RELIGIOSITY OF UNDERGRADUATES IN AN ONLINE CHRISTIAN WORLDVIEW COURSE

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The purpose of this study was to examine whether or not a change in religiosity would occur in undergraduate students at a West Coast Christian university as a result of their participation in an online Christian worldview course. Twenty-six undergraduate students participated in this pretest/posttest quasi-experimental study, which employed the Shepherd Scale (Bassett, Sadler, Kobischen, Skiff, Merrill, Atwater, & Livermore, 1981) and the Religiosity Measure (Rohrbaugh & Jessor, 1975). The findings indicated that students self-reported positive change in two areas: Belief component and Christian walk component. Belief component indicated \( p = .03 \), with a post hoc statistical power of .45 and an effect size of 0.36; Christian walk component indicated \( p = .01 \) with a post hoc statistical power of 0.61 and an effect size of 0.42. Ritual, consequential, theological, and experiential religiosity did not show statistical significance, \( p = .29, .30, .08, \) and \( .07 \) respectively. However, the effect sizes were 0.11, 0.10, 0.27, and 0.30 respectively, which suggests that a small negative effect occurred in the area of ritual religiosity, a small positive effect occurred in the area of consequential religiosity, and a medium effect occurred in the areas of both theological and experiential religiosity. The results of this study suggest that online Christian education may affect an increase in religiosity, which not only validates the mission of Christian colleges and universities to foster Christian growth in their student body but also validates the time, effort, and training that colleges and universities invest in their faculty and staff to provide online Christian education.

INTRODUCTION

Skepticism reasonably accompanies innovation, so questioning the educational merits of online learning earned nods of approval when Vanguard universities first embraced it. However, current statistics suggest that this innovative venue for higher education has captured staying power. The Babson Survey Research Group found that as of Fall 2010, “thirty-one percent of higher education students [including undergraduate, graduate and post-graduate]
now take at least one course online” (Allen & Seaman, 2011, p. 4). Similarly, in Fall 2011, 65.5% of chief academic officers at 2,512 institutions—which represented 80% of students enrolled in postsecondary education—reported agreement to the statement Online education is critical to the long-term strategy of my institution (Allen & Seaman, 2011). Furthermore, Shachar and Neumann (2010) noted that distance learning has gained increased acceptance and legitimacy due to its widespread incorporation into degree programs at established postsecondary institutions. At the same time, frequency and popularity does not necessarily equate quality and scholarship. The primary pitfall to efficacious online education is the possible separation of authentic teaching and learning (Larreamendy-Joerns & Leinhardt, 2006). In terms of online Christian education, Kelsey (2002), for example, raises the issue of disconnectedness between students and instructor as an inherent challenge to online education and wonders whether the virtual environment reduces “personal bodies” (p. 7) to “spiritual machines” (p. 8), an anthropology in conflict with Christianity.

On the other hand, Delamarter (2005) posits that pessimism regarding online theological education could have more to do with loss of power and fear of change than with legitimate pedagogical grounds. Moreover, Gresham (2006) suggests that online theological education represents a new Areopagus, a modern location of academic debate—similar to the location where St. Paul successfully won over many Greeks to the Christian faith with his famous speech about the Unknown God—that holds the potential for Christian conversion. In fact, Gresham recalls the Congregation for the Clergy’s (1998) General Directory for Catechesis which charges the Church to consider the age, culture, and social environment of its audience and adapt the framework of dispensing the message of God accordingly.

Therefore, Christian colleges—which differentiate themselves as places of higher education that seek to foster spiritual growth in addition to academic knowledge (Ma, 2003)—have a responsibility to investigate the efficacy of online theological education as a means of such a cultural adaptation for the 21st century learner. Due to technological advancements, Christian colleges and universities now have the opportunity to fulfill their spiritual mission without the necessity for learners and instructors to meet face-to-face. If authentic teaching and learning hinges—at least in part—on learners’ growth, results of a study, which indicate such a positive change in religiosity as a byproduct of online Christian education, could serve to answer critics and further establish that this learning platform equally contends as a viable and valuable educational option for spiritual growth. Similarly, Christian colleges may use the results to defend the realization of their Christian mission. Therefore, by investigating online theological education specifically, this research made an original contribution to the body of knowledge in the area of Christian education.

