

Faith Integration and Learning in Classrooms

Sophia Mun

California Baptist University

Emilio R. Bermejo

California Baptist University

Abstract

The present study explored the changes in students' faith integration over a 13-week semester. Researchers surveyed undergraduate students ($N=156$) enrolled in psychology and basic research methods courses at a Christian university. Students reported their degree of faith integration by taking the Psychology and Faith Integration (Psy-FI) Scale, which was administered at the beginning of the semester (pre-test) and the end of the semester (post-test). The current grade level, current course taken, past psychology courses taken, assigned instructor, and level of spirituality (self and instructor) were included as contributing factors (Collison et al., 2019). The study found no difference in the degree of faith integration between pre and post-test ($t = -1.6, p = .109$). Results of hierarchical regression analyses indicated that the Psy-FI pre-test score (measured at the beginning of the semester, $\beta = -.20$) and self-spirituality ($\beta = 2.3$) were associated with changes in faith integration, even after accounting for control variables. The study results show that the changes in faith integration in classrooms vary depending on students' spirituality and their initial level of faith integration at the beginning of the semester. More significant increases in faith integration were observed among students who reported a lower degree of faith integration at the beginning of the semester. Students who reported higher self-spirituality had a statistically significant positive association with changes in faith integration. In summary, the study found that faith integration in classrooms may not benefit all students to the degree to which they engage in faith integration in their coursework. Practice advances and implications for future research are presented and discussed.

Key words: Faith integration; Psy-Fi; self-spirituality; Christian higher education

Faith Integration and Learning in Classrooms

The integration of faith and learning is a key feature of Christian higher education and distinctly sets it apart from secular institutions (Patterson, 2005). This integration is set forth by its institutional mission informing various aspects of university life, including classroom instruction. Given these expectations of faith integration and learning, it is critical to evaluate whether courses, especially those with faith integration as a core objective, achieve their goals in this learning area.

Inherent Challenges

Although an expected part of their vocation, many Christian professors admit that faith integration remains one of the more challenging parts of their scholarship. Hasker (1992) points to the inherent challenges of this undertaking by saying that integration is "hard scholarly work," which takes much time and effort to produce significant achievement and a process in which "immediate and highly visible results cannot be guaranteed" (p. 236).

There are a variety of factors that make evaluating effectiveness particularly challenging. First, there is no consensus about an operational definition of the integration

of faith in learning in the literature, nor is there agreement about the language of the term itself in the Christian higher education community. Secondly, there are few validated measures to assess the degree to which students engage in faith integration and learning (Collison et al., 2019). Typically, students' degree of faith integration has been evaluated by responding to a couple of statements in the university's standard course evaluation at the end of the semester (e.g., Christian faith is integrated into the course material as relevant to the subject matter). Thirdly, the discussion of faith-learning integration in higher education has historically focused on the actions and perceptions of teachers and institutions and their interaction with the academic subject matter rather than the needs, behaviors, or perspectives of students (Hall et al., 2009). When student perspectives on faith integration are discussed, they have focused on future developments in students' lives since faith-learning integration is often understood as the "planting of seeds" that will bear future fruit in students' lives.

Research Identifying Factors

To overcome those challenges, a growing body of research has examined the factors that promote faith integration and

learning and how it occurs (Neff et al., 2021). After identifying a lack of empirical research in this area, Sorenson et al. (2004) launched the first programmatic research on this integrative process. They concluded that this process occurred through relational attachments with mentors who personally model that integration for students. Subsequent studies had similar findings regarding the critical role of the professor (Hall et al., 2009; Sites et al., 2009). Sites et al. (2009) suggested that students perceived that integration could occur only within a caring relationship with a mentor who took the time and effort to get to know each student personally and emphasized the process of learning.

Hall et al. (2009) similarly found that students learn integration through relational attachments with mentors who personally model that integration. Participants identified three areas they perceived facilitated integrative experiences in the classroom. The first was a set of traits of professors who were effective in faith integration: evidence of an active, personal relationship with God that was observable by the students; genuine care for students; and welcoming, dedicated, and open-minded disposition. The second identified factor was activities facilitated during the class. Students perceived successful integration when allotted time for prayer and integrative discussions and assignments were included in the curriculum. The third factor was the overall climate of the institution in which students were able to express their Christian faith openly while simultaneously engaging in academic learning.

