

## **Mission-Related Outcomes Assessment at a Jesuit Catholic University**

### Abstract

This research utilized an existing survey instrument to measure mission-related outcomes in students at a Jesuit university. The dimensions assessed by the survey included Magis; Cura Personalis; Diversity; Discernment; Ethics and Professional Responsibility; Community Action/Service; Social Justice; Finding God in All Things; Faith, Spirituality, and Religiosity; and Ego-comparative Identity. Mean comparisons between cohorts of entering freshmen and graduating seniors were undertaken to assess mission-related development over the course of the undergraduate experience. Surprisingly, only two constructs (Ethics and Professional Responsibility and Ego-comparative Identity) showed evidence of the hypothesized growth, and four constructs (Cura Personalis, Community Action/Service, Finding God in All Things, and Faith, Spirituality, and Religiosity) yielded results in the opposite direction, such that freshmen scores on each of these dimensions were significantly higher than senior scores, on average. Subsequent analyses additionally included gender and high school type to explore their possible primary and interactive effects on each of the mission dimensions. In addition, the influence of academic performance as well as participation in curricular and co-curricular offerings such as retreats, service learning and volunteering was explored. In general, these factors produce positive effects on most mission-related dimensions, though the specific relationships vary. Additional questions and ideas for further research are discussed.

## **Mission-Related Outcomes Assessment at a Jesuit Catholic University**

Over the past twenty years, accredited colleges and universities have increased their emphasis on assurance of learning and outcomes assessment programs, primarily in response to the demands of accrediting bodies (Jankowski et al, 2018; Liu, 2011; Tremblay, Lalancette, & Roseveare, 2012; Volkwein, 2003). Although the focus has typically been on assessment of discipline-based learning outcomes as a result of coursework (Tremblay et al., 2012), organizations such as the Association of American Colleges and Universities (AAC&U) have identified general traits that graduates of post-secondary educational institutions should exhibit, including intellectual honesty, active citizenship, ethical discernment, and respect for diversity (AAC&U, 2002; 2007). In turn, scholars have advocated for an expansion of outcomes assessment to include the measurement of such characteristics (Loris, 2010; Volkwein, 2003). Volkwein (2003) advocates for colleges and universities to use their missions to contextualize institutional goals and objectives and guide their assessment.

For accredited business schools, mission-driven outcomes assessment is essential. The accreditation standards of the Association to Advance Collegiate Schools of Business (AACSB) emphasize the essential role that a business school's mission must play in setting the priorities for the school and guiding decision making and strategy across the various domains of the educational enterprise, including teaching, scholarship, and civic engagement. Specifically, Standard 1 reads, in part: "The school articulates a clear and distinctive mission, the expected outcomes this mission implies, and strategies outlining how these outcomes will be achieved" (AACSB, 2013, p. 16). The AACSB further requires that "The school systematically evaluates and documents its progress toward mission fulfillment" (p. 17).

Because Jesuit universities, and their schools of business, share a core set of mission principles that are meant to guide their work and direct the development of their students (Jesuit Conference, 2002; Spitzer, 2010), they are well-situated to take the lead on efforts to incorporate mission outcomes into their assurance of learning programs. The present research represents a first attempt to assess growth in mission-related values and characteristics in a cadre of Jesuit university students.

### **Characteristics of Jesuit Education**

Over the past thirty years, numerous Jesuit leaders have articulated the distinctive character of the Jesuit educational endeavor, specifically identifying a number of characteristics that serve as hallmarks of Jesuit education (Kolvenbach, 1987, 2001; McGovern, 1988; Mitchell, 1988; Spitzer, 2010). Building upon this foundation, Patil, Loroz, and Liu (2014) developed a survey instrument to measure whether a commitment to these ideals is evident in students at Jesuit universities. Their refined instrument included measurements of ten constructs, as described below:

- *Magis*. *Magis* is a Latin word meaning for “more” or “to a greater degree” (Geger, 2012). Traub (2002) describes *Magis* as “the spirit of generous excellence in which ministry should be carried out,” or as “continuous quality improvement.” More generally, *Magis* in Jesuit education circles is often thought of as the pursuit of excellence (Kolvenbach, 1987; McGovern, 1988) or quality (Mitchell, 1988). In the instrument developed by Patil, et al. (2014), two dimensions of *Magis* emerged and were subsequently retained: Goal-setting and Attitude toward Improvement.
- *Cura Personalis*. *Cura personalis* is a Latin phrase meaning “care for the [individual] person” (Traub, 2002). In the context of Jesuit education, it typically refers to respect for the inherent dignity of each member of the community and a personal concern for others, manifested in the personal relationships that form among community members (Kolvenbach, 1987; McGovern, 1988; Mitchell, 1988).
- *Diversity*. The mission statements of nearly every Jesuit university express an attitude of respect toward all persons and an appreciation of diverse perspectives and experiences. The important role of diversity in Jesuit education was reaffirmed by Kolvenbach (2007).
- *Discernment*. Discernment is a decision-making process in which the decision maker is attentive not only to reason, but also to what St. Ignatius, the founder of the Jesuit order, called “movements of the soul,” with the goal of choosing the option that produces the greatest good or leads one closer to God (Kolvenbach, 1987; McGovern, 1988; Traub, 2002).
- *Ethics and Professional Responsibility*. Development of personal integrity and foundations for ethical decision making have long been an important aspect of the curriculum at Jesuit universities (Kolvenbach, 2007; McGovern, 1988; Mitchell, 1988; Spitzer, 2010). Students should wrestle with difficult contemporary issues, such as racism, unemployment, poverty, and oppression (Mitchell 1988), and contribute to the welfare of society (Ganss, 1954).
- *Community Action/Service*. A key tenet of Jesuit education is the formation of “men and women for others” (Arrupe, 1973; Kolvenbach, 2001). Students should have direct contact with those at the margins of society (Kolvenbach, 2001), which may be engaged through service and service learning activities (Spitzer, 2010).
- *Social Justice*. The “service of faith and the promotion of justice” was emphasized by Kolvenbach (2001) in his characteristics of Jesuit Education. Spitzer (2010) notes that, “Justice is distinct from service in its attempts to systematically remediate past injuries. While service attempts to help individuals, justice attempts to create better systems and structures which will reshape past

momentums of bias, inequity, and injury into momentums for long term common good” (p.10).

- *Finding God in All Things*. The belief that God is present everywhere and in everyone is a central tenet of Ignatian spirituality (Barry, 1991; McGovern, 1988; Traub, 2002). Thus, Jesuit education recommends being attentive and reverent to the good or divine in all situations (Traub, 2002).
- *Faith, Spirituality, and Religiosity*. Religious and spiritual formation are an essential aspect of Jesuit education (Kolvenbach, 1986, 2001; Mitchell, 1988; Spitzer, 2010). As conceptualized by Patil et al. (2014), this dimension includes participation in religious practice, the value placed on having faith, and the extent to which faith is a guide in decision-making, inclusive of those that do not identify as Catholic or Christian.
- *Ego-comparative Identity*. A person with a primarily ego-comparative identity derives his or her self-worth through comparisons against the achievements or traits of others (Spitzer, 2000). This is in contrast to a contributive identity, which focuses the individual on making an “optimum positive difference” in the world (Spitzer, 2010, p. 3). Spitzer (2010) maintains that Jesuit schools ought to encourage in their students the development of contributive identities over ego-comparative ones. In the final instrument developed by Patil, et al. (2014), only measures of ego-comparative identity exhibited sufficient measurement properties to be retained.