The purpose of this study was to fill this gap in literature regarding religious education. Data was collected through the use of a quasi-experimental pretest/posttest study, which employed one quantitative survey comprised of two instruments—the Shepherd Scale (Bassett et al., 1981) and the Religious Measure (Rohrbaugh & Jessor, 1975)—deployed during the first two weeks and last two weeks of the same course. While the course itself included eight weeks of participation, the course sections in this study experienced a two-week interruption because the Christmas break occurred within the eight-week course timeframe. Therefore, all participants had a total of ten weeks—from beginning to end—to experience the effects of the course material. All participating students were enrolled in a Christian worldview class, which was a foundational course, at the same Christian university. The significance and justification of this study lies in the discrepancy between the reported desire that contemporary students have for spiritual growth during their college years and their simultaneous dissatisfaction with this objective being met (Lindholm, Astin, & Astin, 2005).

LITERATURE REVIEW

This study espoused the theoretical and seminal work of Bandura (1986), Mezirow (1978, 1997a, 1997b, 1998), and Fowler (1981). Bandura’s social cognitive theory suggests that humans have a capacity to regulate their own change through intentionality, forethought, self-reactiveness, and self-reflectiveness. Mezirow suggested through transformative learning theory that a disorienting dilemma precipitates a reevaluation of once-held assumptions, and Fowler suggested through faith
development theory that people reconfigure their faith in response to worldview experiences. Each of these theories provides a lens through which to view the theoretical underpinnings of this study.

This study sought to investigate the complexity of religiosity by identifying multiple dimensions of religiosity as independent variables. Glock and Stark’s (1965) seminal work classified five dimensions of religiosity: ritualistic, consequential, ideological, experiential, and intellectual. Rohrbaugh and Jessor (1975) created a survey that comprised eight questions that spanned four of the same components of Glock and Stark’s (1965) classifications of Christian life: (a) ritual religiosity, which refers to frequency of prayer and church attendance; (b) consequential religiosity, which refers to what degree religious belief affects actions and decision-making; (c) theological religiosity, which refers to belief about God and the afterlife; and (d) experiential religiosity, which refers to the degree of tangibly feeling the effects of one’s religion. To develop a similarly comprehensive investigation of religiosity, Bassett et al. (1981) examined 136 instruments used by other researchers in the field of Christian studies. They observed that none of those instruments used the Bible as their primary source for formulating their questions to assess a participant’s “observable and measurable life pattern which is distinctly Christian” (p. 342). They then studied the Bible to find any verse or passage which in any way defined the life of a Christian. From this exercise, they divided their passages into five categories: basic beliefs, personal growth, relationship with God, relationship with other Christians, and relationship with the world. Those five categories then evolved into the two in the final instrument: belief component and Christian walk component. They subsequently created a survey comprised of 38 questions, which were separated into belief component (13 questions) and Christian walk component (25 questions). As a result of a pilot test, a reliability and validity experiment, and subsequent wider participant pool experiment, the researchers concluded that the Shepherd Scale, their instrument, accurately “separated the sheep from the goats” (Bashett et al., 1981; Matthew 25:32) in terms of differentiating degrees of religiosity among participants. In light of this body of knowledge, six areas of religiosity—ritual, consequential, theological, experiential, belief component, and Christian walk component—were identified for the studied variables in this investigation.

Studies indicate that postsecondary education—particularly Bible and theology courses—influences spiritual growth (Fleischer, 2006; Ma, 2003; Sacerdote & Glaeser, 2001; Uecher, Regnerus, & Vaaler, 2007). Furthermore, Bowman (2006) suggests that although most American educators of religious studies courses intend for their classes to be educational rather than forums for personal religious growth, “it is not possible … to remove from the university classroom the quest of young adults to make sense out of their lives and…form…values by which to live” (p. 144). Hines, McGee, Waller, and Waller (2009) propose several possibilities specific to online education that avail students to increase personal reflection. First, the asynchronous format allows for more time to consider and present views to each other, which may be a less threatening environment than a “think-and-respond-in-the-moment” atmosphere that accompanies live discussions and interactions (Hines et al., 2009). Second, Hines et al. suggested that the increased writing requirements of online courses may be particularly beneficial for student reflection because students tend to exert a greater concern and effort to make their thoughts understood in writing. Third, instructors have more opportunity through a written discussion thread to direct and/or address the flow of theological thought. Fourth, a written discussion can present a deeper opportunity for ruminating on and revising one’s thoughts as the participants have a written account of what has been shared (Hines et al., 2009). All of these online dynamics intersect with social cognitive theory (Bandura, 1986), transformative learning theory (Mezirow, 1978, 1997a, 1997b, 1998), and faith development theory (Fowler, 1981).

