Retention at a Small Catholic University

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Executive Summary

Small Catholic University (SCU), a pseudonym for an institution of higher education, sought to increase the retention rate of students from the first to second year from the current rate of 79 percent to the ninety percent range (Small Catholic University, 2010). Achieving a trajectory that will yield a ninety percent retention rate takes careful analysis of the campus environment, applicant pools, entering characteristics of the students enrolling, on campus programming, student satisfaction, and intervention efficacy.

To start this process, Small Catholic University applied for and received a doctoral capstone project team from Peabody College at Vanderbilt University in Nashville, Tennessee. The project team initially spoke with key staff members, examined extant literature, and institutional information; then the project team surveyed students in the current first-year cohort around the five strongly supported propositions suggested by Braxton, Hirschy, and McClendon (2004) in their *Tinto's Revised Theory for Student Departure in Residential Colleges and Universities*. The five aspects of the residential model that influenced student persistence were Initial Goal Commitment, Subsequent Goal Commitment, Initial Institutional Commitment, Subsequent Institutional Commitment, and Social Integration.

During initial interviews with the client for the stated purpose of determining the scope of work, three questions were at the center of this project; 1. What level of engagement at Small Catholic is significant in predicting retention? 2. What are the most significant risk factors of attrition for students at SCU? and 3. What organizational changes would increase student retention?

After administering surveys to students in the freshman cohort, and conducting interviews with students and staff, the project team recommended focused actions to increase retention. Increasing the engagement of students beyond the classroom in student clubs and organizations was statistically significant in predicting retention. As student participation increased from zero to over five hours per week

in these activities at Small Catholic University, their rate of persistence increased as well. The ability of the institution to provide the type of engagement opportunities students desire will require collaboration with students to invest in types of activities which will change over time as student-entering characteristics change.

While the student characteristics are shifting, the institution must also be cognizant of the students it recruits and enrolls. Certain aspects of the student profile present greater barriers to persistence at Small Catholic than others. Student characteristics that act as barriers to retention, which institutional interventions must assist in overcoming, include financial concerns, not selecting Small Catholic as a first choice, being a racial minority, first-generation or low income student, having off campus jobs, or being under-engaged with campus activities. While some interventions already in place have had a positive influence in overcoming these pre-enrollment barriers for students, the extension of these programs to all students will be necessary in time as students coming to institutions of higher education will require increased levels of service and accommodations.

In addition to increasing engagement and recruiting the right set of students for the institutional culture, some changes to the organizational structure may facilitate increased retention as well. Increasing the number of recruiters in an effort to provide a personalized recruitment process is one strategy. Additionally, allowing those recruitment officers to switch to retention officers for the students in the entering cohort that they recruited would likely improve retention at Small Catholic. This provides an instant institutional connection and safe haven for students to ask questions and engage with the institution. Additional suggestions include adding more full-time faculty to teach courses during the freshman year.

Dedication of the institution to make these changes will have an impact on student retention from the first to second year. Small Catholic University has a strong academic foundation and an institutional culture that is supportive of student success. The suggestions

presented align with their mission and values, as well as supports the Vision 2020 Plan for the institution.

Define the Issues and Project Questions

Public and private higher education institutions across the nation are investing in efforts to positively influence enrollment rates and student retention, which ultimately impacts student success and graduation (ACT, 2010b). The ACT released trend data on completion and retention for both public and private, two and four year institutions. The freshman to sophomore year retention at both baccalaureate and masters level private institutions is at the lowest values since 1983, impacting student graduation rates (ACT, 2004; ACT, 2010a).

Improving student retention facilitates students graduation and degree attainment, but it is also a wise financial move for institutions whether they are a public institution facing outcomes measures leveraged by state legislatures, or private institutions that are tuition dependent (Cuseo, NA). Either way, focusing on student retention is a financially prudent action due to the fact that a student retained in the first year is likely to be a student for three to four more years. Losing a student after the first year is synonymous with losing three to four years of revenue.

