the extent that those faculty embrace and express their denominational identity in the classroom (Rine et al., 2013).

Ream and Glanzer (2007) suggested four categories of institutional practices to cultivate integration of faith and learning. First, priority should be given to hiring faculty and administrators who practice or who are open to the integration of faith and learning. This process can be facilitated by providing search committees with a suggested list of integration topics to ask candidates during interviews or requiring an interview with an institutional representative to assess the candidate's commitment to the university mission. Second, professional development designed to assist new faculty in the intentional development of the practices and habits for integrating faith and learning may include mentoring by a senior faculty member, retreats, seminars, and courses. Third, institutional leadership can demonstrate their commitment to faith and learning by asking about faculty practice on student and peer

evaluations, considering the practice in promotion decisions, requiring faculty to outline their faith and learning philosophy as part of the tenure application, or providing financial incentives such as grants or the creation of distinguished professor positions to foster this practice. Lastly, other support structures can be created such as the development of an institute to promote faith-based scholarship.

For individual faculty members, engaging in reflective practice and implementing practical tools may aid faculty in integrating faith and learning. Beers and Beers (2008) compiled questions for faculty to use in self-examination of how to integrate faith and learning within their specific academic discipline. In addition to modeling reflective thinking, faculty can teach students how to ask questions using a three-level hierarchy that includes hermeneutic reflection (to understand and investigate), normative reflection (to interpret), and strategic reflection (to apply). Another strategy, posing integrative questions, requires that students draw from theological understanding and academic discipline-specific knowledge to answer questions such as, "What is the relationship between the quest for profitability and the Christian call for compassion and justice?" (p. 70). Union University's (n.d.) Center for Faculty Development provides examples of integrative questions by discipline and provides links to additional resources. Additionally, the CCCU's (2016b) website links to a peer-reviewed video archive of faculty from various disciplines modeling classroom strategies for faith integration. Furthermore, the CCCU and Indiana Wesleyan University cooperatively offer a course that equips faculty for faith and learning integration in the university classroom (CCCU, 2016b).

Conclusion

Because faculty are considered the primary influence on the integration of faith and learning, understanding factors that predict this practice are important for Christian institutions that desire to cultivate a faith-based education. The good news is that almost 80% of the CCCU faculty indicated theology influences their teaching. Furthermore, the results of our research indicate there are some factors that are likely related to faculty members' decisions to integrate faith and learning. Faculty and administrators concerned with cultivating the integration of faith and learning may want to consider these factors as they develop their intuition's teaching culture, as well as promote research that examines these factors on their own campuses.

Acknowledgments

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