Research has also suggested that instructional methods and classroom environments promote faith integration and learning. Lawrence et al. (2005) discovered that students perceive the integration of faith and learning in terms of course content through the instructional methods used by the professor. The methods utilized active learning approaches that allowed students to mentally manipulate and develop ideas, such as role-play or inquiry training. The top three categories identified were teaching methodologies (conversations with the professor during class time), making connections (the professors playing an active role in connecting faith with the area of study), and the atmosphere of the classroom (positive, safe, feels accepted, and supported).

The Current Study

Although previous research has explored factors that promote faith integration in classrooms, direct assessment of student faith integration based on pre-tests and post-tests is rare. In this project, we define faith integration as the process of identifying, exploring, and clarifying the essential connections between Christian and academic worldviews (Collison et al., 2019). The purpose of the

current study is twofold. The first purpose is to measure changes in students' faith integration by administering a pre-and post-test at the beginning and end of a 13-week semester. The second purpose of this study was to identify the factors associated with the changes in students' faith integration.

Methods

Institutional Context

This study was conducted at a private, Christian, liberal arts university located on the West coast of the United States. The university's mission seeks to provide academic programs that prepare students for professional careers, as well as co-curricular programs that foster an environment supporting each student's intellectual, physical, social, and spiritual development. In the classroom, professors integrate the "Core 4" outcomes established by the university in their course instruction to promote students to be (1) academically prepared, (2) Biblically rooted, (3) globally minded, and (4) equipped to serve.

Course Description & Sample

The data were collected in six undergraduate classrooms in the 2020 Fall semester. Two courses were PSY 120, which was an introduction to lifespan development that incorporates individuals' physical, cognitive, psychosocial, and spiritual growth from conception through older adulthood. The four other classes were behavioral science research courses designed to teach the basics of behavioral science research. Two different instructors taught the six courses and delivered instruction in an online synchronous format due to COVID-19 restrictions. The instructors taught from a campus location via video conference while students joined remotely from personal computers. The class met three times a week during the 13-week semester (60 minutes for each meeting). Complete information was obtained from students enrolled in six classrooms. Students took surveys about their characteristics and the degree of faith integration at the beginning and the end of the semester. Surveys were distributed, and data were collected via Qualtrics. Completed longitudinal data were collected from a sample of 156 students. Table 1 presents descriptive statistics of student characteristics for all courses.

Content of Faith Integration

Based on previous research, both conceptual and experiential integration were done in six classrooms by both instructors (Hall & Porter, 2004). For example, the "Research and Faith Series" introducing research findings that had confirmed scriptures (e.g., psychology of gratitude) were presented and discussed regularly during the semester. The instructor also engaged in classroom prayer

and used scriptural references in the research methods courses to illustrate key concepts such as the scientific method, critical thinking, and learning.

The Pre-Post Test Instrument

Student faith integration was measured at Time 1 (the beginning of the semester) and Time 2 (the end of the semester) using the Psychology and Faith Integration (Psy-FI) Scale (Collison et al., 2019). The Psy-FI scale was developed to assess faith integration within psychology courses and programs.

The scale contains 27 statements (e.g., “I often think about how psychology and my faith relate to each other”) with response options ranging from 1 (*Disagree strongly*) to 6 (*Agree Strongly*) intended to capture the degree to which students relate, think about, overlap, connect, and integrate their knowledge of psychology and Christianity. Item scores are summed to calculate a total score; higher scores reflect higher levels of student faith integration. The Psy-FI scale is one of the few measures demonstrated to be reliable and valid (evidencing structural, convergent, divergent, and discriminant validity). The internal consistency coefficient of the scale was above 0.8 (Collison et al., 2019).

Cronbach’s alpha coefficient ($\alpha = .945$ [Time 1], $\alpha = .950$ [Time 2]) suggested high internal consistency for the 27 items in this study. Changes in student faith integration were calculated by subtracting student faith integration Time 1 from Time 2.

Controlled Variables

Other variables were also included as possible contributing factors: school year, the course they were taking (Behavioral Science introductory research courses vs. Psychology courses), the experience of taking psychology courses (Yes or No), instructor (instructor A or B), and level of spirituality (Self & Instructor). The level of spirituality was measured on a scale of 1 to 10.

In a pre-and post-test setting, as the pre-score controls for each student’s prior understanding of each student’s faith integration, the pre-test (Time 1) was added as a control variable.