Additionally, the cost to retain a student that has already enrolled versus finding an incremental student the following year to replace the student that was lost is an expensive proposition. Kramer (1982) considered recruitment costs to include staff salaries, travel funding, and marketing costs which in 1982 equated to $200 to $800 per student. The estimates associated with retaining a student already enrolled are likely to be three to five times less expensive, meaning that three to five students can be retained for the cost of recruiting one student to the incoming cohort (Noel, Levitz, & Saluri, 1985; Rosenberg & Czepiel, 1983; Tinto, 1975). This calculation, while informative is only a portion of the financial picture for the institution as it does not factor in the lost revenue from tuition and fees.

While costs to the institution for students not persisting are of concern, an equal or greater concern is the consequences borne by society collectively and the student individually that does not continue with higher education. Braxton (2008) identified eight domains of student success: academic attainment, acquisition of general education, development of academic competence, development of cognitive skills and intellectual dispositions, occupational attainment, preparation for adulthood and citizenship, personal accomplishments, and personal development; all of which would not be cultivated to the same level if a student stopped out. Persistence from one academic year to the next provides additional opportunities for development and attainment of these student success domains. With the hindered development in these eight domains, the student's success potential is decreased and as a result there is greater chance for generational poverty related to low social capital and decreased earnings potential (Bourdieu, 1977; Bowles & Gintis, 1976; and Furstenberg & Hughes, 1995).

To combat the negative economic consequences and generational transmission of limited social capital, the Commonwealth of Kentucky has set audacious goals for all institutions in the state, both public and private, to increase institutional graduation rates as a lever to advance the state. The "Double the Numbers; Kentucky's Plan to Increase College Graduates" report establishes specific goals for all public institutions in the state to achieve by 2020, but also includes twenty Southern Association of Colleges and Schools (SACS) accredited independent institutions (Kentucky Council on Postsecondary Education [CPE], 2007). Private institutions in Kentucky award over 4,000 bachelor's degrees annually, comprising approximately 22% of the Commonwealth's total, and the Council on Postsecondary Education (CPE) looks to these institutions to produce 8,231 degrees by 2020. This goal at the state level is congruent with Small Catholic University's

institutional efforts to simultaneously increase enrollment and first to second year retention.

During efforts to identify the scope and limitations of the project, the project team interviewed senior level staff members in Student Affairs and Academic Affairs about the recruitment process, first-year experience, and overall organizational culture and structure. From this series of interviews three guiding questions were developed as a framework to assess Small Catholic University's programs, culture and organizational structure as they each relate and influence student persistence:

1. What level of engagement at Small Catholic is significant in predicting retention?

2. What are the most significant risk factors of attrition for students at SCU?

3. What organizational changes would increase student integration and retention?

Taking each of the project questions individually, examining the literature, considering the quantitative data, and reviewing the student and staff interviews, a clearer understanding of the current SCU programs develops as well as insight into areas for potential improvement. Evaluation of the defining characteristics of Small Catholic University assists in formulating a platform for making recommendations to improve student retention.

Contextual Analysis

Small Catholic University is a small private liberal arts institution located in Louisville, the largest city in the Commonwealth of Kentucky with a metropolitan area population over 1.2 million (U.S. Census Bureau, 2011). Over 17% of the state's population lives in the metropolitan area. The residents of Louisville are predominantly white (72%) with approximately

21.3% of the over age 25 population holding a bachelor's degree or higher.

Founded in 1950 by the Archdiocese of the metropolitan area as an all-male school, Small Catholic College soon merged with a local women's college founded in 1938and began co-educational instruction in 1968 (Small Catholic University, 2010). In 2000 the self-perpetuating Board of Trustees voted to officially change the name from Small Catholic College to Small Catholic University, which is comprised of the College of Arts & Sciences, the School of Nursing & Health Sciences, a School of Business, a School of Education, and the School of Continuing and Professional Studies.

Of the over three thousand students enrolled at Small Catholic, nineteen hundred are undergraduates (Small Catholic University, 2010). The student profile is predominantly Caucasian, majority female, over forty percent first-generation, thirty percent commuters, sixty- eight percent from Kentucky, 22-26 ACT range (25th to 75th percentile), fifty-five percent in top one-fourth of high school class, and twenty percent participating in varsity athletics (Figure 1).