The above group of values and characteristics (with the exception of Ego-comparative Identity, which runs counter to the mission) will be referred to collectively as the “mission principles” for the purposes of the present research.

## Hypotheses

If Jesuit universities truly exemplify the values and characteristics that leaders in Jesuit education have identified, it is reasonable to expect that students at Jesuit universities grow in each of these dimensions over the course of the typical four-year, undergraduate experience. Thus, the present research seeks to test the following primary hypothesis:

H1: Students nearing the end of their undergraduate experience at a Jesuit university will report greater orientations, on average, toward the mission principles than students at the beginning of their undergraduate experience. They will report a lesser orientation toward Ego-comparative Identity.

In addition, it seems plausible to suggest that engagement with curricular and co-curricular activities particularly related to the aforementioned Jesuit education

principles might also produce growth in these areas. As such, the following hypotheses are also of interest:

H2: Greater participation in retreats over a student's undergraduate career will yield greater orientations, on average, toward the mission principles and a lesser orientation toward Ego-comparative Identity.

H3: Greater participation in service learning courses over a student's undergraduate career will yield greater orientations, on average, toward the mission principles and a lesser orientation toward Ego-comparative Identity.

H4: Participation in volunteering over a student's undergraduate career will yield greater orientations, on average, toward the mission principles and a lesser orientation toward Ego-comparative Identity.

## **Survey Instrument and Methodology**

The instrument developed by Patil et al. (2014) is comprised of a 67-item survey encompassing eleven dimensions, with Magis represented as two distinct dimensions related to goal-setting and attitude toward improvement. (See Appendix for constructs and survey items.) This survey was used to conduct a cross-sectional survey of incoming freshmen in September 2015 and graduating seniors in April 2016 at a single Jesuit university. The objective of this approach was to assess average mission-related growth of students during the course of their undergraduate experience. In addition, demographic information (e.g., gender, high school type, major school/college) and other behavioral outcomes of interest (e.g., participation in retreats, service learning, and volunteering) were collected to allow for a finer understanding of mission development between different groups of students and to test the hypotheses related to participation in various curricular and co-curricular activities.

A link to an online version of the survey was distributed by email to all freshmen and seniors. As an incentive for participation, students in each of the two cohorts were offered a chance to win one of 50 gift cards valued at \$25.<sup>1</sup> The freshmen survey generated 435 partial or complete responses. Approximately 58% of these respondents were female, slightly higher than the undergraduate population at the university which is 54% female. The senior survey generated 325 partial or complete responses. The senior sample skewed even more heavily female, with 64% of the respondents identifying as such. Demographics of the two samples are included in Table 1.

-----Insert Table 1 about here-----

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<sup>1</sup> In a pre-test, a convenience sample of students at the institution was provided with incentive options ranging from a small amount per participant to a single large prize. This arrangement was deemed the most likely to produce participation.

## Analysis and Results

### Combined Freshmen and Senior Data

All items were measured on a 5-point rating scale where responses were coded as 5="Strongly Agree," 4="Agree," 3="Neutral," 2="Disagree," and 1="Strongly Disagree." For each of the eleven mission-related constructs, a reliability analysis was conducted in order to confirm the appropriateness of using the associated items as a measure of a single underlying factor. Cronbach's alphas for these constructs ranged from .73 to .99, exceeding the satisfactory threshold of .70. As a result, composite variables for each construct were computed by averaging each participant's responses on each of the items.

A correlation matrix of the eleven survey constructs is presented in Table 2. Means for the constructs range from 3.30 (Faith, Spirituality and Religiosity) to 4.51 (Magis: Goal-setting), on a five-point scale, illustrating that in general, respondents were apt to agree with the items as presented. Correlations among the constructs were overwhelmingly positive and significant at the  $p < .01$  level. The highest correlation was .69, between Cura Personalis and Finding God in All Things. Most were in the .20 to .40 range. Only two constructs were not significantly correlated with all others: Ego-comparative identity was correlated only with Community Action and Discernment, while Faith, Spirituality, and Religiosity is not correlated with Magis: Attitude toward Improvement, Ego-comparative Identity, or Diversity.

-----Insert Table 2 about here-----

To test H1, the freshmen composite mean was compared to the senior composite mean on each composite variable to determine whether senior responses were higher than freshmen responses, indicating growth in each of the mission areas. (For Ego-comparative Identity, the expected direction of growth is in the opposite direction, and thus the senior mean was hypothesized to be lower than the freshman mean.) Independent sample two-tailed t-tests were used to assess the statistical significance of any mean differences in the two class cohorts.

Only two constructs showed evidence of the hypothesized growth. As expected, seniors reported significantly greater scores on the measures of the importance of Ethics and Professional Responsibility than did freshmen (means = 4.15 and 4.08, respectively;  $t = -1.73$ ,  $df = 636$ ,  $p = 0.042$ ). In addition, seniors reported significantly lower scores on the measures of ego-comparative identity than did freshmen (means = 3.35 and 3.57, respectively;  $t = 3.57$ ,  $df = 632$ ,  $p = .0002$ ), suggesting that after their undergraduate experience, they were, on average, less likely to view their self-worth or success as rooted in comparisons to others.

Interestingly, group means on four constructs differed in the opposite direction from what was expected. Freshmen reported a greater orientation toward Cura Personalis (means = 4.41 and 4.31, respectively;  $t = 2.73$ ,  $df = 630$ ,  $p = .007$ ), Community

Action/Service (means = 4.04 and 3.72, respectively;  $t=5.28$ ,  $df=596$ ,  $p=.0?$ ), Finding God in All Things (means = 4.46 and 4.37, respectively;  $t=2.06$ ,  $df=614$ ,  $p=.04$ ), and Faith, Spirituality, and Religiosity (means = 3.41 and 3.15, respectively;  $t=2.90$ ,  $df=603$ ,  $p=.004$ ) than did seniors, on average. No between-group differences were found on either of the Magis dimensions, Diversity, Discernment, or Social Justice.

This unexpected pattern of results compelled a further exploration of the data. Each of the eleven composite variables was subjected to a three-way analysis of variance with gender (male vs. female), high school type (public vs. private), class group (freshman vs. senior), and the full complement of interaction terms as independent variables. These analyses yielded a number of interesting findings, as summarized in Table 3. First, female students reported significantly higher means on all of the variables with the exception of Magis: Attitude toward Improvement. For several constructs, this gender main effect was qualified by a significant higher-order interaction. The results of each analysis are presented presented below.

