Growing Thinking Christians: An Investigation of the Outcomes of Christian Education

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This investigation compared the influence of public and Christian high schools on the spiritual formation and academic achievement of college students. Recent high school graduates who attend a private, liberal arts university in the southeastern United States responded to an online survey and interview questions related to the influence of one's high school experience on spiritual formation and academic achievement. Significant differences were found between high school type and the type of problems faced by students and teachers, students' ability to intelligently defend their faith, and students' perceived ability to function in a diverse world.

KEYWORDS spiritual formation, public and private Christian education, Christian higher education

INTRODUCTION

According to the Council for American Private Education (CAPE), in 2009–2010, approximately 10% of American PK–12 students were enrolled in private schools. Of these students, approximately 80% attend religiously affiliated schools (Council for American Private Education). In 2010, the National Center for Education Statistics (NCES) released a report on school trends from 1993–2007. According to the report, in 2007, 79% of American children in religious schools had parents who said they were very satisfied, overall, with the school, compared to 52% of parents who were very satisfied with their child's assigned public school. Seventy-two percent of parents

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whose children attended a religious school were very satisfied with their child's teacher, 82% of parents were very satisfied with the academic standards, and 81% were very satisfied with the order and discipline their child received, compared to 57% of parents who were very satisfied with their child's teacher in the assigned pubic school; 56% who were very satisfied with academic standards, and 55% who were very satisfied with the order and discipline of the assigned public school.

Many religious schools have in their mission/vision statements the goals of nurturing and supporting the growth of the mind, body, and spirit of young people. However, the attainment of these goals has not been comprehensively measured or assessed. Are students who graduate from Christian high schools in the United States spiritually and academically prepared for the challenges of higher education? How does this preparation compare to students who graduate from public high schools? This study examined the influence of school type during the high school years on subsequent spiritual formation and academic achievement of its graduates.

SPIRITUAL FORMATION

Increased faith and spiritual growth are not apparent in many college-age young people whether or not they have been educated in Christian schools. As early as 1977, Astin found decreases in religious behaviors of college students at both public and selective, prominent, nonreligious colleges and universities. A 4-year longitudinal study conducted by Madsen and Vernon (1983) found a significant decrease in traditional religiosity of college students, with 50% of study participants indicating a decrease in religiosity over a 4-year period. Similar results were found by Railsback (1994) who reported that 34% of all students who entered a public university claiming to be "born again" no longer held to their faith 4 years later upon graduation. A more recent study by Railsback (2006) found that 27% of students who attended public universities "fell away" from "born again" status compared to the 34% in the earlier cohort. Results from the early cohort also showed that 28% of self-proclaimed Christian students, upon completion at a public university, had not attended a church or religious service in the previous year. In the more recent cohort, 32% of respondents at public universities indicated not attending religious services at all. If one combines the two percentages for each cohort, 62% in the early cohort deliberately or subtly stepped away from their faith as did 59% of students in the later cohort. In other words, more than one out of two Christian young people at public universities discard their faith by the time they finish their undergraduate degree. Steve Henderson (2003) further established the negative impact public universities have on students' faith. He found that it was difficult for students to maintain their Christian faith at private colleges that have a history of religious affiliation but have fallen away from those roots. Up to two thirds of Christian students abandoned their relationship with God at these institutions.

Students attending Christian schools of higher education are also likely to encounter challenges to their spiritual growth and formation. Joeckel and Chesnes (2010) argued that in an effort to protect against secularization, many Christian colleges and universities cultivate homogeneity in culture/climate, political ideology, theology, and epistemology. As such, the intellectual and spiritual growth of students on these campuses could be limited and stifled.

Nevertheless, some researchers' results suggest that attending a religiously affiliated institution benefits spiritual growth and formation. Ma (2003) found that students who attended a Christian college reported positive spiritual growth as a result of their experience. Students reported that nonacademic factors such as relationships with peers, engaging in personal spiritual disciplines, and praise and worship opportunities had a bigger influence on their spiritual growth than academic factors. In addition, those students who lived on campus reported more positive spiritual growth experiences than those living off campus. This finding supports a similar one by Wighting and Liu (2009) who reported a moderate, positive correlation, r (71) = .62, between sense of community and sense of religious commitment for Christian high school students. Furthermore, in 2000, Gay reported that for middle school and high school students, religious lessons and corporate worship promoted spiritual development by helping them to acquire a better understanding of their own beliefs as well as those held by other people. These findings corroborate those of Small and Bowman (2011) that evangelical students reported strengthening in their faith while in college (in contrast with other groups).

Overall, previous research indicates that a religious school experience has a positive impact on spiritual growth and formation. However, more research is needed to investigate whether the apparent benefits to spiritual formation "carry over" from high school to college. What impact does one's high school experience have on spiritual preparation and formation during the college years? The current study sought to address this question.