As Small Catholic has grown to enroll over three thousand students offering over 50 majors, granting baccalaureate degrees, masters degrees and a doctorate in Physical Therapy, and evolved within the marketplace, the desire to increase retention has been at the forefront (SCU, 2010). Examining the retention rates for some simple groupings of students compared to the institutional first-year retention rate of eighty percent for the same year, the areas of concern include; first-generation students, commuter students, females, and non-athletes (Figure 1).

Small Catholic has engaged in multiple initiatives to increase retention from the first to second year and as a result, is "…very interested in learning more about its students' first-year experience as a means to identify how to implement an infrastructure that will increase the level of first-year students' academic and social integration and engagement both inside and outside the classroom" (Proposal from Small

Figure 1.2008-2009 Small Catholic University first-year cohort retention rates. (Small Catholic University, 2010; Before College Survey of Student Engagement (BCSSE-2008); and National Survey of Student Engagement 2009 (NSSE-2009).
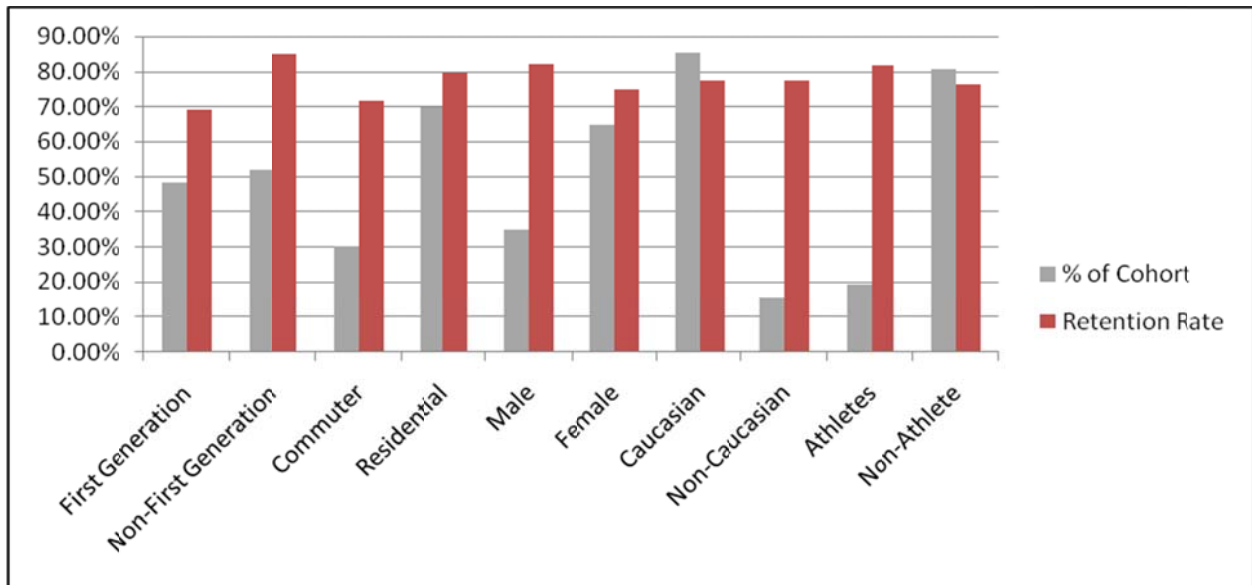
Catholic University to Vanderbilt University, 2010).

The desire to improve the first-year experience at Small Catholic and increase retention is pervasive. Faculty, staff and administration long for the glory days of retention they experienced prior to the year 2000 where retention of first-time freshmen was over 90% (Small Catholic University, 2010). The faculty and staff interviewed are perplexed by the drop in retention as Small Catholic is spending more resources, working harder, offering more programs, being more intentional, and yet retaining at a lesser rate. The institution must critically evaluate the current programs offered for effectiveness and efficiency, as well as better understand what influences first-year Small Catholic students to return for their second year if the institutional goals are to be achieved.