-----Insert Table 3 about here-----

#### *Magis: Goal-setting*

In addition to the main effect of gender (female and male means = 4.56 and 4.46, respectively;  $t=2.35$ ,  $df=553$ ,  $p=.019$ ), high school type was also a significant predictor of Magis: Goal-setting such that public school students reported a higher score, on average, than did graduates of private high schools (public and private means = 4.56 and 4.45, respectively;  $t=2.62$ ,  $df=481$ ,  $p=.009$ ).

#### *Magis: Attitude toward Improvement*

No predictor variables nor their interactions significantly predicted scores on this construct.

#### *Cura Personalis*

The ANOVA ( $df=651$ ) yielded two significant main effects: gender ( $F=58.67$ ,  $p<.001$ ) and class ( $F=12.04$ ,  $p=.001$ ). Independent sample t-tests confirmed that females scored higher on this dimension than did males (female and male means = 4.49 and 4.22, respectively;  $t=7.30$ ,  $df=516$ ,  $p<.001$ ) and freshmen scored higher than seniors (freshmen and senior means = 4.42 and 4.34, respectively;  $t=2.14$ ,  $df=561$ ,  $p=.033$ ). In addition, the gender x class interaction was significant ( $F=3.92$ ,  $p=.048$ ), as shown in Figure 1.

-----Insert Figure 1 about here-----

#### *Diversity*

Only the main effect of gender was significant, with females reporting higher scores on

the diversity measure than their male counterparts (female and male means = 4.24 and 3.97, respectively;  $t=5.76$ ,  $df=545$ ,  $p<.001$ ).

### *Discernment*

The ANOVA ( $df=651$ ) yielded a significant main effect of gender ( $F=15.27$ ,  $p<.001$ ) such that females scored higher on this dimension than males (female and male means = 4.45 and 4.30, respectively). In addition, the class x high school type interaction was significant ( $F=6.43$ ,  $p=.011$ ), as shown in Figure 2.

-----Insert Figure 2 about here-----

### *Ethics and Professional Responsibility*

In the full ANOVA, only the main effect of gender was significant, with females reporting higher scores on the ethics measure than their male counterparts (female and male means = 4.19 and 3.98, respectively;  $t=4.89$ ,  $df=537$ ,  $p<.001$ ). Note that the effect of class found in the initial comparison of seniors vs. freshmen became non-significant with the inclusion of gender, high school type, and the full set of interactions in the analysis.

### *Community Action/Service*

The ANOVA ( $df=651$ ) yielded two significant main effects: gender ( $F=31.58$ ,  $p<.001$ ) and class ( $F=31.19$ ,  $p<.001$ ). Independent sample t-tests confirmed that females scored higher on this dimension than males (female and male means = 4.04 and 3.74, respectively;  $t=4.63$ ,  $df=536$ ,  $p<.001$ ) and freshmen scored higher than seniors (freshmen and senior means = 4.06 and 3.73, respectively;  $t=5.17$ ,  $df=505$ ,  $p<.001$ ). In addition, the gender x high school type interaction was significant ( $F=5.26$ ,  $p=.022$ ), as shown in Figure 3.

-----Insert Figure 3 about here-----

### *Social Justice*

The ANOVA ( $df=651$ ) yielded three significant main effects: gender ( $F=88.00$ ,  $p<.001$ ), class ( $F=6.31$ ,  $p=.012$ ), and high school type ( $F=10.38$ ,  $p=.001$ ). Independent sample t-tests confirmed that females scored higher on this dimension than males (female and male means = 4.28 and 3.79, respectively;  $t=8.40$ ,  $df=481$ ,  $p<.001$ ) and private school students scored higher than public school students (public and private means = 4.04 and 4.17, respectively;  $t=2.32$ ,  $df=545$ ,  $p=.02$ ). The simple mean difference test of freshmen vs. senior scores was not significant (freshmen and senior means = 4.10 and 4.08, respectively;  $t=0.40$ ,  $df=555$ ,  $p=.69$ ); however, there was a significant gender x class interaction ( $F=10.45$ ,  $p=.001$ ), as shown in Figure 4.

-----Insert Figure 4 about here-----

### *Finding God in All Things*

The ANOVA (df=651) yielded two significant main effects: gender ( $F=36.90$ ,  $p<.001$ ) and class ( $F=7.26$ ,  $p=.007$ ). Independent sample t-tests confirmed that females scored higher on this dimension than males (female and male means = 4.53 and 4.29, respectively;  $t=5.55$ ,  $df=524$ ,  $p<.001$ ) and freshmen scored higher than seniors, though the mean difference was only marginally significant (freshmen and senior means = 4.47 and 4.39, respectively;  $t=1.73$ ,  $df=545$ ,  $p=.08$ ). In addition, the gender x class interaction was significant ( $F=5.68$ ,  $p=.017$ ), as shown in Figure 5.

-----Insert Figure 5 about here-----

### *Faith, Spirituality, and Religiosity*

The ANOVA (df=651) yielded three significant main effects: gender ( $F=14.89$ ,  $p<.001$ ), class ( $F=12.625$ ,  $p<.001$ ), and high school type ( $F=9.885$ ,  $p=.002$ ). Independent sample t-tests confirmed that females scored higher on this dimension than males (female and male means = 3.39 and 3.14, respectively;  $t=2.76$ ,  $df=544$ ,  $p=.006$ ), freshmen scored higher than seniors (freshmen and senior means = 3.41 and 3.14, respectively;  $t=2.94$ ,  $df=568$ ,  $p=.003$ ), and private school students scored higher than public school students (public and private means = 3.17 and 3.51, respectively;  $t=3.74$ ,  $df=528$ ,  $p<.001$ ). In addition, there were several significant interaction effects, including gender x high school type ( $F=4.505$ ,  $p=.034$ ), as shown in Figure 6; high school type x class ( $F=4.69$ ,  $p=.031$ ), as shown in Figure 7; and the three-way interaction of gender, high school type, and class ( $F=5.269$ ,  $p=.022$ ), as shown in Figure 8.

-----Insert Figures 6-8 about here-----

### *Ego-comparative Identity*

The ANOVA (df=651) yielded three significant main effects: gender ( $F=10.012$ ,  $p=.002$ ), class ( $F=10.549$ ,  $p=.001$ ), and high school type ( $F=4.503$ ,  $p=.034$ ). Independent sample t-tests confirmed that males scored higher on this dimension than females (male and female means = 3.62 and 3.41, respectively;  $t=-3.26$ ,  $df=563$ ,  $p=.001$ ), freshmen scored higher than seniors (freshmen and senior means = 3.59 and 3.36, respectively;  $t=3.60$ ,  $df=531$ ,  $p=.0004$ ), and public school students scored higher than private school students, though this mean difference achieved only marginal significance (public and private means = 3.53 and 3.42, respectively;  $t=-1.68$ ,  $df=490$ ,  $p=.09$ ). No interaction effects were found.

### *Summary*

Summarizing this analysis is difficult because of the number of constructs and factors involved; however, a couple of findings seem noteworthy. First, it appears clear that women tended to score higher on nearly all of the mission principles than men did. This was true of students entering the institution as well as students exiting the institution.