Analysis

T-tests were conducted to examine pre- and post-differences in student faith integration measured by the Psy-FI scale and spirituality of self and instructor. Hierarchical multiple regression was conducted to explore factors contributing to changes in student faith integration. Ethnicity and past experience in psychology courses were entered as predictors in the first step of the model, and the

pre-test score of the Psy-FI was added in the second step of the model, followed by the self-spirituality in the third step.

Results

Sample Characteristics and Descriptive Statistics

The demographic data are shown in Table 1. Of the 156 included students, 115 (73.7%) were aged between 18-20, and 26 (16.7%) were aged between 21-29. One hundred thirty (83.3 %) were male and 96 % were never married. Students were 41.7 % Hispanic, 27.6 % Caucasian, 9 % African-American, and 30% Other (American Indian or Alaskan Native, Asian or other Pacific islander, and from multiple races). More than half (61.5%) of students had taken a psychology course before.

Changes in Student Faith Integration and Spirituality

Differences between pre and post-tests on faith integration and student and instructor spirituality were analyzed using independent sample t-tests. Students reported higher instructor spirituality post-tests (Pre $M = 9.1$, $SD = 1.1$; Post $M = 9.5$, $SD = .8$), $t(310) = -3.24$, $p < .05$. There were no differences in student faith integration and spirituality (See Table 2).

Predictors of Change in Student Faith Integration

A hierarchical multiple regression analysis was performed using changes in faith integration as the dependent variable to explore predictors of change in student faith integration. The results of each step in the regression analysis and individual beta coefficients with associated significance are provided in Table 3. The first model, including ethnicity and past experience in psychology courses, was statistically significant, $F(1,153) = 5.247$, $p < .05$. Ethnicity and past experience in psychology courses explained 6.4 % of the variance in the dependent variable. In the second step, when the pre-test of Psy-FI was added, the model was statistically significant, $F(2, 152) = 6.001$, $p < .05$. The pre-test variable explained unique variance in changes in faith integration with 4% over and above ethnicity and past experience of psychology course. When self-spirituality (“On a scale of 1 to 10, how would you rate your spirituality?”) was entered in the last step of the model, the model was statistically significant, $F(3,151) = 9.951$, $p < .001$. The self-spirituality contributed a significant unique variance (10%) to the prediction of changes. All predictor variables together accounted for 21% of the variance in changes. African Americans (AA) had a statistically significant negative association with changes in faith integration, indicating that faith integration among AA was less likely to be promoted compared to faith integration among the Hispanic population (reference group) ($\beta = -6.9$, $p < .05$). Results also indicated that the Psy-FI pre-test score ($\beta = -.20$, $p < .001$) significantly contributed to the variance in

change scores. It represents greater increases in faith integration observed among students who reported a lower degree of faith integration at the beginning of the semester. Lastly, self-spirituality ($\beta = 2.3, p < .001$) had a statistically significant positive association with changes in faith integration, indicating that higher self-spirituality was associated with more change in faith integration.

Discussion

The current study explored changes in faith integration by students over the 13-week semester and identified the related factors. The changes in faith integration in classrooms varied depending on students' spirituality and their initial faith integration level at the semester's beginning. To summarize, students who reported a lower degree of faith integration at the beginning of the semester demonstrated greater increases in faith integration. Students who reported higher levels of spirituality demonstrated greater increases in faith integration. Lastly, ethnicity and past experience of taking a psychology course were potential factors associated with the changes as well. Interestingly, there was no difference in faith integration between pre-and post-assessments. One possible explanation for this finding may involve cases in which observed decreases in faith integration offset increases in faith integration between pre-and post-assessments.

Practices Advances and Implications for Future Research

There is a growing understanding of the importance of individual spirituality, quality mentor relationships, thoughtful curriculum design, classroom activities, and supportive environments and their role in faith integration and learning. The findings of this study offer some practical strategies and implications for future research adding to the collective understanding of those factors that promote faith integration.

Voice – A Matter of Primary Importance

First and foremost, this study aimed to give students a voice and agency. Given the limited research that investigates the integration of faith and learning from the students' perspectives, any study that solicits their perspectives on spiritual development and learning is a valuable contribution to the literature on Christian higher education. More quantitative and qualitative research is needed to deepen a collective understanding of their needs, behaviors, and perspectives in these important areas of growth and development.