Small Catholic University is five years into a campaign to achieve the Vision 2020 plan presented by the President to the Board of Trustees as an outline of appropriate aspirations (McGowan, 2005). The goal stated the plan is to transition Small Catholic University into the premier independent Catholic university in the South, and thereby the top private university in the Commonwealth. Included in this Vision 2020 plan are significant goals;

- Grow the number of schools from four (4) to twelve (12) or more through the addition of a Graduate School, a Graduate School of Business, a School of Communications, Media & Culture (fall 2009), a School of Pharmacy, a School of Hotel, Food and Beverage Industry Management, a School of Law, a School of Architecture, and a School of Veterinary Medicine;
- Transition Carnegie classifications from Masters I University to Doctoral/Research University – Intensive indicating the awarding of at least 20 doctoral degrees per year (41 granted in 2008-2009);
- Expanding enrollment from 2,500 to 8,000 in 15 years (3,000 in 2010); and
- Doubled the number of facilities on campus from 30 to 60 (42 total, with 22 on the campus proper).

One of the cornerstones of the Vision 2020 plan is student enrollment, retention, and graduation. Retention presently is not at the historically high levels Small Catholic enjoyed and is of concern as they seek to address other components of the Vision 2020 Plan. As a result, student retention and the factors that influence it are integral to the institutions further success. If students are enrolled but not retained, all of the goals are in jeopardy due to the lack of demand and constricted revenue stream.

Small Catholic University has indicated a goal of becoming the premier institution of the region, yet the number trends on yield and retention are cause for examination of programs and actions currently being employed throughout recruitment and into the second year. Programs and theories to be examined in context of the Vision 2020 plan include, but are not limited to; target recruitment areas and catchment identification, Crossroads, SOAR, Interdisciplinary courses (IDC), Freshman Seminar, Pioneer Scholars program, student engagement strategies, staff organizational structure, and institutional market placement.

Generating progress in the realm of retention, as well as the goals stated in the Vision 2020 plan, requires careful attention to each of three project goals described below.

Project Question # 1:
What level of engagement at Small Catholic is significant in predicting retention?

Small Catholic University is specifically interested in the issue of engagement and its subsequent effect on persistence. The university is exerting tremendous effort to engage all students and especially first-year students. During the initial interviews to determine the scope of work, a recurring theme was "how much engagement is enough?" Administrators who are highly involved in the retention effort want to know if students are engaged with one affinity group, does the probability of retention increase if they become engaged with an additional group? The administration wants to know if there are an optimal number of hours in

which students should be engaged socially. On the other side of the equation, is there an amount of social engagement at which additional hours spent in clubs or groups is detrimental to the student's probability of persistence?

The project team used linear regression to determine the influence that participation in co-curricular activities has on social integration. Additionally, the project team employed linear regression analysis to determine the influence that the number of hours involved in co-curricular activities might have on persistence.

Project Question # 2:
What are the most significant risk factors of attrition for students at Small Catholic?

Small Catholic has developed a model to predict retention (Small Catholic University Office of Institutional Research and Academic Resource Center, 2008) to include the following student entering characteristics (Table 1). The model was developed with four years of historical data for the intended purpose of generating a list of students most at-risk for attrition. Small Catholic University's interest lies in determining additional factors that may be contributing to the student departure decision beyond entering student characteristics that cannot be changed. The university seeks a better understanding of the influencers of social integration and the resulting influence on persistence.

The project team employed regression analysis to test the influence that institutionally defined predictors and other selected constructs from the conceptual framework might have on Initial Institutional Commitment, Social Integration, Subsequent Institutional Commitment, and Persistence.

Project Question # 3:
What organizational changes would increase student integration and retention?

During the course of the interviews, one Small Catholic University staff member describes Small Catholic's effort at retention as "amazing

Table 1. Small Catholic University retention prediction model.

Variable	Directionality
First-generation	First-generation students are at higher risk
ACT Score	Students scoring higher are at lower risk
Race	African-American students are at higher risk
High School GPA	Low HS GPA are at a higher risk
Geographic Distance from Home	Local students are more likely to be retained

people doing dynamic things". While the university understands that retention has to be a campus wide effort, much of that work is occurring in silos and contained within departmental boundaries. The current organizational structure has more likely "evolved" informally rather than being the intentional result of a comprehensive analysis of the most effective use of the university's resources and talent.

The project team has been asked to review the existing organizational structure and provide recommendations for a revised structure. During the initial interviews, it was made apparent that the answer cannot be to merely create another office. The senior administrators at Small Catholic must understand how the organizational changes will promote better retention results.