ACADEMIC ACHIEVEMENT

According to the U.S. Department of Labor, Bureau of Labor Statistics (2011), 68% of 2010 high school graduates were enrolled in colleges or universities by the fall of 2010 with approximately 60% attending 4-year institutions. Recent data indicate that only 26% of high school students who took college preparatory courses are prepared and ready for college level work in English, mathematics, science, and social studies with 19% of students not adequately prepared in any of the stated content areas (Arenson, 2007). Students who did not take the core college prep classes fared less well, with only 14% determined to be equipped to handle college work in all four areas; 36% were not prepared to assume college level work in any area.

With only one quarter of high school graduates seemingly prepared and ready for college in the United States, one might wonder whether or not students who graduate from private schools fare better than those who graduate from public schools. The College Board, which publishes and scores the Scholastic Aptitude Test (SAT), reported in 2010 that private school students, who accounted for 16% of SAT test takers, outperformed public school students on the writing, verbal, and math sections of the SAT. The average SAT writing score for public school students was 488, compared to 530 for students in religious schools. The average SAT score on the critical reading portion of test was 498 for public school students, compared to an average score of 533 for religious school students. Finally, average math scores were 511 and 534 for public and religious schools respectively.

Some researchers argue that students in private schools exhibit higher levels of achievement and attend college at higher rates than students who attend public schools (Coleman, Hoffer, & Kilgore, 1982; Falsev & Heyns, 1984; Jeynes, 2005). One of the foremost researchers in this area is William Jeynes, who studied the impact of religious schools and religious commitment on academic achievement. In 2005, Jeynes conducted a meta-analysis of research that investigated the academic outcomes of low socioeconomic groups who attended religious school with those whose who attended public schools. Results of the meta-analysis indicated that for four of five outcomes (reading achievement, math achievement, science achievement, social studies achievement, and student behavior), low-income students attending religious schools showed statistically significant positive gains over low-SES students attending public schools. Furthermore, the advantage of attending a religious school appeared to be greater for middle and high school students than for elementary school students. Finally, results indicated that when students who attend religious schools are compared and socio-economic status (SES) is controlled for, students in the lowest SES quartile had the greatest benefit academically; in addition, there was a noticeable and smaller difference in the achievement gap between high-SES and low-SES in religious schools than those same groups of students in public schools.

In another meta-analysis that used the National Education Longitudinal Study (NELS) dataset, Jeynes (2007) found that when the data were adjusted for SES status and for gender, African American and Latino adolescents who described themselves as religious and who came from intact families did just as well academically as their Caucasian counterparts. Additional analysis of the NELS dataset, which included family structure as a variable, indicated that adolescent students who reported high levels of religious commitment and who came from nonintact families had significantly higher levels of academic achievement than adolescents who were less religious. When African American and Latino adolescents were examined specifically, the pattern was similar; minorities who were religious and who came from nonintact homes had statistically higher levels of academic achievement than their

less religious counterparts. In sum, it appears that academic achievement is enhanced for students who attend religious schools (over public schools) and/or who have higher levels of religious commitment, regardless of family structure or socioeconomic level.

Within the broader context of religious commitment, an interest in examining the effect of Biblical literacy on academic success and behaviors has emerged. In a recent study, Jeynes (2009) demonstrated that students who had the highest measured level of Biblical literacy also had significantly higher GPAs and significantly higher percentile rankings in test and grade results. These trends in the data remained constant for students whether they attended a private Christian school or a public school.

Despite the results reported by Jeynes (2009), earlier researchers have concluded that, when relevant variables such as socioeconomic status levels are controlled for, the differences in cognitive abilities and achievement between private and public school students are minimal (Alexander & Pallas, 1983; Cain & Goldberger, 1983).

Overall, research on these issues seems to have produced mixed results, and more research is warranted. In addition, little research has addressed the question of whether or not private schools, and more specifically, private Christian schools prepare graduates for the academic challenges of college life. Are students who graduate from Christian high schools adequately prepared for college? Are they prepared academically? Are they prepared spiritually?

DEFINITION OF TERMS

Spiritual Formation

The scripture from I Peter 3:15 inspired the researchers' definition of spiritual growth and development and served to guide the research questions addressed in the study:

- Has your high school education prepared you to live out your Christian faith in the world?
- Has high school prepared you to intelligently defend your faith and share it with others?
- Has high school prepared you to function in a diverse world?
- How can Christian education better support your academic and spiritual development?

Academic Achievement

In this study, academic achievement was defined by self-reported measures of student perceptions of their preparation for college level work. The guiding research question in this area of the study was: Has your high school education prepared you to be successful academically at the university level?