Second, freshmen reported a greater orientation, on average, toward several of the mission principles than seniors did. This is certainly an unexpected result that warrants critical examination. In a few cases, gender x class interactions seemed to exacerbate this effect such that freshmen females scored particularly high while senior males scored particularly low. Finally, high school type also had a main or interactive effect on about half of the mission principles. One might expect that students from a private high school background might score higher on these mission principles as freshmen and thus exhibit less growth over the four undergraduate experience than students from public high schools. This is only partially true. Freshmen students from private high schools did report greater orientations toward social justice (public and private means = 4.01 and 4.26, respectively,  $t=3.94$ ,  $df=309$ ,  $p<.001$ ) and Faith, Spirituality, and Religiosity (public and private means = 3.24 and 3.73, respectively,  $t=4.33$ ,  $df=317$ ,  $p<.001$ ), but differences on the other mission principles did not reach significance. Furthermore, in the cases of Community Action/Service, Finding God in All Things, and Faith, Spirituality, and Religiosity, students who had attended private schools (particularly males) exhibited a notable drop in mission principle orientation as compared to students with a public school background.

### Senior Only Data

To test H2-H4 regarding the roles that curricular and co-curricular offerings may play in mission growth over the course of a student's undergraduate career, data from the senior sample was used in a series of regression analyses. Each of the mission principles, as well as Ego-comparative Identity, was regressed upon the number of retreats attended, number of service learning courses taken, and number of volunteer hours in the students' most active volunteer semester. In addition, the student's self-reported grade-point average (gpa) was also included as a predictor, although no hypotheses regarding the impact of academic performance on the mission principles were offered a priori. The results are summarized in Table 4, with significant relationships discussed in more detail below.

-----Insert Table 4 about here-----

#### *Magis: Goal-setting*

There was a significant positive effect of academic performance such that higher gpa was associated with higher scores on this dimension ( $t=5.82$ ,  $df=265$ ,  $p<.001$ ).

#### *Cura Personalis*

No variables were found to significantly impact scores on this construct, although two factors (i.e., number of retreats and number of volunteer hours) were marginally significant in the positive direction.

#### *Discernment*

There was a significant positive effect of academic performance such that higher gpa was associated with higher scores on this dimension ( $t=2.10$ ,  $df=265$ ,  $p=.037$ ).

### *Ethics and Professional Responsibility*

There was a significant positive effect of retreat participation, such that a higher number of retreats was associated with a higher score on Ethics and Professional Responsibility ( $t=2.90$ ,  $df=265$ ,  $p=.004$ ). In addition, the impacts of both gpa and participation in service learning courses were positive but marginally significant.

### *Community Action/Service*

There was a significant positive effect of retreat participation, such that a higher number of retreats was associated with a higher score on Community Action/Service ( $t=2.90$ ,  $df=265$ ,  $p=.004$ ). There was also a significant positive effect of volunteering such that a greater number of hours spent volunteering was associated with higher scores on this dimension ( $t=6.75$ ,  $df=265$ ,  $p<.001$ ).

### *Social Justice*

There was a significant positive effect of retreat participation, such that a higher number of retreats was associated with a higher score on Social Justice ( $t=2.15$ ,  $df=265$ ,  $p=.033$ ). There was also a significant positive effect of volunteering such that a greater number of hours spent volunteering was associated with higher scores on this dimension ( $t=2.22$ ,  $df=265$ ,  $p<.027$ ). In addition, there was a significant positive effect of academic performance such that higher gpa was associated with higher scores on this dimension ( $t=3.02$ ,  $df=265$ ,  $p=.003$ ).

### *Faith, Spirituality, and Religiosity*

There was a significant positive effect of retreat participation, such that a higher number of retreats was associated with a higher score on this dimension ( $t=6.57$ ,  $df=265$ ,  $p<.001$ ). There was also a significant positive effect of volunteering such that a greater number of hours spent volunteering was associated with higher scores on this dimension ( $t=2.28$ ,  $df=265$ ,  $p<.023$ ).

### *Ego-comparative Identity*

There was a significant positive effect of academic performance such that higher gpa was associated with higher scores on Ego-comparative Identity ( $t=3.16$ ,  $df=265$ ,  $p=.002$ ). In addition, there was a significant negative effect of retreat participation, such that a higher number of retreats was associated with a lower score on this dimension ( $t=-2.72$ ,  $df=265$ ,  $p=.007$ ).

### *Summary*

In summary, it does appear that participation in curricular and co-curricular activities such as retreats, volunteering, and service learning has some positive impact on students' self-reported orientations toward the dimensions of Ethics and Professional Responsibility, Community Action/Service, Social Justice, and Faith, Spirituality, and Religiosity, and an expected negative impact on Ego-comparative Identity. These results partially support H2, H3, and H4. Although no a priori hypotheses about academic performance were offered, it appears that higher grade point averages are associated with higher levels of Magis: Goal-setting, Discernment, and Social Justice as well as higher levels of Ego-comparative Identity, which perhaps is not surprising given the likely achievement motivation of high gpa students.

### **Discussion and Directions for Further Research**

This research represents a first attempt to assess mission-related student outcomes at a Jesuit institution. The primary objective of this research was to obtain evidence of the effectiveness of the university's mission-driven work in light of the increased emphasis on accountability for learning outcomes in higher education. It was hoped that this data might prove beneficial when communicating with accrediting bodies, grant organizations, benefactors, potential students and their parents, and other stakeholders. However, because the expected results did not obtain, the research raised several additional questions for future research.

Given that, for the most part, the hypothesized freshmen-to-senior mission growth was not evident in these survey results, future research should focus on gaining a better understanding of this phenomenon. Is the particular university from which the samples were drawn truly failing to develop its students in these areas? If so, why might that be the case? If not, what other explanations are plausible? For example, might freshmen respondents who are new to the university experience be more inclined to exhibit social desirability bias in their responses than seniors are? Might freshmen respondents be less self-aware of their orientations on these dimensions than seniors are after four years of learning about and reflecting on these mission principles? Is it possible that the end of senior year is not the time of peak mission development? Perhaps the highest levels of mission orientation might be seen in the middle of students' college careers when exposure to the core curriculum is at its zenith and participation in co-curricular activities might be greater than in senior year when students are primarily studying within their chosen disciplines and are more oriented toward career development activities. To what extent does appreciation for the mission principles continue to develop (or dissipate) after the student leaves the university and has more interaction with people who were not educated in this way? It seems plausible that higher levels of mission orientation might be seen in graduates of Jesuit institutions five or ten years after they leave the school; on the other hand, the opposite might be true. This is another potential avenue for research. Additionally, it would be desirable to know how students at this or other Jesuit universities differ in these mission areas from students at non-Jesuit (private or public) institutions.

While the results of this study may be disappointing to Jesuit educators and raise numerous questions for further study, the research remains important. Identifying areas of strength and weakness in the delivery of specific mission principles is the first step towards improving these efforts. Understanding the differences in mission growth between students of different genders and from different high school backgrounds may guide the development of mission education and development efforts tailored to these groups. Finally, the evidence obtained regarding the positive impact on mission development of curricular and co-curricular activities such as service learning and retreats may be used to generate increased institutional support for these important activities.