The project team was specifically charged with recommending an organizational structure that would foster greater institutional commitment during the pivotal second semester. Small Catholic's staff feels that student's dedication and commitment to the institution wanes during the second semester of the freshmen year because there are fewer touch points in the spring term.

Small Catholic's staff informed the project team that they welcome and expect recommendations of "sweeping" change. Small Catholic's fragmented organizational structure was a common and recurring theme throughout this project. Many senior administrators see the current structure as a barrier to improving the rate of retention.

The project team employed data from qualitative interviews with faculty, staff, and students, responses to program efficacy questions, open-ended survey responses, and references from the extant literature to inform the study on the optimal organizational structure for Small Catholic University.

Instruments and Methods

Survey Instrument.

The project team distributed an instrument containing questions and selected constructs employed by Braxton, et. al (2004) to several sections of the Freshman Focus course at Small Catholic University. The survey instrument gathered data to inform each of the three project questions.

Survey distribution was limited to those sections that were taught by faculty under the supervision of the department of Student Affairs. To ensure a higher response rate, the project team negotiated for surveys to be completed during class time.

Students are assigned to sections without regard to the department of the faculty member. In the planning process, neither Small Catholic's leadership nor the project team anticipated any systemic reason why the courses taught by Student Affairs professionals would have a more or less favorable mix of student entering characteristics.

The survey was distributed by the teaching faculty to minimize observer bias. The survey contained a cover sheet explaining that participation was voluntary, survey results could not be matched to the respondent, and the surveys would remain anonymous.

Consistent with Braxton, et. al (2004) revised theory of student persistence at residential colleges and universities, the survey provided measures of student entering characteristics (including ability to pay), initial institutional commitment, subsequent institutional commitment, institutional commitment to the welfare of students, institutional integrity, communal potential, social integration, and persistence. A list of constructs and scales are attached as appendices D through J.

The survey also included items that were program specific for Small Catholic University. A series of question was directed at each of the major programs that focus on retention. These questions inform the understanding of student's perceptions of SOAR (#35-42), Crossroads (#56-63), Freshman Focus (#83-90), Freshman Seminar (#93-100), and the Pioneer Scholars program (#92, 92a, and 92b)(Appendix A). These program specific questions primarily inform project question 3 related to the organizational structure piece.

Additionally, the survey included items that measured the respondent's level of participation in clubs, organizations, sports, and other co-curricular activities (Questions 8, 9, 82 and 101; Appendix A). The items measured both the number of various types of participation as well as hours spent per week in co-curricular activities (Question 92; Appendix A) These measures were used primarily to inform Project Question #1 on the issue of student engagement.

The survey also contained seven open-ended questions that were subsequently coded into thematic categories by the research team (Questions 107-113; Appendix A). These responses informed the organizational structure question (project question 3), provided additional information on the drivers of attrition (project question 2), and shed additional light of the student's perception of engagement at Small Catholic (project question 1).

Survey Administration.

There were 42 sections of Freshman Focus courses taught in the fall term. Surveys were distributed in 14 sections taught by Student Services faculty and 169 surveys were collected from among the 190 students enrolled in those sections. The survey response rate was 88.9% (169 respondents from 190 surveys distributed).

Tests were conducted to ensure that the sample of 169 students surveyed were representative of the population of 577 in the first-time, full-time freshmen cohort at Small Catholic University.

Comparison of general student population characteristics and the frequency in the sample population found that the differences in the proportions of gender, ethnicity, and first-generation status between the total population (from institutional data) and the survey responses from the project team's sample, were not significant and likely occurred by chance. A Z test for differences of proportions revealed that the differences in proportions were not significant at the alpha=.05 level with the single exception of "residential status". The results of the test for statistical significance between two proportions appears in Table 2 (Appendix D).

Resident status is the most problematic comparison. The possibility of coding errors was eliminated after every survey was reexamined. The project team asked Small Catholic's leadership if there could be any reason why Freshman Focus courses taught by student affairs staff, (those sections surveyed) would have a lower percentage of residential students. Small Catholic's leadership determined that two sections of the fourteen sections sampled contained only commuter students.

The sample is representative of the population with the exception of residential students. Commuting students comprise a larger percentage of the sample than is represented in the population. This project limitation is also noted in the "Limitations" section of the report.