METHOD

Participants

Participants were selected from the total population of currently enrolled students at a private, Christian university in the southeastern part of the United States. Southeastern University (SEU) is located in central Florida and is one of 28 independent colleges and universities in Florida and one of 11 private Christian universities in Florida. The student population at SEU in fall 2009 was 2,950 undergraduate and graduate students. Fifty-eight percent of the students enrolled in that semester were female, and 42% were male. Sixty-three percent of the students enrolled in fall 2009 came from within the state of Florida. Three and a half percent of the total student population came from 40 different countries world-wide. At the time of this study, the racial/ethnic composition of the student population at SEU was determined to be 25% minority. Two thirds of the student population at SEU came from public high schools, while one third came from private schools or homeschools.

Thirty-five percent of SEU students who reported their denominational affiliation ($n = 2215$) in fall 2009 claimed affiliation with Pentecostal churches; 21% claimed affiliation with nondenominational or multidenominational congregations; 17% reported affiliation with mainline Protestant churches; 4% reported affiliation with Catholic or other churches; and 25% of the students did not respond to the question on the admissions application.

Participants in this study were recruited via an e-mail to all faculty, staff, and students ($n = 3158$) requesting their participation in an online survey developed by the researchers. Two-hundred-fifty-three students (79% of the respondents) responded to the online survey.

Seventeen percent of the student respondents classified themselves as freshmen, 22% were sophomores, 30% were juniors, 24% were seniors, and 8% were classified as graduate students. Seventy percent of the student respondents attended public high schools, and 29% attended private Christian schools during their high school years; 1% of those surveyed attended private secular high schools, attended more than one type, or were homeschooled.

One-hundred-twenty-seven currently enrolled students participated in face-to-face interviews. The mean age of this sample of students was 22. Of the 127 interviews that were conducted, 114 were suitable for analysis.

Procedures

PHASE I

This research study consisted of two phases. During phase one, an online survey was distributed via e-mail to all faculty, staff, and students ($n = 3158$) at SEU with the view of compiling comparison data at some point in

the future. Students were contacted twice more during the semester to complete the survey if they hadn't already done so. The survey was configured so that a respondent could take the survey just once. Most items provided open-ended sections so that students could not only respond, but also make comments anonymously.

From the 253 student responses to the online survey, 183 currently enrolled students were selected who were recent high school graduates (since 2005). This sample of students was invited to participate in face-to-face interviews to gain further information. Graduate and undergraduate student interviewers were trained by the researchers and given contact information to personally approach students who had taken the online survey to schedule face-to-face interviews.

PHASE II

During the spring 2010 semester, interviewers conducted 127 face-to-face interviews with recent high school graduates currently enrolled at Southeastern, many of whom did not fill out the online survey. Of the 127 interviews, 114 were suitable for analysis. Fifty-three of the 127 interviewees also filled out the online survey, allowing the researchers to triangulate data from two different sources.

Researchers and a graduate research assistant compiled the data during the summer months of 2010. The researchers were looking primarily for trends in the data and for comparisons between those graduating from public versus Christian high schools.

Instruments

For purposes of this study, two instruments were developed for data collection purposes. First, an online survey was created and distributed to the campus community. This survey sought to elicit information pertaining to respondents' high school experiences, including the influence of high school experience on spiritual formation and academic achievement. Students who completed the online survey were invited to participate in face-to-face interviews with trained interviewers. The interviewers asked 127 students a series of open-ended questions pertaining to their high school experience. Because these instruments were created by the primary researchers for use in the present study, no reliability or validity data are available.

RESULTS AND DISCUSSION

The purpose of the current study was twofold. First, this study investigated the influence of high school type, public versus private Christian, on

students' spiritual formation. A second purpose of this study was to examine the influence of school type on students' perceptions of academic achievement and preparation for university level work. This section discusses the findings related to the previously stated purposes by focusing on the trends observed and supported by the research findings.

Spiritual Formation

One of the primary tasks during adolescence is the formation of a personal identity. According to Erikson (1968), identity formation is a dynamic, developmental process that begins at birth and culminates during the adolescent period. One aspect of identity development involves the exploration and solidification of religious beliefs and values, in essence, spiritual formation. This study examined the influence of school type during the adolescent years on subsequent spiritual formation as operationalized by ratings of statements related to spiritual disciplines and fruits of the spirit in an online survey and responses to interview questions.