## References:

Arrupe, P., S.J. (1973). *Men for Others*. Address given to the Tenth International Congress of Jesuit Alumni of Europe, Valencia, Spain, July 31, 1973. Retrieved from: <http://onlineministries.creighton.edu/CollaborativeMinistry/men-for-others.html><http://onlineministries.creighton.edu/CollaborativeMinistry/men-for-others.html>

The Association to Advance Collegiate Schools of Business. (2013). "Eligibility procedures and accreditation standards for business accreditation." Retrieved from <https://www.aacsb.edu/-/media/aacsb/docs/accreditation/standards/business-accreditation-2017-update.ashx?la=en>

Association of American Colleges and Universities (2002). *Greater Expectations: A New Vision for Learning as a Nation Goes to College*. Washington, DC: Association of American Colleges and Universities.

Association of American Colleges and Universities (2007). *College Learning for the New Global Century*. Washington, DC: Association of American Colleges and Universities.

Barry, W. A., S.J. (1991). *Finding God in All Things: A Companion to the Spiritual Exercises of St. Ignatius*. Notre Dame, IN: Ave Maria Press, 2<sup>nd</sup> ed.

Ganss, G. E., S.J. (1954). *Saint Ignatius' Idea of a Jesuit University: A Study in the History of Catholic Education, Including Part Four of the Constitutions of the Society of Jesus*. Milwaukee, WI: Marquette University Press.

Jankowski, N. A., Timmer, J. D., Kinzie, J., & Kuh, G. D. (2018). *Assessment that matters: Trending toward practices that document authentic student learning*. Urbana, IL: University of Illinois and Indiana University, National Institute for Learning Outcomes Assessment (NILOA).

Jesuit Conference (2002). *Communal Reflection on the Jesuit Mission in Higher Education: A Way of Proceeding*. Washington, DC: The Society of Jesus in the United States. Reprinted in G. W. Traub, S.J., (Ed.), *A Jesuit Education Reader* (pp. 177-88). Chicago, IL: Loyola Press, 2008.

Kolvenbach, P., S.J. (1987). *Go Forth and Teach: The Characteristics of Jesuit Education*. Washington, DC: Jesuit Secondary Education Association.

Kolvenbach, P., S.J. (2001). "The service of faith and the promotion of justice in American Jesuit higher education," *America Magazine*, Feb 5, 2001, Vol. 184, no. 3, p. 8.

Kolvenbach, P., S.J. (2007). "The service of faith in a religiously pluralistic world," *Conversations on Jesuit Higher Education*, Vol. 32, Article 19, 1-8.

- Liu, O. L. (2011). "An overview of outcomes assessment in higher education." *Educational Measurement: Issues and Practice*, 30, 2-9.
- Loris, M. (2010), "The human journey: Embracing the essential learning outcomes," *Liberal Education*, 96(1), 44-49.
- McGovern, A. F., S.J. (1988). "Jesuit education and Jesuit spirituality," *Studies in the Spirituality of Jesuits*, 20 (4, September), 1-39.
- Mitchell, R., S.J. (1988). "Five traits of Jesuit education," *Boston College Magazine*. Reprinted in G. W. Traub, S.J., (Ed.), *A Jesuit Education Reader* (pp. 111-12). Chicago, IL: Loyola Press, 2008.
- Patil, V. H., P. S. Loroz & R. L. Liu (2014). "Outcomes assessment for mission: Measuring the impact of Jesuit education." *Journal of Jesuit Business Education*, 5, 15-34.
- Spitzer, R.J., S.J. (2000). *The Spirit of Leadership*. Provo, UT: Executive Excellence.
- Spitzer, R.J., S.J. (2010). "The distinctiveness of Jesuit business schools," *Journal of Jesuit Business Education*, 1(1), 1-16.
- Traub, G.W., S.J. (2002). *Do You Speak Ignatian? A Glossary of Terms Used in Ignatian and Jesuit Circles*. Cincinnati, OH: Xavier University. Reprinted in G. W. Traub, S.J., (Ed.), *A Jesuit Education Reader* (pp. 390-409). Chicago, IL: Loyola Press, 2008.
- Tremblay, K., Lalancette, D. & Roseveare, D. (2012). *Assessment of Higher Education Learning Outcomes. Feasibility Study Report. Volume 1 – Design and Implementation*. Paris: OECD. Retrieved from:  
<http://www.oecd.org/education/skills-beyond-school/AHELOFSReportVolume1.pdf>
- Volkwein, J. F. (2003). "Implementing outcomes assessment on your campus." *The RP Group eJournal*, 1 (May). Retrieved from:  
[https://www.bmcc.cuny.edu/iresearch/upload/Volkwein\\_article1.pdf](https://www.bmcc.cuny.edu/iresearch/upload/Volkwein_article1.pdf)

## Tables

Table 1. Sample Demographics

	Freshmen	Seniors	Totals
Gender			
Male	161	98	259
Female	222	183	405
Prefer not to Answer	0	5	5
High School Type			
Public	241	182	423
Private	146	108	254
School			
Arts and Sciences	123	136	259
Business Administration	71	65	136
Education	14	9	23
Engineering and Applied Sciences	99	55	154
Nursing and Human Physiology	60	21	81
Undecided	17	0	17

Table 2. Correlations Among Mission Constructs

Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9	10
1. Magis: Goal-setting	4.51	0.52										
2. Magis: Attitude toward Improvement	4.40	0.53	.53**									
3. Ego-comparative Identity	3.47	0.81	.33**	.32**								
4. Diversity	4.13	0.61	.21**	.35**	-0.01							
5. Community Action/Service	3.90	0.81	.25**	.22**	.11**	.34**						
6. Cura Personalis	4.37	0.48	.30**	.39**	0.04	.46**	.33**					
7. Finding God in All Things	4.42	0.55	.26**	.32**	-0.02	.34**	.29**	.69**				
8. Ethics and Professional Responsibility	4.11	0.54	.39**	.34**	0.04	.33**	.26**	.42**	.39**			
9. Discernment	4.39	0.47	.32**	.33**	.12**	.24**	.21**	.49**	.39**	.42**		
10. Social Justice	4.08	0.73	.18**	.27**	-0.01	.54**	.33**	.49**	.40**	.44**	.29**	
11. Faith, Spirituality and Religiosity	3.30	1.16	.13**	0.01	0.03	0.04	.30**	.20**	.21**	.30**	.15**	.16**

Table 3. Summary of Impact of Gender, High School Type, and Class on Mission Constructs

	Gender	HSType	Class	Gender x HSType	Gender x Class	HSType x Class	Gender x HS Type x Class
Magis: Goal-setting	*	*					
Magis: Attitude toward Improvement							
Cura Personalis	***		***		*		
Diversity	***						
Discernment	***					*	
Ethics and Professional Responsibility	***						
Community Action/Service	***		***	*			
Social Justice	***	***			***		
Finding God in All Things	***		**		*		
Faith, Spirituality and Religiosity	***	**	***	*		*	*
Ego-comparative Identity	**	+	***				