Self-Spirituality as a Foundation

One significant finding of this study was the relationship between self-spirituality and faith integration. Students who reported higher levels of spirituality had a statistically

significant positive association with changes in faith integration. These are students who see themselves on a positive trajectory spiritually and benefit further over 13 weeks of faith integration and learning. These findings suggest that spirituality and faith integration may have a synergetic effect on each other. In other words, while both factors grow simultaneously, they can influence each other. This observed relationship should be further explored to generate effective and evidence-based teaching practices.

Supportive Environments

Given the importance of self-spirituality in faith integration, Christian institutions should consider creating a climate of support so students can grow in their faith while simultaneously engaging in academic learning (Hall et al., 2009).

When formulating a supportive environment on and off campus, higher education institutions can draw from established theories to nurture the spiritual development of college students. For instance, Fowler's theory on faith development was not initially created to measure student development. Fowler, however, maps out a staged process of how individuals develop as faithful beings and can provide essential insight into the unique needs of young adults (Andrade, 2014). The supportive environment can also extend beyond the confines of the campus. As Christian institutions live out their mission, they are called out to be both "Christ-centered and church-connected" (Dockery, 2018, p. 27). In practical terms, Christian institutions have the opportunity to partner with congregational bodies to support the spiritual growth of students, many of whom are away from home or maybe looking for a new or temporary church community.

Instructional Format and Faith Integration

This study also raises the need to examine further the effect instructional formats have on the student-teacher relationship as it relates to faith integration and learning. The data collected for this study were drawn during a semester affected by COVID-19 in which course instruction was delivered in an online synchronous format. Some educational research studies have indicated that there is no significant learning difference when students are taught at a distance as opposed to traditional face-to-face instruction; however, student attrition can be higher and satisfaction lower for remote students (Beauchot & Bullen, 2005; Johnson, 2006). Purper et al. (2020) adapted some faith integration strategies for online students from a model Delaney (2015) developed for traditional in-person instruction. They also showed that with some slight modifications, professors could facilitate effective and meaningful faith integration for online students as well.

An Integrated Approach Towards Assessment

This study highlights the value of implementing a pre-and post-assessment as part of its course design. Since pre-and post-assessments are widely used in educational research to measure a change in student learning, the results provide a vehicle for assessing the impact of pedagogical strategies, methodologies, and interventions that promote faith integration and learning. In addition to conducting assessments within a semester course, tools like the Psy-FI can also be conducted as a cross-sectional tool to document changes within a program or course sequence (Collison et al., 2019). If taking a previous course within a program or sequence predicts a greater change in faith integration, as observed in this study, educators may be interested in observing changes in students who move from lower-division to upper-division coursework. Pre- and post-assessments can also be used longitudinally to document changes in faith integration of students who complete their undergraduate coursework and transition into graduate studies or even the workforce.

Limitations

Although the Psy-FI Scale provides an objective, direct, and self-reported measure of students' faith integration, it does present a few limitations. First, the scale does not offer an explicit definition of faith integration for its users but instead measures the degree to which students self-report their frequency of integrative thought and behavior ("*I often see connections between psychology and Christianity*"). It is possible that students often think about the connections between psychology and Christianity and thus score highly on the Psy-FI scale. Still, their connections may be shallow, superficial, or not deeply integrated. This limitation for self-insight and understanding may explain why some students in this study reported a high level of faith integration in the pre-test but showed a decrease in the post-test. Secondly, the Psy-FI scale items focus on psychology, limiting its usefulness and application to only this discipline. There is a need to develop or refine instruments that integrate faith integration and learning in all academic disciplines (e.g., Adedoyin et al., 2021; Savarirajan & Fong, 2019). Finally, there may be other pertinent predictors of changes in faith integration that this study did not consider. These include factors observed in other studies, including relational attachments, instructional methods, in-class activities, and campus environment.

Conclusion – A Call to Faithfulness

Exploring the factors that promote the integration of faith and learning is essential for Christian institutions that desire to cultivate a faith-based education. Although this study identified potential factors likely related to increased faith integration, the changes in faith integration varied amongst

students, and not all students benefitted from such efforts. Faculty and administrators concerned with cultivating the integration of faith and learning may want to consider these factors as they develop the teaching culture at their institutions. They must also be attuned to differences among students, with particular attention to prior experiences and where they are currently in their spiritual development.