ONLINE SURVEY RESULTS

Several notable trends were observed in the research results. One of the surprising findings of this study was that, contrary to predictions, public school students reported in the online survey that the antagonism and hostility to Christian faith and values in public high schools served to strengthen students' commitments to Christ, taught them how to resist peer pressure and how to defend their faith intelligently, and increased their desire to share the gospel through witnessing. Sharing the gospel is considered to be one of the indicators of stage 3 in both Fortosis' model (1992) and Willett's model (2010) of spiritual growth and development. Many public school students felt that their high school was a mission field. Ninety-five percent of the survey respondents indicated that they were able to defend their faith effectively and respectfully (Table 1). While public and Christian school graduates did not differ significantly on their ability to defend their faith intelligently or to share their faith with others, their reported influence from high school on these same measures was significantly different (see Table 4). Christian school graduates were significantly more influenced by their high school experience to intellectually defend their beliefs ($p < .001$) and to share their faith with others ($p < .004$).

Public and Private Christian graduates were not significantly different with regard to responses on most of the spiritual formation statements (Table 3), except for the item on respecting the beliefs of others. Public school students reported significantly greater ability to respect beliefs of others ($p < .049$), probably due to the greater diversity in public schools.

TABLE 1 Frequencies, Percentages, and Means of Survey Responses to Spiritual Formation Statements ($n = 182$)

	Very true	Mostly true	Somewhat true	Not true	Count	Mean
I feel that I can worship God in a variety of places using a variety of means.	**72% (131)**	20% (37)	7% (12)	1% (2)	182	2.63
I regularly thank God for what He is doing in my life.	**78% (142)**	14% (26)	6% (10)	2% (4)	182	2.68
I spend regular quality time in God's Word and in prayer.	36% (65)	**39% (72)**	23% (42)	2% (3)	182	2.09
I am usually able to help people in need without being judgmental towards them.	**47% (85)**	45% (83)	7% (13)	1% (1)	182	2.38
I have a strong desire to know God better.	**88% (160)**	10% (19)	2% (3)	0.0% (0)	182	2.86
I consistently integrate my faith with my education.	**48% (87)**	35% (63)	16% (30)	1% (2)	182	2.29
I feel loved by God.	**86% (155)**	10% (19)	3% (6)	1% (1)	181	2.81
I take my studies seriously and make classes a priority.	**63% (115)**	29% (52)	8% (15)	0.0% (0)	182	2.55
I enjoy helping others.	**80% (145)**	18% (33)	2% (4)	0.0% (0)	182	2.77
I am able to think critically about important social issues.	**48% (88)**	43% (79)	8% (14)	1% (1)	182	2.40
I am able to defend my beliefs in a respectful manner.	**55% (101)**	40% (72)	5% (9)	0.0% (0)	182	2.51
I respect the beliefs of others.	**62% (112)**	32% (59)	6% (11)	0.0% (0)	182	2.55
I am able to share my faith with others.	**41% (74)**	**41% (74)**	17% (33)	1% (1)	182	2.21
I appreciate the multicultural nature of the university.	**70% (127)**	22% (40)	8% (15)	0.0% (0)	182	2.62
I take responsibility for my actions rather than blame others.	**60% (109)**	39% (70)	1% (3)	0.0% (0)	182	2.58
I am open to receiving constructive feedback from others.	**51% (93)**	40% (72)	9% (17)	0.0% (0)	182	2.42
I have learned to be honest with myself and a few significant others about my doubts, feelings, beliefs, and struggles.	**70% (127)**	24% (44)	5% (10)	1% (1)	182	2.63

Note. Students were asked to rate the statements using the following scale: 3 (*very true*); 2 (*mostly true*); 1 (*somewhat true*); 0 (*not true*). The most frequent responses are displayed in bold.

Christian school graduates reported significantly greater influence from high school than public school graduates on the following measures (see Tables 2 and 4): taking their studies seriously ($p < .010$), helping others ($p < .027$), intelligently defending their beliefs ($p < .001$), sharing their faith with others ($p < .004$), taking responsibility for their actions ($p < .001$), receiving constructive criticism ($p < .049$), and being honest with themselves about doubts and beliefs ($p < .010$). These results are corroborated by comments on the survey and in the interviews.

TABLE 2 Frequencies, Percentages, and Means of Survey Responses to Influence of High School on Spiritual Formation (*n* = 182)