(\*\*\* p<=.001, \*\* p<= .01, \* p<= .05, + p<= .10)

Table 4. Summary of Impact of Academic Performance and Participation in Co-curricular Offerings on Mission Constructs

	GPA	Number of Retreats	Number of Volunteer Hours	Number of Service Learning Courses
Magis: Goal-setting	***			
Magis: Attitude toward Improvement				
Cura Personalis		+	+	
Diversity				
Discernment	*			
Ethics and Professional Responsibility	+	*		+
Community Action/Service		**	***	
Social Justice	**	*	*	
Finding God in All Things				
Faith, Spirituality and Religiosity		***	*	
Ego-comparative Identity	**	**		

(\*\*\* p<=.001, \*\* p<= .01, \* p<= .05, + p<= .10)

## Figures

Figure 1. Interaction of Gender x Class on Cura Personalis

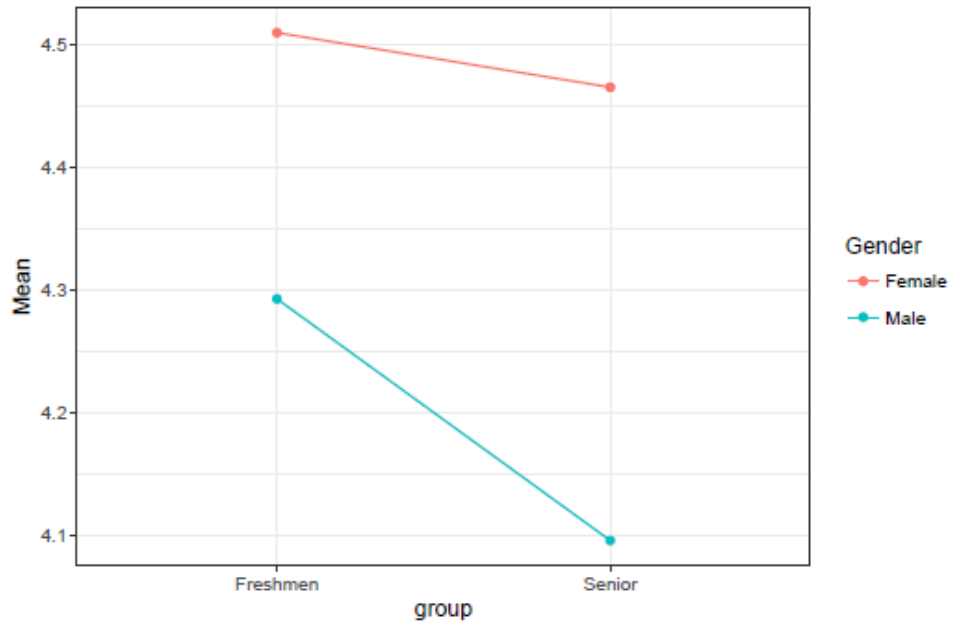


Figure 2. Interaction of Gender x High School Type on Community Action/Service

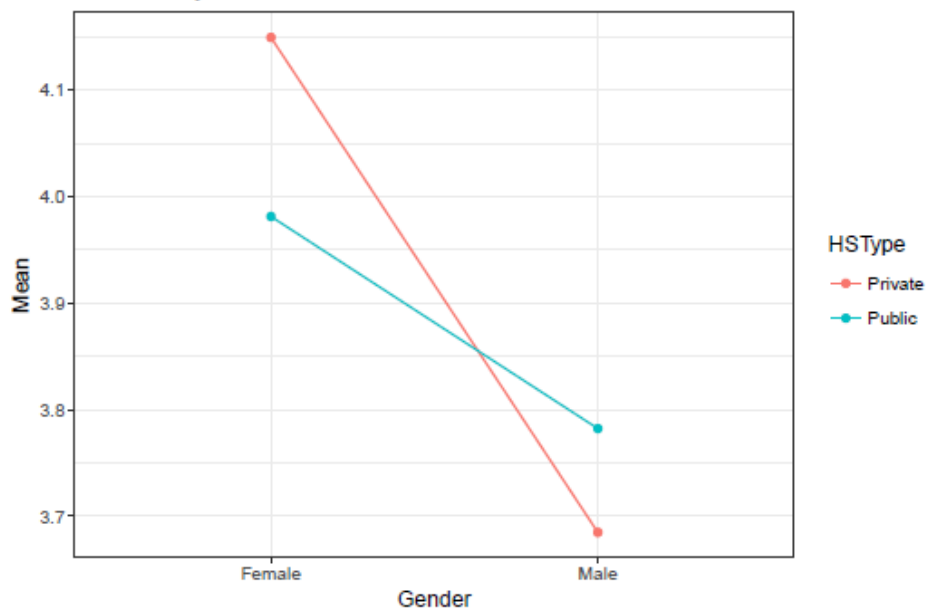


Figure 3. Interaction of Gender x Class on Social Justice

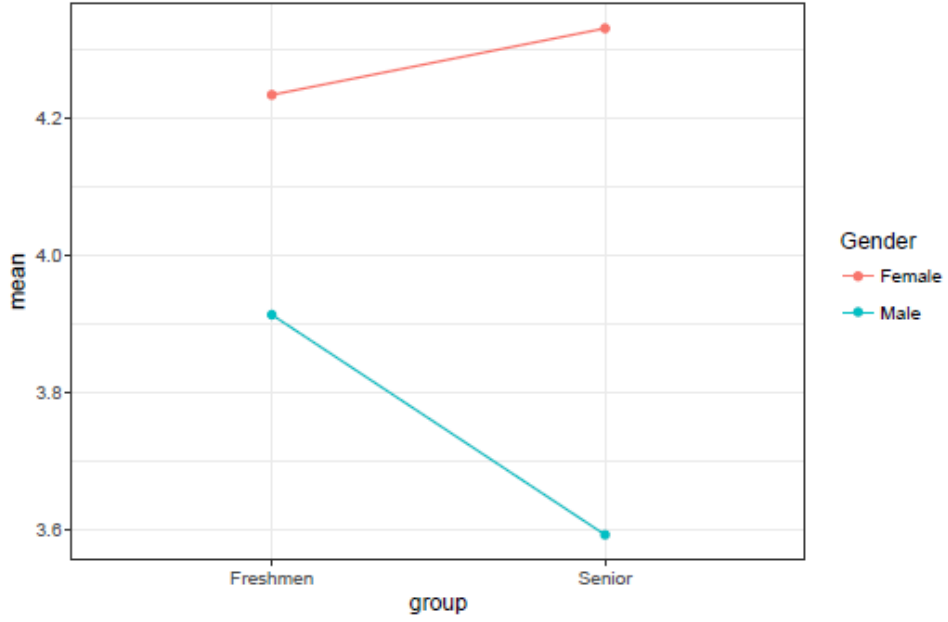


Figure 4. Interaction of Gender x Class on Finding God in All Things

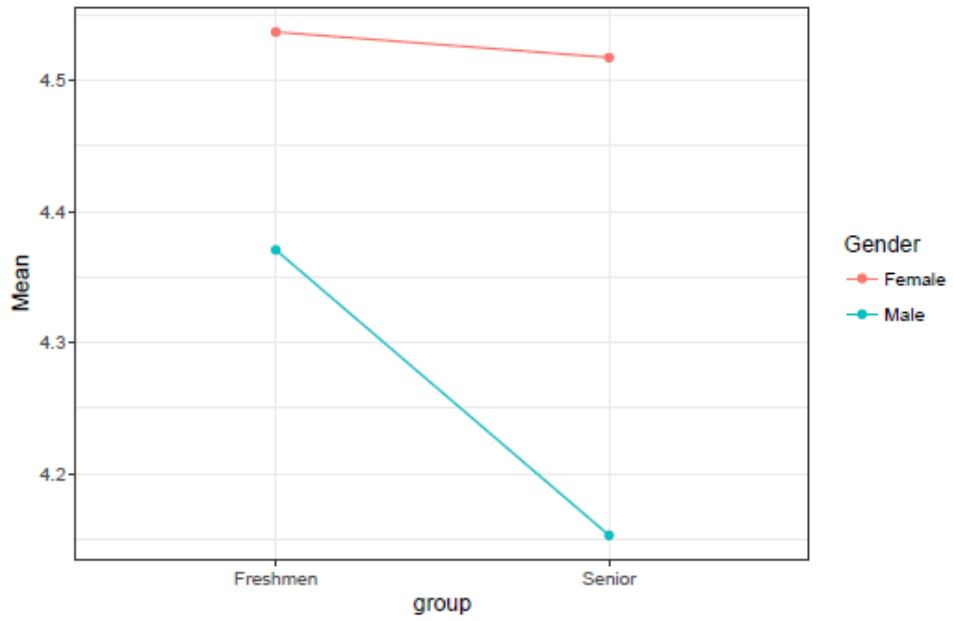


Figure 5. Interaction of Class and High School Type on Finding God in All Things

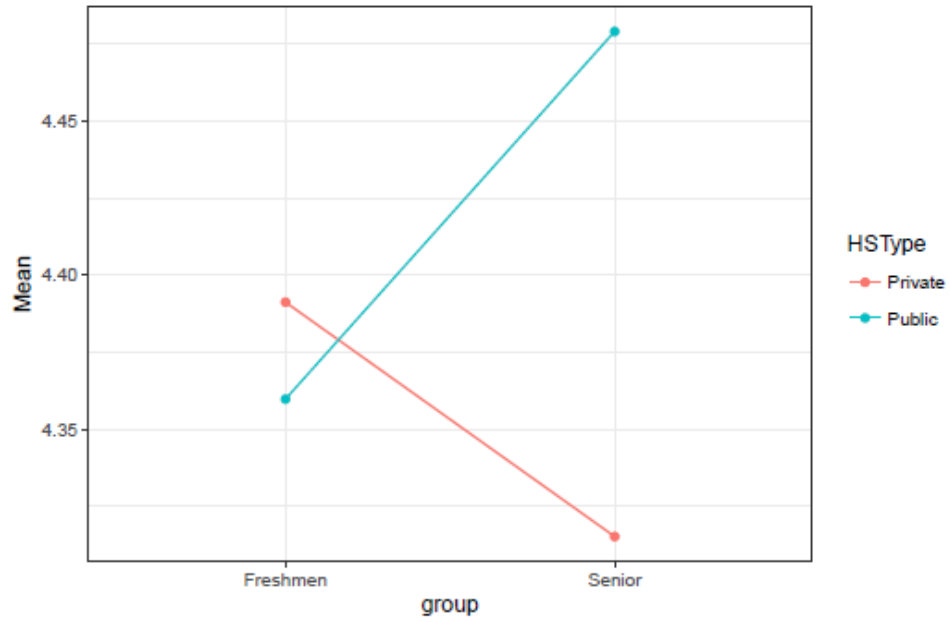


Figure 6. Interaction of Gender x High School Type on Faith, Spirituality and Religiosity

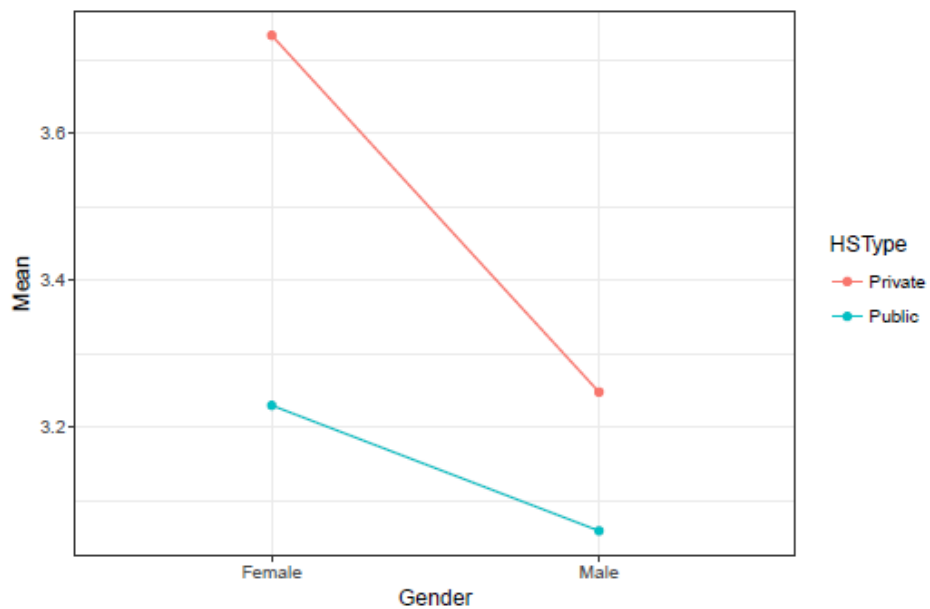


Figure 7. Interaction of Class x High School Type on Faith, Spirituality and Religiosity