Holcomb and Nonneman (2004) found that crisis—defined as “a prolonged period of active engagement with, and exploration of, competing roles and ideologies” (p. 100)—to be the consistent element, which facilitated faith development, a similarity to Mezirow’s disorienting dilemma. There was a chasm, a cognitive dissonance, which presented itself to these students and caused conscientious examination of their values and logic in the face of alternative views. In some cases, students identified specific theology courses, which propelled them to reconsider their previously held foundations (Holcomb & Nonneman, 2004), which supports Bandura’s (2001) social cognitive theory that points to humans’ ability to self-regulate and change based on observation and reflection. Based on these results, which shows religiosity change specifically stem-
From theology courses, one can expect similar religiosity change to occur with an online Christian worldview course in another Christian university.

Issler (2009) suggested that a gap exists between professing Christian beliefs and actually believing them and that focusing on improving one’s inner beliefs produces increased levels of authentic Christianity. He maintained that core beliefs are the basis for ensuing action, and it is more frequent than uncommon for a discrepancy to exist between avowed beliefs and actions. In other words, core beliefs and avowed beliefs sometimes contradict each other. He posited that religious change is a process that may be hindered by failing to examine ideas already believed to be false or holding too tightly to core beliefs that are, in fact, false. It is through God’s grace, not willpower, that religious change occurs, and this change normally takes time; it is not immediate (Issler, 2009).

Fowler (1981) proposed six stages of faith and noted that most adults normally fall between the third and fifth stages. Stage three centers around adherence to religious authority and conforming to the values of a group, whereas stage four centers around the tensions associated with forming one’s own worldview in relation to faith. Finally, stage five indicates openness to truth without feeling the restraints of previous loyalties (Fowler, 1981). Ma (2003) defined spiritual formation as “progress...towards spiritual maturity...in at least three areas (relationships with God, self, and with others), and encompasses one’s intellect, beliefs, values, emotions, will, and behavior” (p. 328). Therefore, combined with Glock and Stark’s (1965) germinal 5-D identification of religiosity, the following six independent variables were selected for this research investigation to capture that broad perspective: ritual religiosity, consequential religiosity, theological religiosity, experiential religiosity, a belief component, and a Christian walk component. This study examined the following six hypotheses and six null hypotheses that encapsulate the six variables:

- **H10** – Ritual religiosity is independent of online theological education.
- **H11** – There is a positive correlation between ritual religiosity and online theological education.
- **H20** – Consequential religiosity is independent of online theological education.
- **H21** – There is a positive correlation between consequential religiosity and online theological education.
- **H30** – Theological religiosity is independent of online theological education.
- **H31** – There is a positive correlation between theological religiosity and online theological education.
- **H40** – Experiential religiosity is independent of online theological education.
- **H41** – There is a positive correlation between experiential religiosity and online theological education.
- **H50** – Students’ belief component is independent of online theological education.
- **H51** – There is a positive correlation between students’ belief component and online theological education.
- **H60** – Students’ Christian walk component is independent of online theological education.
- **H61** – There is a positive correlation between students’ Christian walk component and online theological education.
According to Sacerdote and Glaeser (2001), as an American becomes more educated, the tendency to attend church services increases. These researchers posited that individuals who are more educated desire social group membership and that “religious activity is one major form of American social interactions” (p. 4). If this is true, one could hypothesize that there is a positive correlation between ritual religiosity and online theological education because this postsecondary course increased the education base of the participant and increased their familiarity with the potential to become members of this social group.