	Very influential	Moderately influential	Somewhat influential	Not influential	Count	Mean
I feel that I can worship God in a variety of places using a variety of means.	6% (11)	17% (30)	22% (40)	**55% (100)**	181	0.73
I regularly thank God for what He is doing in my life.	17% (31)	17% (31)	21% (38)	**45% (80)**	180	1.07
I spend regular quality time in God's Word and in prayer.	7% (13)	12% (22)	24% (43)	**57% (102)**	180	0.70
I am usually able to help people in need without being judgmental towards them.	14% (26)	29% (51)	**31% (56)**	26% (47)	180	1.31
I have a strong desire to know God better.	17% (31)	17% (30)	19% (35)	**47% (84)**	180	1.04
I consistently integrate my faith with my education.	13% (24)	9% (17)	25% (44)	**53% (95)**	180	0.83
I feel loved by God.	16% (28)	18% (33)	19% (35)	**47% (84)**	180	1.26
I take my studies seriously and make classes a priority.	**36% (65)**	31% (56)	17% (31)	16% (28)	180	1.88
I enjoy helping others.	21% (37)	**33% (59)**	24% (44)	22% (40)	180	1.52
I am able to think critically about important social issues.	22% (40)	30% (54)	**35% (62)**	13% (23)	179	1.62
I am able to defend my beliefs in a respectful manner.	20% (36)	22% (40)	**31% (55)**	27% (49)	180	1.31
I respect the beliefs of others.	27% (49)	26% (46)	**28% (51)**	19% (34)	180	1.61
I am able to share my faith with others.	15% (27)	24% (43)	29% (52)	**32% (58)**	180	1.22
I appreciate the multicultural nature of the university.	22% (40)	25% (45)	25% (45)	**28% (50)**	180	1.42
I take responsibility for my actions rather than blame others.	17% (31)	**31% (56)**	25% (45)	27% (48)	180	1.39
I am open to receiving constructive feedback from others.	19% (34)	28% (51)	**35% (62)**	18% (32)	179	0.82
I have learned to be honest with myself and a few significant others about my doubts, feelings, beliefs, and struggles.	12% (22)	20% (37)	32% (57)	**36% (64)**	180	1.09

Note. Respondents were asked to rate the influence of their high school education on their rating using a scale of 3 (*very influential*); 2 (*moderately influential*); 1 (*somewhat influential*); and 0 (*not influential*). The most frequent responses are displayed in bold.

Analysis of the survey item "I appreciate the multicultural nature of the university," indicates that 92% of the respondents indicated "very true" or "mostly true" for both school types (Table 1). Even though private Christian school students reported in the survey that their schools were not as diverse

TABLE 3 Average Ratings of Spiritual Formation Statements by High School Type (*n* = 179)

	Public high school		Private Christian school	
	Mean rating	Mean rating of high school influence	Mean rating	Mean rating of high school influence
I feel that I can worship God in a variety of places using a variety of means.	2.63	0.40	2.68	1.62
I regularly thank God for what He is doing in my life.	2.67	0.74	2.70	1.96
I spend regular quality time in God's Word and in prayer.	2.11	0.40	2.08	1.51
I am usually able to help people in need without being judgmental towards them.	2.39	1.23	2.42	1.53
I have a strong desire to know God better.	2.86	0.67	2.88	2.10
I consistently integrate my faith with my education.	2.25	0.43	2.44	1.92
I feel loved by God.	2.78	0.65	2.88	2.10
I take my studies seriously and make classes a priority.	2.54	1.72	2.60	2.18
I enjoy helping others.	2.76	1.40	2.76	1.80
I am able to think critically about important social issues.	2.42	1.57	2.40	1.75
I am able to defend my beliefs in a respectful manner.	2.55	1.19	2.46	1.78
I respect the beliefs of others.	2.60	1.60	2.40	1.59
I appreciate the multicultural nature of the university.	2.62	1.50	2.60	1.14
I take responsibility for my actions rather than blame others.	2.60	1.22	2.52	1.84
I am open to receiving constructive feedback from others.	2.47	1.41	2.32	1.73
I have learned to be honest with myself and a few significant others about my doubts, feelings, beliefs, and struggles.	2.64	.97	2.58	1.41
	N = 129	N = 129	N = 49	N = 49

Note. Students were asked to rate the statements using the following scale: 3 (*very true*); 2 (*mostly true*); 1 (*somewhat true*); 0 (*not true*). For the same statement, respondents were asked to rate the influence of their high school education on their rating using a scale of 3 (*very influential*); 2 (*moderately influential*); 1 (*somewhat influential*); and 0 (*not influential*).

as those of graduates of public schools (Table 5), most of the students from both types of schools believe that they have made the adjustment to the multicultural nature of the university, which is evidence of spiritual growth. However, public school students were significantly more influenced by their

TABLE 4 *t* tests of Significance Between Public and Private Christian School Graduates on Responses to Spiritual Formation Statements and Influence From High School (*n* = 179)