Table 2. Comparison of student characteristics between the population and sample.

	Pop. Freq.	Sample Freq.	Pop. %	Sample %	Diff.	Z-value	Sig. (p-value)
Total in Cohort	577	169					
Gender	362	102	62.7%	60.1%	-2.6%	0.471	0.638
Ethnicity	69	27	12.0%	16.0%	4.0%	1.242	0.214
First-generation	238	57	41.2%	33.7%	-7.5%	1.669	0.095
Residency Status	421	109	73.0%	64.5%	-8.5%	2.036	0.042

Qualitative Interviews.

The project team also conducted over forty hours of interviews with faculty, staff, and students. The qualitative interview data primarily informed project question 3 relating to organizational structure issues around the issue of student retention.

Students were purposefully sampled to ensure that the interviewees included students of varying interests, varying backgrounds, and varying levels of campus involvement. Faculty and staff were selected by the Dean of Students, the project team's primary contact, with input from the project team concerning administrators and roles that should be included in the process. Interviewees included vice presidents, deans, associate deans, directors, faculty, religious leaders, and students. Each interviewee was interviewed for one session lasting between forty-five and sixty minutes. Interviews were conducted employing semi-structured interview protocols (Appendix O). The interview data was transcribed verbatim.

Small Catholic University Survey Data.

Beyond the project team's quantitative survey, the teams also obtained survey results conducted by the institution in the 2009 academic year. This institutional survey data informed project question 1 on the issue of engagement. The survey conducted in the spring 2009 term, with matched institutional data indicating the student's decision to return for the fall 2009 term,

specifically informed the question of "how much engagement is enough?"

The survey results include students that took the Before College Survey of Student Engagement (BCSSE) in the summer of 2008, matched to the survey results from the National Survey of Student Engagement (NSSE) in the spring of 2009. Additional data from the institution's database (CARS) such as student departure, major program participation, and entering student characteristics were matched to the BCSSE and NSSE survey results.

Statistical Methods – Project Question #1 – Engagement at Small Catholic University

Project question 1 is analyzed as three "sub-questions" in this study (further defined in the Findings section of this report). The first sub-question seeks to determine if engagement influences social integration at Small Catholic. To this end, the project team conducted a linear regression analysis as shown in Appendix H.

The second sub-question speaks to the amount of participation as measured by the number of different types of activities in which the student participated. The project team framed the sub-question in this way – does engagement in multiple categories of campus activities positively influence social integration?

The project team estimated the relationship between student involvement and social integration using the quadratic functional form. This is a subset of a broader class of statistical techniques called polynomial

regression. The technique estimates the relationship with the following equation:

$$Y = C + \beta_1 X + \beta_2 X^2$$

(Y = Predicted Social Integration; C = Constant; β_1 and β_2 = parameter estimates (coefficients) returned by SPSS; and X = involvement score)

The resulting curve estimation is used to determine if there is a point of diminishing returns in social integration with increasing involvement in the number of categories or types of campus events or programming. Additionally, the project team employed T-tests for independent samples to systematically determine if there were statistically significant differences in the measure of social integration between groups when the groups are divided upon the basis of increasing levels of participation.

The third sub-question speaks to the hours spent in co-curricular activities and their impact on social integration. Again, the project team employed curve estimation utilizing the quadratic functional form to determine if there is a point of diminishing returns in social integration with increasing hours of involvement in campus sponsored clubs. The same test was conducted with the National Survey of Student Engagement data using "supportive campus environment" as a proxy for social integration. The NSSE (09) data set was also used (Appendix I) to perform a logistic regression analysis with persistence serving as the dependent variable.

Statistical Methods – Project Question #2 – Significant Risk Factors of Attrition

The project team set out to analyze the most significant risk factors of attrition for the current cohort of first-year students at Small Catholic. The institution is committing significant resources and exerting a tremendous amount of effort and energy in their efforts to improve the cohort retention rate, but it is necessary to be focusing those efforts in areas that will yield

results as well as meet the needs of the students that are being recruited, admitted, and enrolled.