In a study of consequential religiosity—an investigation of day-to-day decision-making based on one’s Christian perspective—Perrin (2000) found that college-aged students with high religiosity scores were generally “more honest” (p. 538) when those students had to choose a behavior in response to the study’s moral dilemma. Additionally, Callan, Grotzer, Kagan, Nisbett, Perkins, and Shulman (2009) posited that education that “involves metacognitive reflection and simulations” (p. 21) is more effective than didactic education. Based on these arguments, one could hypothesize that there is a positive correlation between consequential religiosity and online theological education because the study’s Christian worldview course required that type of reflection Callan et al. identified.

Vygotsky (1978) proposed that “properly organized learning results in mental development and sets in motion a variety of developmental processes that would be impossible apart from learning” (p. 90), which points to the necessity of formal education for the process of cognitive growth. As schooling creates the social context of this learning (Estep, 2002), one could hypothesize that there is a positive correlation between theological religiosity and online theological education because this course afforded the participant the opportunity for cognitive growth.

Proctor, Miner, Mclean, Devenish, and Bonab (2009) found that “secure ATG [attachment to God] … involves confident exploration of, and engagement in life’s journey” (p. 252); this attachment to God is comparable to experiential religiosity or one’s feeling of connectedness or closeness to God. As this study’s online worldview course provided this type of exploration of faith, one could hypothesize that there is a positive correlation between experiential religiosity and online theological education.

Estep (2002) posited that an individual’s faith community informs and molds that person’s perspective or worldview. In other words, the social context of engaging in that community cannot be negated; while a person’s religious belief formation has an inherently individual direction, it is directed by way of interacting socially and cooperatively within a chosen community. If this is true, one could hypothesize that there is a positive correlation between belief and online theological education because the course provided a faith community with which to engage socially.

Bass (1985) contends that followers (in this case, learners) who are intellectually stimulated are more apt to change their behavior. In social cognitive theory, Bandura (1986) argues that behavior change results from a three-fold interaction between an individual’s environment, internal processes, and behavior to create the expressed behavior. In a traditional face-to-face teaching environment, Fleischer (2006) found that those who participated in a theology class experienced increased spiritual growth. If this is true, and students’ spiritual growth is manifested in their “walk,” it is possible that online Christian education will have a positive influence on students’ Christian walk.

METHODOLOGY

This study involved undergraduate students participating in an online Christian worldview course, which was a requirement for graduation from the participating university. New sections of this online course began every Monday, and the class size was limited to 21 students. In total, there were 916 students enrolled in 49 sections of the course. The study was originally designed so the survey would be available only during the first seven days and last seven days of the course. Due to the lower-than-expected participation rate in the pretest, the researcher attempted to increase the sample size by extending the pretest survey availability by another week and extending the posttest survey availability by an extra week. With these adjustments in the design of the study, 26 students—2.8% of the 916 students enrolled in 49 sections of this Christian worldview course—qualified as participants by responding to both the pretest and posttest. A measure of the initial responses was compared to the subsequent survey data in order to ascertain whether a change occurred in the participant religiosity. Because quantitative
Second, the participants for this study will be enrolled in Christian universities. While enrollment is open to students of all faiths, those participants will most likely be an adherent of the Catholic or one of the Protestant faiths as 78.4% of American adults fall into one of those two categories (Pew Forum, 2008). Therefore, choosing scales that assess levels of religiosity with a Christian bent is justifiable.

Data Collection and Analysis Procedures

The participating university for this study utilized Angel as the learning management system for their online courses, which range from seven weeks to a full semester. The university routinely utilized End-of-Course surveys via SnapSurveys.com. Eveslage, Dye, and Wilson (2007) indicated that online surveys are becoming more widely accepted as a viable option to be used for data collection in research. This study used that form of data collection not only because students at the university were familiar with it but also because it is acceptable in the research community. This survey was administered twice in the same manner as the school’s End-of-Course survey; it was available during the first 14 days of the course and the last 14 days of the course. Not only did students see the survey posted in their course, but instructors were asked to make an announcement asking students to participate in this voluntary survey. Once the students clicked on the web link, they were able to read the letter to the students explaining the study and reiterating the fact that it was confidential, voluntary, and not compensated, which met the necessary conditions for informed consent. If students agreed to participate, they were asked to use their student identification number in order to mask their identity, and then they were directed to complete the survey. When they completed the survey, their data was sent automatically as sealed data via Outlook email to the director of academic assessments, who batched the emails as they arrived and imported them into an Excel file. The data was aggregated each time a new batch was added. When the survey period was over, all the raw data was sent to the researcher via email.