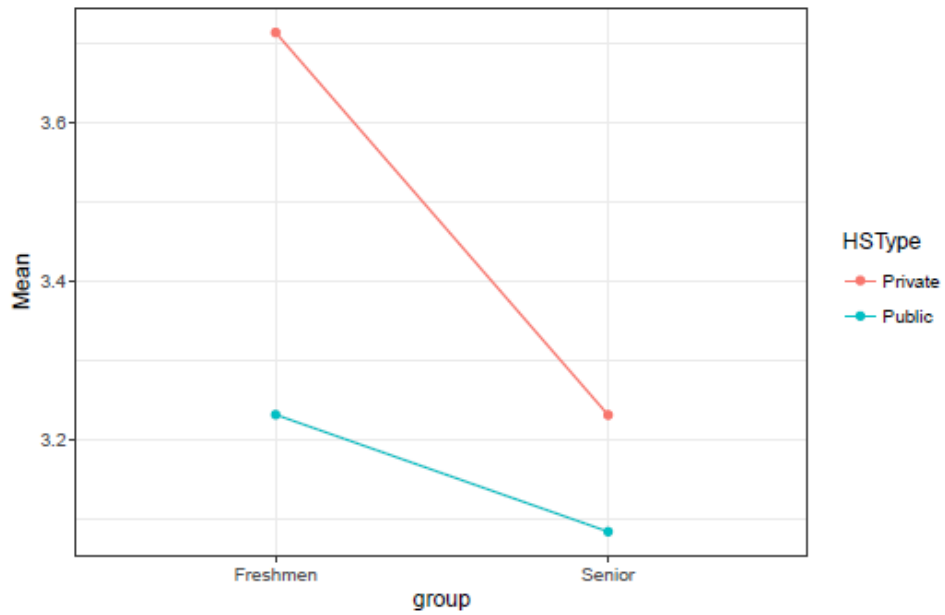
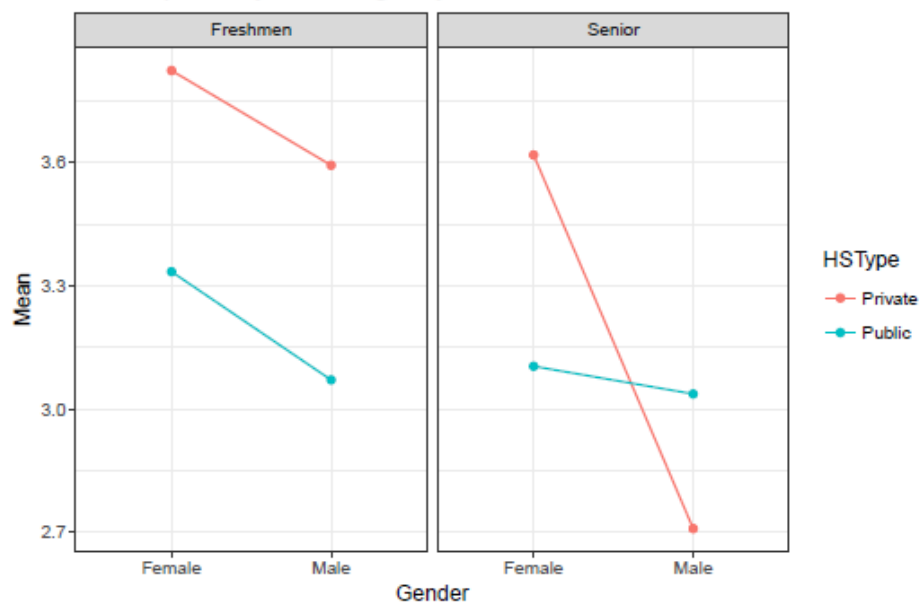


Figure 8. Interaction of Gender x High School Type x Class on Faith, Spirituality and Religiosity



## Appendix: Survey Items by Construct

<b>Constructs and Items</b>
<p><b><i>Magis: Goal-Setting (<math>\alpha = .62</math>)</i></b></p> <p>I set high standards for myself.</p> <p>I strive for excellence in whatever I do.</p> <p>I am motivated by the fundamental desire to do well, not merely to earn reward or avoid punishment.</p>
<p><b><i>Magis: Attitude towards Improvement (<math>\alpha = .78</math>)</i></b></p> <p>I like to make improvements in the way I do things.</p> <p>I believe in continuous learning and improvement in the way I do things.</p> <p>I feel I can redo things I have done in a better manner.</p>
<p><b><i>Cura Personalis (<math>\alpha = .80</math>)</i></b></p> <p>I pay individual attention to people I meet.</p> <p>I am keen to know more about people.</p> <p>I respect the unique circumstances from which people come.</p> <p>I appreciate the unique talents people possess.</p> <p>I make an effort to reach out to others.</p> <p>I treat others with care, concern, and respect.</p> <p>I try to place myself in another person's place and understand how that person is feeling.</p>
<p><b><i>Diversity (<math>\alpha = .73</math>)</i></b></p> <p>Learning about different cultures is an important part of my development.</p> <p>My beliefs change as I encounter new ideas and experiences.</p> <p>I have friends from other faiths or cultures.</p> <p>I seek out experiences that give me the opportunity to engage with people of another faith or culture.</p>
<p><b><i>Discernment (<math>\alpha = .79</math>)</i></b></p> <p>When making an important decision, I mull it over from different angles.</p> <p>After making an important decision, I reflect on whether it was the right one.</p> <p>I try to learn from my mistakes and make changes.</p> <p>I seek the wisdom of others when making important decisions.</p> <p>I take time to reflect prior to making important decisions.</p> <p>When making an important decision, I identify and evaluate different courses of action.</p>
<p><b><i>Ethics and Professional Responsibility (<math>\alpha = .83</math>)</i></b></p> <p>Being ethical is the most important thing for me to do.</p> <p>When setting goals and making career plans, I should consider the ethical implications.</p> <p>The most important professional concern for me is making money, even if it means bending or breaking the rules.</p> <p>Being ethical is essential to my long term success.</p> <p>For me, ethics and professional success can be compatible.</p> <p>Being ethical is critical to my success as a professional.</p> <p>My first priority should be maintaining my sense of ethics.</p> <p>I have an ethical responsibility beyond making money.</p>

**Community Action/Service ( $\alpha=.88$ )**

I do some volunteer work.  
I am involved in my community.  
I am an active member of my community.  
I participate in one or more community service organizations.

**Social Justice ( $\alpha=.86$ )**

I will work for social justice changes in society.  
We should create programs and public policies to address social issues.  
I can help promote equal opportunities for all people.  
I have a responsibility to help efforts directed at social justice changes in society.  
This society needs to increase social and economic equality.

**Finding God In All Things ( $\alpha=.61$ )**

I appreciate the good in people I encounter.  
I appreciate the beauty in things I encounter.  
I try to find the good in others' actions.

**Faith, Spirituality, and Religiosity ( $\alpha=.99$ )**

I think about how my life is part of a larger spiritual force.  
I am a very spiritual person.  
My relationship with God transforms me as a person.  
My faith impacts my choices and behavior at work.  
My religious beliefs help me understand the world.  
I believe that all creation is a gift from God.  
My religious faith is extremely important to me.  
I pray daily.  
I look to my faith as a source of inspiration.  
I look to my faith as providing meaning and purpose in my life.  
I consider myself active in my faith or religious establishment such as a church.  
My faith is an important part of who I am as a person.  
My relationship with God is extremely important to me.  
I enjoy being around others who share my faith.  
I look to my faith as a source of comfort.  
My faith impacts many of my decisions.  
I feel God's presence.  
I find strength and comfort in my religion.  
I feel God's love for me, directly or through others.  
I try to carry my religious beliefs over into all my other dealings in life.  
I am a very religious person.

**Ego-comparative Identity ( $\alpha=.50$ )**

I have strong desires to beat everyone and be successful.  
I have worked hard in order to be among the best among my peers.  
I view life as a win-lose proposition.