	Public × Christian re: truth of statement	Public × Christian re: influence from high school
I feel that I can worship God in a variety of places using a variety of means.	*t* = 0.645	*t* = 0.00
I regularly thank God for what He is doing in my life.	*t* = 0.787	*t* = .0.00
I spend regular quality time in God's Word and in prayer.	*t* = 0.834	*t* = .0.00
I am usually able to help people in need without being judgmental towards them.	*t* = 0.798	*t* = 0.078
I have a strong desire to know God better.	*t* = 0.767	*t* = 0.00
I consistently integrate my faith with my education.	*t* = 0.134	*t* = 0.00
I feel loved by God.	*t* = 0.251	*t* = 0.00
I take my studies seriously and make classes a priority.	*t* = 0.557	*t* = 0.010**
I enjoy helping others.	*t* = 0.985	*t* = 0.027*
I am able to think critically about important social issues.	*t* = 0.832	*t* = 0.263
I am able to defend my beliefs in a respectful manner.	*t* = 0.384	*t* = 0.001***
I am able to share my faith with others.	*t* = 0.216	*t* = 0.004**
I respect the beliefs of others.	*t* = 0.049*	*t* = 0.978
I appreciate the multicultural nature of the university.	*t* = 0.885	*t* = 0.057*
I take responsibility for my actions rather than blame others.	*t* = 0.364	*t* = 0.001***
I am open to receiving constructive feedback from others.	*t* = 0.241	*t* = 0.049*
I have learned to be honest with myself and a few significant others about my doubts, feelings, beliefs, and struggles.	*t* = 0.571	*t* = 0.010**

Note. Students were asked to rate the statements using the following scale: 3 (*very true*); 2 (*mostly true*); 1 (*somewhat true*); 0 (*not true*). For the same statement, respondents were asked to rate the influence of their high school education on their rating using a scale of 3 (*very influential*); 2 (*moderately influential*); 1 (*somewhat influential*); and 0 (*not influential*).
*$p < .05$. **$p < .01$. ***$p < .001$.

high schools (Table 4) than Christian school students ($p < .057$). Analysis of the open-ended responses to the diversity survey item indicated that private Christian school graduates tended to consider diversity with regard to race, while public school students considered a broader variety of differences, including race, religious backgrounds, handicapping conditions, and sexual orientation of both faculty and students.

ANCILLARY SURVEY RESULTS

As anticipated, students from public high schools reported significantly higher incidences of school problems on the survey, as depicted in

TABLE 5 Frequencies and Percentages of Online Survey Responses on Diversity of Students and Faculty at High School ($n = 180$)

	Very diverse	Moderately diverse	Slightly diverse	Not diverse at all
Public $n = 129$	42	48	29	10
	33%	37%	22%	0.78%
Private Christian $n = 51$	7	11	28	5
	14%	22%	55%	0.49%

TABLE 6 Descriptive Statistics for School Problems by School Type ($n = 183$)

	Number		Mean		Standard deviation	
School problem	Public	Private Christian	Public	Private Christian	Public	Private Christian
Verbal bullying	130	51	2.15	1.59	0.76	0.83
Physical bullying	128	51	1.84	0.84	0.77	0.70
Plagiarism	130	50	1.97	2.20	0.74	1.05
Cheating	130	51	2.38	1.92	0.70	0.72
Students disrespecting teachers	130	51	2.30	1.78	0.70	0.67
Students disrespecting students	130	51	2.42	1.90	0.64	0.67
Teachers disrespecting teachers	130	51	0.87	0.63	0.68	0.72
Teachers disrespecting students	130	50	1.08	0.84	0.67	0.84
Racial tension	128	51	1.35	0.53	0.95	0.70
Alcohol use	130	51	2.18	1.20	0.83	0.96
Drug use	130	51	2.22	1.00	0.76	0.77
Teen pregnancy	130	51	1.87	0.55	0.82	0.64

Tables 6 and 7. All the indicators on the online survey items related to school problems were significantly different for the two high school types except plagiarism and teachers disrespecting students. The nonsignificant differences found between the two school types on the item related to teachers disrespecting students are the result of low incidence of that behavior in both public and private Christian schools.

Parents of private Christian school students will probably be encouraged by significantly fewer problems at Christian schools in this sample, especially for alcohol/drug use, bullying, and teen pregnancy, perennial concerns for most parents. However, the nonsignificant differences found in plagiarism should promote parent/student discussions about these moral issues.

Public school respondents felt that promoting religious freedom and critical thinking would improve school climate. One public school graduate wrote in a comment, "Teachers can't even discuss important ideas if they have *any* sort of religious overtones. What kind of a culture do you expect when living and working under those conditions?"

TABLE 7 *t* tests of Independent Samples of School Problems by School Type (*n* = 183)

Variable	*t* value	Degrees of freedom	*p* value (sig. level)
Verbal bullying	4.336	179	*p* =.001*
Physical bullying	7.965	177	*p* =.001*
Cheating	3.987	179	*p* =.001*
Plagiarism	1.425	68.35 (equal variances not assumed)	*p* =.159
Students disrespecting teachers	4.505	179	*p* =.001*
Students disrespecting students	4.683	88.255 (equal variances not assumed)	*p* =.001*
Teachers disrespecting teachers	2.127	179	*p* =.035*
Teachers disrespecting students	1.787	73.815 (equal variances not assumed)	*p* =.078
Racial tension	6.348	123.894 (equal variances not assumed)	*p* =.001*
Alcohol use	6.874	179	*p* =.001*
Drug use	9.652	179	*p* =.001*
Teen pregnancy	10.315	179	*p* =.001*

*Denotes statistically significant results.