After the data was collected, individual questions were coded—or reverse coded as needed—so that a consistency existed between higher scores and higher levels of religiosity. After the scale scores were computed, the data was analyzed using SPSS Version 18 in order to attain descriptive exploratory analyses—specifically, means and standard deviations.
Finally, each research hypothesis was tested by conducting a paired samples t test, a statistical tool which identifies the difference between two related or dependent sets of scores—in this case, the pre-test and posttest scores—when dependent variables are present (Cronk, 2008; Field, 2009). According to Trochim (2006), paired sample t tests are appropriate in order to test for differences. Because this was a quasi-experimental pretest/posttest study, the differences between what participants self-reported after the course was compared to their self-reported responses from the beginning of class to find a difference. Therefore, paired sample t test was used to analyze the following hypotheses and null hypotheses.

The paired samples t test was used to determine if the two sets of scores were statistically significantly different. Statistical significance was determined by an alpha of .05, and one-tailed tests were used given that the research hypotheses were directional (Field, 2009). The post hoc statistical power was computed for each hypothesis to determine the statistical power for detecting significant differences (Field, 2009). Effect size was also considered as a subsequent measurement of the meaningfulness of the collected data when it was coupled with statistical significance. In terms of effect size, according to Field (2009), $r = 0.10$ is considered as no effect or very small effect; $r = 0.30$ is considered a medium effect; $r = 0.50$ or more is considered a large effect. In other words, the mean scores were used to calculate the p-values, which were used to indicate statistical significance. The post hoc statistical power analysis results were conducted in order to ascertain whether a true difference occurred between the pretest and posttest. On the other hand, effect size calculations were used to rank the order of the components that were examined in terms of how meaningful the difference was with regard to the size of the difference. Overall, the analysis aligns with the raised hypotheses in the empirical data.

RESULTS

The statistical power for all six hypotheses was low. For hypothesis one—ritual religiosity—the 95% confidence interval indicates that the pretest mean score could be as much as 0.10 points lower than the posttest mean score, or it could be as much as 0.18 points higher than the posttest mean score. The post hoc statistical power was .085. For hypothesis two—consequential religiosity—the 95% confidence interval indicates that the pretest mean score could be as much as 0.19 points lower than the posttest mean score, or it could be as much as 0.11 points higher than the posttest mean score. The post hoc statistical power was .080. For hypothesis three—religiosity—the 95% confidence interval indicates that the pretest mean score could be as much as 0.33 points lower than the posttest mean score, or it could be as much as 0.06 points lower than the posttest mean score. The post hoc statistical power was .28. For hypothesis four—experiential religiosity—the 95% confidence interval indicates that the pretest mean score could be as much as 0.76 points lower than the posttest mean score. Notable in the data is the lack of statistical significance although a relatively large mean difference exists. This happened because of the large amount of variability within the samples (Field, 2009). The post hoc statistical power was .45. For hypothesis five—belief component—the 95% confidence interval indicates that the pretest mean score could be as much as 0.18 points lower than the posttest mean score to as little as 0.01 points higher than the posttest mean score. The post hoc statistical power was .61. Overall, the post hoc statistical powers indicated that if a true difference existed, the researcher would detect it only 8.5%, 8.0%, 28%, 32%, 45%, and 61% of the time respectively (Field, 2009).

Similarly, the results for four of the six hypotheses were not statistically significant because an alpha of .05 determines statistical significance (Field, 2009). Hypothesis one, ritual religiosity, yielded $t(25) = 0.57, p = .29$. Hypothesis two, consequential religiosity, yielded $t(25) = -0.53, p = .30$. Hypothesis three, theological religiosity, yielded $t(25) = -1.43, p = .083$.