More importantly, this study points to a need for an integrated, developmental, and socio-ecological approach toward faith integration and learning that extends beyond the confines of the self, a classroom, or a 13-week semester. If the "hard scholarly work" of faith integration, individual spiritual growth and insight, relational attachments, and connections in the community each take time, educators and researchers must formulate pedagogical strategies and research designs to reflect the multiple dimensions and timelines of faith integration and learning. Christian scholars will need to consider another metric to judge themselves to accomplish this. Author, educator, and activist Palmer (2014), in his book *Healing the Heart of Democracy*, points to the key attribute of faith, and that is faithfulness itself:

We must judge ourselves by a higher standard than effectiveness, the standard called faithfulness. Are we faithful to the community on which we depend, to doing what we can in response to its pressing needs? Are we faithful to the better angels of our nature and to what they call forth from us? Are we faithful to the eternal conversation of the human race, to speaking and listening in a way that takes us closer to truth? Are we faithful to the call of courage that summons us to witness to the common good, even against great odds? When faithfulness is our standard, we are more likely to sustain our engagement with tasks that will never end: doing justice, loving mercy, and calling the beloved community into being. (p. 193)

The higher standard of faithfulness should be an encouragement and reminder for Christian faculty and institutions to be thoughtful, steadfast, and unwavering in their faith integration efforts with students. Faith development is a lifelong process, and those called into Christian higher education can play an important role in creating environments for students where intellect and faith can grow and thrive together.

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Author Information

Sophia Mun
California Baptist University
smun@calbaptist.edu

Emilio R. Bermejo
California Baptist University
rbermejo@calbaptist.edu

Appendix

Table 1*Sociodemographic Characteristics of Participants at Baseline*

Baseline characteristic	<i>n</i>	%
Age		
17 or younger	8	5.1
18-20	115	73.7
21-29	26	16.7
30-39	4	2.6
40 or older	3	1.9
Gender		
Female	130	83.3
Male	25	16.0
Race		
Black or African-American	14	9.0
Hispanic	65	41.7
Caucasian	43	27.6
Others	34	21.8
Marital status		
Married	5	3.2
Divorced	1	0.6
Never married	149	95.5
Education		
High school degree or equivalent	55	35.3
Some colleges but no degree	78	50.0
Associated degree	20	12.8
Bachelor degree	1	0.6
Graduate degree	2	1.3
The school year		
Freshman	33	21.2
Sophomore	77	49.4
Junior	42	26.9
Senior	4	2.6
Course		
PSY 120	88	56.4
Reading and Writing in Research (BEH)	68	43.6
Previous psychology course ^a	96	61.5
Instructor ^b	126	80.8

Note. *N* = 156

^a Reflects the number and percentage of participants answering “yes” to this question.

^b Reflects the number and percentage of participants who took a course taught by instructor A.

Table 2*Results of Comparing Pre- and Post-test on Variables*

Variables	Pre-test		Post-test		t (310)	p	Cohen's d
	M	SD	M	SD			
Self-Spirituality	7.1	1.8	7.3	1.7	-1.35	.178	-.15
Instructor-Spirituality	9.1	1.1	9.5	.8	-3.24	.001	-.37
PSY-FI	119.5	20.3	123.2	20.3	-1.60	.109	-.18

Table 3*Model Summary of Hierarchical Regression Analysis for Changes in Faith Integration*

Step	Predictor	Estimate	SE	p	95% CI		R ²	R ² change	F	p
					LL	UL				
1							.064	.064	5.247	.006
	Ethnicity ^a	-6.38	2.87	.027	-12.04	-.72				
	PE ^b	-3.67	1.68	.031	-6.99	-.35				
2							.106	.042	6.001	.001
	Ethnicity	-6.46	2.81	.023	-2.30	.02				
	PE	-3.36	1.66	.044	-6.62	-.09				
	Pre-test ^c			.008						
3							.209	.103	9.951	.000
	Ethnicity	-6.97	2.66	.010	-12.21	-1.72				
	PE	-3.01	1.56	.057	-6.10	.09				
	Pre-test	-.20	.04	.000	-.28	-.11				
	Self-spirituality ^d	2.30	.52	.000	1.27	3.32				

Note. CI= confidence interval; LL = lower limit; UL = upper limit.

^a 0 (Reference group) = Hispanic, 1 = African Americans.

^b 0= no past experience of taking psychology courses, 1= past experience of psychology courses.

^c Time 1 Psy-PI score.

^d Time 2 Self-spirituality.