The public high school students in this sample reported that their high school experience promoted their spiritual growth because they had to defend their faith daily. However, one has to wonder how many Christian students succumbed to the peer pressures to conform to a worldview antagonistic to Christians during high school.

INTERVIEW RESULTS

Public and private Christian school students differed significantly in their responses to the face-to-face interview items related to spiritual formation. Private Christian school students reported that their high school experience better prepared them to intellectually defend their faith, and public school students reported that their high school experience better prepared them to function in a diverse world. Chi square analysis revealed a highly significant difference between responses to the interview item related to ability to intelligently defend faith for those who attended public schools and those who attended private Christian schools, χ^2 (1, *n* = 114) = 14.48, *p* = 0001. Students who graduated from private Christian schools were significantly better prepared to intellectually defend their faith than students from public schools. With regard to the interview item related to ability to function in a diverse world, public school students reported significantly different responses χ^2 (1, *n* = 112) = 12.31, *p* = .0005. Public school graduates felt

that they were better prepared to function in a diverse world than private Christian school graduates.

Both public and private Christian school graduates reported in interviews that their high school experience was not the major influence on their spiritual formation, but rather their families, homes, churches, mission opportunities, and youth groups. The results of interviews point to the absolutely critical need for strong youth groups to adolescents' overall spiritual growth, especially those who attend public schools. Students who reported strong youth groups described them as those that (a) provide Christ-centered teaching vs doctrinal instruction, (b) give direct instruction in evangelizing, (c) are action oriented as defined by direct involvement real-world contexts such as missions and social justice issues. These findings related to what churches and schools can do to enhance spiritual development corroborate those of Smith and Denton (2005) in the National Study of Youth and Religion.

Chi square analyses indicated that there were no significant differences between school type and level of involvement in community service χ^2 (3, $n = 163$) $= 1.41$, $p = .7032$. This finding is not especially surprising since the majority of students in this sample are from Florida, and 75 hours of documented community service are required for college scholarships at any of the public or private colleges and universities in the state.

Forty-four percent of the students who were interviewed indicated that they held leadership positions at the university, which was a slight decline from leadership percentages reported, on average, during high school years. Given the emphasis on servant leadership in most Christian schools, this finding merits further exploration.

In the interviews, students were asked to discuss any rebellious periods they had in high school; 30% of the private Christian school students and 19% of the public school students reported that they had no rebellious periods, which leads to questions about spiritual formation versus spiritual acquiescence. According to Erikson (1968), young people must inevitably go through a separation period from parents and significant others in order to establish their own identities. However, the interviewers reported that the private Christian school students were more reluctant to share their stories than the public school students.

Academic Achievement

Ninety-eight percent of the respondents to the online survey indicated that they attended high schools focused on college preparation. Results of the survey to items related to academic achievement indicate that this sample of students perceive themselves to have been well-prepared for college-level work regardless of the type of high school they attended (Table 1). In interviews, 84% of the public school students said that they were adequately

prepared, while 94% of the private Christian school students responded in the same way. Sixteen percent of the public school students said they were not adequately prepared, while only 6% of the private Christian high school graduates felt that they were not adequately prepared for college level work.

For those students who reported that their high school did not prepare them adequately for college-level work, the most frequently cited problem was insufficient preparation for the amount of reading required and insufficient development of writing skills.

Ninety-two percent reported in the survey that they take their studies and classes seriously, and two thirds of those students indicated that their high schools were "very or moderately influential" on their ratings (Table 1). Students in this sample self-reported their perceptions that they were adequately prepared to think critically and to successfully face challenging work. These students believed that they know how to study and to do well on tests. Approximately half of the students interviewed indicated that they took AP, honors, or dual enrollment courses at their high school. Several students pointed out that they turned down excellent scholarships to other colleges and universities in order to get a Christian education at SEU.

ANCILLARY INTERVIEW RESULTS

Students were asked what their high schools could do to improve, and the results were very interesting. Facilities, sports, school finances, technology, class size, and extracurricular activities are not high on this group's list of priorities for improving high school education. These are exactly the items that ARE high on the list of most parents, educators, school boards, and legislators. Suggestions for educational improvement from both public and private school graduates include: the need for hiring and retaining inspiring teachers who model moral behavior daily; the need for school personnel to listen to students and involve them in decision making; better problem-solving skills by school administrators; less favoritism shown to certain students by teachers and administrators; greater focus on authentic learning in real-world contexts; and the need for academic freedom to discuss critical issues without fear of retribution by teachers, administrators, or other students.