Hypothesis four, experiential religiosity, yielded $t(25) = -1.56, p = .07$. On the other hand, the results for research hypothesis five and six indicated statistical significance. For hypothesis five, belief component, $t(25) = -1.90, p = .03$. For hypothesis six, Christian walk, $t(25) = -2.33, p = .01$.

The results of this study indicate that online Christian education positively influences students’ belief component and Christian walk. However, empirical evidence in this study did not support that
online Christian education positively influences students’ ritual religiosity, consequential religiosity, theological religiosity, or experiential religiosity. On the other hand, positive mean increases did occur across five out of six outcomes according to the descriptive comparison between the pretest and the posttest scores; ritual religiosity was the only component that had a decrease in the mean score when the posttest was compared to the pretest. Furthermore, based on the effect sizes from each of the hypotheses, students as an entire entity showed some positive change in the following order of categories of religiosity: Christian walk ($r = .42$ / medium to large effect), belief component ($r = .036$ / medium change), experiential ($r = .30$ / medium effect), theological ($r = .27$ / medium effect), ritual and consequential ($r = .10$ / small effect).

Table 1

Results at a Glance

<table>
<thead>
<tr>
<th>Hypothesis 1 – ritual religiosity</th>
<th>Hypothesis 2 – consequential religiosity</th>
</tr>
</thead>
<tbody>
<tr>
<td>P-value = .28 = unsupported</td>
<td>P-value = .30 = unsupported</td>
</tr>
<tr>
<td>Difference in mean = .04</td>
<td>Difference in mean = .04</td>
</tr>
<tr>
<td>lower in posttest</td>
<td>higher in posttest</td>
</tr>
<tr>
<td>Power analysis .08</td>
<td>Power analysis .08</td>
</tr>
<tr>
<td>Effect size was .11, a small negative effect</td>
<td>Effect size was .10, a small positive effect</td>
</tr>
</tbody>
</table>

Hypothesis 3 – theological religiosity

| P-value = .08 = unsupported |
| Difference in mean = .13 |
| higher in posttest |
| Power analysis .27 |
| Effect size was .27, a medium positive effect |

Hypothesis 4 – experiential religiosity

| P-value = .07 = unsupported |

Hypothesis 5 – belief component

| P-value = .03 = supported |
| Difference in mean = .08 |
| higher in posttest |
| Power analysis .44 |
| Effect size was .36, a medium positive effect |

Hypothesis 6 – Christian walk

| P-value = .01 = supported |
| Difference in mean = .08 |
| higher in posttest |
| Power analysis .60 |
| Effect size was .42, a medium-large positive effect |
DISCUSSION

This study examined the extent to which a change in religiosity occurred in undergraduate students in a West Coast Christian university as a result of their participation in an eight-week, online Christian worldview course. Findings from this study can inform and influence Christian institutions as well as departments of theology and Christian studies regarding their goal to fulfill their Christian mission of deepening their students’ relationship with Christ. The empirical evidence from this research lends support to previously conducted studies—such as Ma (2003), Fleischer (2006), and Bertram-Troost, de Roos, and Miedema (2009)—which suggests that religious education has a positive effect on spiritual growth as opposed to Foster and LaForce’s (1999) longitudinal study which did not show any significant changes. Similarly, this data refutes Gresham’s (2006) general claim that college students fail to hold a fundamental knowledge of Christian theological precepts but instead bolsters the HERI (2004) study that suggested that a majority of students manifest tangible evidence of religion/spirituality.

This study contributes to filling in the gap of knowledge in the field of education related to whether or not online Christian education produces significant and positive growth for learners. Similarly, results indicating increased religiosity may also have an effect on churches-at-large in that they may institute online bible studies or invest in the technology to offer online interactive seminars to increase revenue. Moreover, a pervasive thought that postsecondary students decrease in levels of religiosity prevails in contemporary society (Uecker et al., 2007) although this demographic desires to explore this dimension of themselves (Lindholm et al., 2005). The significance of this study may counter that assumed cultural phenomenon. Another area of importance is that this study builds on results from the original study of Bassett et al. (1981), which served to identify Christians through the “observable and measurable life pattern which is distinctly Christian” (p. 342). Also important is that it builds on Ma’s (2003) study by employing one of the recommendations for future research, thus adding to the body of knowledge to include data pertaining to online Christian studies. An additional contribution stems from assessing the justification of teaching Christian education courses online to counter Kelsey’s (2002) concern regarding the appropriateness of Christian theological education in a virtual setting that seemingly disconnects the participants in time and space.

RECOMMENDATIONS FOR FUTURE RESEARCH

Future researchers could build on this study by improving the methods of implementation as well as by varying the demographics of this study, which could improve the chances of attaining statistical significance. For example, because this study is not generalizable due to the low number of participants, one way to increase participation could be to ask the third parties to email the survey link directly to the students instead of requiring the students to find the survey on the course themselves. Additionally, sending the posttest survey link only to those students who participated in the pretest could eliminate a large number of unmatched posttest responses. This step would cut out any confusion through this focused posttest invitation. Also, because there was some participant confusion surrounding directions for entering their identification number, some responses had to be eliminated or could not be properly matched. In order to avoid the problem of non-numerical responses and similar issues, perhaps the survey itself can be programmed in such a way to anticipate and forestall such problems. Similarly, attention should be made to include some hindrance within the survey to prevent a participant from taking the same survey with the same identification information multiple times.

In addition to these suggestions for improving the instrument mechanics and deployment, the following are recommendations for variations of this study: (a) instead of using just one nondenominational Christian university as the venue to collect data, conduct a similar study and include a Catholic university as well as a secular university for further comparison; (b) inquire what the students’ initial religious background is at the onset of the study to investigate whether growth between Christians and non-Christians vary; (c) seek to reach a more balanced, gender-equal study to ascertain whether gender does play a part in changes in religiosity; (d) conduct a study to investigate whether age impacts a change in religiosity through the medium of online theology courses; (e) conduct a study which includes all undergraduate Christian studies courses instead of just the foundational, required one; (f) conduct a mixed study that adds a qualitative aspect in order to incorporate specific student feedback to their experience.
CONCLUSION

As this current study occurred through a post-secondary institution with a unifying Christian worldview, one could reasonably expect that areas of religiosity changed because of the draw of like-minded Christian individuals who may desire and be open to that spiritual exploration. Modern education continues to value critical thinking skills and self-reflection as elements of higher and deeper levels of Bloom’s (1956) taxonomy, and Callan et al. (2009) echo that synthesizing ideas as opposed to a didactic style of education merits more efficacious learning. A tension exists, however, regarding online education. The data of this study indicated positive increases occurred in the areas of consequential, theological, experiential, belief, and Christian walk—five out of six hypotheses—according to the descriptive comparison between the pretest and posttest scores. What the data also suggests is that there are plenty of opportunities within the Christian community to deepen believers’ level of religiosity as well as introduce the basic tenets to those less formed in the Christian faith.

Nevertheless, what one must consider in a study pertaining to religiosity is that while the statistics may not be empirically significant, each human being who is a participant is “made in the image and likeness of God” (Genesis 1:27). Therefore, increased levels of religiosity—even for one person—have significance especially in light of the mission of Christianity itself as well as the mission of Christian universities, to help foster a deeper relationship with Jesus Christ and to “Go and make disciples of all nations” (Matthew 28:19). Overall, this study offers encouragement to this Christian university’s administration and faculty members of the Christian Studies department.

Author Biography

Jo Ann Alicia Foley Markette earned a B.S. in Education from Indiana University of Pennsylvania, a Master of Arts in Theatre from Villanova University, a Master of Arts in Theology from St. Charles Borromeo, and a Doctor of Education in Organizational Leadership from Grand Canyon University. A veteran English teacher, Dr. Markette has served in secondary public education for 17 years as well as in Catholic education in the Theology Department at DeSales University as an adjunct instructor for non-traditional students for over seven years. Her experience as both a face-to-face and online instructor at DeSales University served as the impetus for her dissertation topic as she witnessed her students’ dramatic life changes as they encountered Christ and the Church’s teaching in both her traditional and online classrooms. Currently, she is the Director of the University of Mary Tempe, and serves that institution as an Assistant Professor teaching Catholic studies and theological studies courses.
References