The interview findings regarding what high schools did poorly corroborate those from the phase I online survey analysis; public school students report greater incidences of bullying, use of alcohol and/or drugs at school and outside school, cheating, as well as students disrespecting teachers and students disrespecting other students (Table 6). Of those students reporting school size ($n = 68$), 80% came from large high schools (1,001–2,000 students) or extra-large high schools (more than 2,000 students). All (100%) of the students from Christian schools reported attending small schools (less

than 500 students), while 19% of the public high school students came from small or medium sized (501–1,000 students) schools. The correlation of these problems to school size should be explored further.

Limitations

Several limitations evident in this study might be improved upon in future research. In order to better understand participants' current level of identity status attainment, a measure of identity development, such as the Objective Measure of Ego Identity Status (OMEIS) (Adams, Shea, & Fitch, 1979), could be utilized. The interaction between participants' status types and spiritual formation related to school type could then be analyzed.

A second limitation of this study involves the measurement of spiritual formation. In the current study, spiritual formation was measured using an online survey with follow-up, open-ended survey, and interview questions. Future studies might consider using a more standardized measure of spiritual development.

Finally, the use of nonrandom samples of students from a Christian university limits the generalizability of the results.

Recommendations for Future Research

The principal investigators of this study are interested in examining a 360° analysis of spiritual formation, in which friends, colleagues, and significant others report on and validate the accuracy of the self-reports by students on their spiritual formation.

With the above recommendation in mind, future research must consider the model of spiritual formation used and the measurement instrument employed. Many models of spiritual development are stage models that depict discrete stages and categories of the developmental process. However, most instruments used to measure spiritual development involve the measurement of continuous rather than discrete variables. Therefore, future researchers will need to clearly understand the model of spiritual development from which they are working so that proper assessment measures can be employed.

Future research efforts might take a longitudinal approach to the study of spiritual formation and academic achievement during the high school and college years by following a sample of students throughout high school and the college experience. Periodic measures of spiritual formation and academic achievement could be conducted. This longitudinal data should provide a more thorough understanding of spiritual formation during the high school years and its subsequent impact on spiritual formation and academic achievement during the college years.

An interesting study would be to compare faculty perceptions of student responses to the spiritual statements to those of the students to see whether any correlations exist.

Thirty-one percent of the private Christian school responses to interview items indicated that their schools did a poor job of listening to students and respecting their views compared to 10% of the public school responses to the same items. Several of the Christian school interviewees said that the school administration and faculty were more interested in academics and students' acceptance of doctrine than in engaging them in critical thinking about their faith and issues relevant to the real world as they see it. In addition, when private Christian school graduates were asked what their high school could do to improve, 28% of the responses were categorized by the researchers as "promoting religious freedom" compared to 7% of the responses of public school graduates to the same item. These findings need to be probed further through narrative or ethnographic studies.

Jeynes's study in 2009 found significant correlations between academic achievement of Latinos and African American high school students and Christian home environments, involvement with a faith community, and Biblical literacy. This study should be replicated at the university level.

Finally, the researchers are keenly interested in examining academic achievement and spiritual formation and development of SEU students who are studying totally online. Are the online students achieving the same academic and spiritual formation goals as the face-to-face students?

CONCLUSIONS

For 78% of the survey respondents in this study, whether from public or Christian schools, the main reasons for choosing SEU were location, academics, the university's values, Christian environment, the community of believers, the desire to grow spiritually, and God's calling.

Students who attend SEU not only desire to continue the progression of spiritual growth begun in adolescence, but also believe that SEU is a place where this spiritual growth will be fostered. They are not seeking insulation from the world, but rather additional preparation to engage the world as evidenced by acts of service, cultural engagement in important social issues, and a growing walk with God. What might continued spiritual formation look like at the university level? Survey and interview results from the current study indicate that these students desire their Christian education experience to challenge them to grow spiritually and help them learn how to apply their faith in "real world" contexts. They also believe that access to and interaction with Godly professors will challenge them to grow spiritually in a discipling model similar to Estep's (2002). One student said in an interview, "I have learned more here in two years in my knowledge of God and the Bible and

about growing up in Christ than I learned in four years of high school and twelve years of church."

The findings of this study of online survey responses and face-to-face interviews point to a very dedicated group of Christian young people who are focused on academics, intimately connected to a loving God, and who feel confident in their abilities to defend and proclaim the gospel.

Overall, the researchers are encouraged by the level of commitment to a Christian worldview and actions that demonstrate this worldview that were reported by both public and private Christian school graduates at SEU. Based on developmental theory, one may presume that spiritual growth and development will continue as these young people learn and apply new knowledge and skills to their spiritual formation while advancing their academic careers.

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