The institution has developed a prediction model to identify students that may be at-risk of attrition. The institution's model contains the following measures and propositions of students' entering characteristics: 1) first generation students are at higher risk; 2) students with ACT scores greater than or equal to 24 are more likely to be retained; 3) African-American students are at higher risk; 4) low high school GPA (less than 3.2) are at higher risk; and 5) local students are more likely to be retained.

The project team included proxies for these institutionally identified predictors along with gender, parental education, and Pioneer Scholars Program participation in a logistic regression model to determine students' entering characteristics influence on Initial Institutional Commitment (Appendix D).

The focus on the concepts and framework of Braxton, Hirschy, and McClendon (2004) is driven by the need to determine potential predictors of persistence that go beyond students' entering characteristics which cannot be changed. The constructs of communal potential, institutional commitment to the welfare of students, and institutional integrity, might provide insight to significant risk factors upon which the institution has at least some element of control. In addition to the selected constructs from Braxton, Hirschy, and McClendon (2004), the project team created a Faculty Engagement Scale as a proxy for students' engagement with the Small Catholic faculty.

After determining students' entering characteristics' influence on initial institutional commitment, a linear regression analysis was performed to analyze the influence that Braxton, Hirschy, and McClendon's (2004) constructs of Institutional Commitment to the Welfare of Students, Institutional Integrity and Communal Potential, and Initial Institutional Commitment, along with the newly created Faculty Engagement Scale, have on Social Integration. Constructs, measures, and the resulting linear regression analysis appear in Appendix E.

The constructs in the conceptual framework contain testable propositions that will allow the project team to hypothesize the direction of the regression coefficient, thus enabling the statistical significance to be determined through a one-tailed test of significance. The testable propositions (Braxton, et. al., 2004) are as follows:

Institutional Commitment to the Welfare of Students: *The more a student perceives that the institution is committed to the welfare of its students, the greater the student's level of social integration.*

Institutional Integrity: *The more a student perceives that the institution exhibits institutional integrity, the greater the student's level of social integration.*

Communal Potential: *The more a student perceives the potential of community on campus, the greater the student's level of social integration.*

Consistent with the conceptual framework, a linear regression analysis was conducted to determine Initial Institutional Commitment and Social Integration's influence on Subsequent Institutional Commitment. In addition to these constructs, students' entering characteristics were included in the model in an effort to determine if those demographic variables might directly influence subsequent institutional commitment. Results of this analysis are shown in Appendix F.

Finally, the project team conducted logistic regression analysis to determine the influence that initial institutional commitment, social integration, and subsequent institutional commitment has on persistence. That analysis is shown in Appendix G.

Findings for Each Project Question

1. What level of engagement at Small Catholic is significant in predicting retention?

The client's charge involves multiple sub-questions related to engagement at Small Catholic University. The client articulated the question as "how much engagement is enough? If a student is engaged in multiple activities already, does it make any difference if the student becomes involved in another? Is there a point at which a student can become over-involved?"

The project team, in an effort to make these questions more conducive to a research methods design, reformulated the client's questions in this way:

1.a At Small Catholic University, does engagement influence social integration?

1.b At Small Catholic University, does engagement in multiple categories of campus activities positively influence social integration?

1.c At Small Catholic University, is there a positive relationship between hours spent in campus activities and social integration?

1.a Does Engagement Influence Social Integration?

The study design first determines if there is a direct relationship between participation in various activities and social integration. Appendix H contains results from a linear regression analysis in which measures of student involvement (by category of involvement,) and the "faculty engagement scale" as a proxy for involvement with faculty, is regressed against social integration. The adjusted R squared of the model suggests that 22.4% of the variance in social integration is explained by the model.

Students identifying themselves as "athlete" is a statistically significant influencer of social integration in the model (β=2.148; p=.003). This finding is intuitive since collegiate athletes arrive on campus with a ready-made affinity group waiting for them. Also, coaches and assistant coaches provide an increased number of interested stakeholders to monitor the student's success.

"Attended campus movies, plays, concerts" was statistically significant (β=1.042; p=.005). This finding could be more related to the student's propensity for engagement than for the benefit of the activity itself.

"Participation in campus sponsored clubs" also had a direct influence on social integration (β=1.884; p=.003). Again, the finding is intuitive and consistent with the literature. However, it is affirming to have evidence that supports the commitment of effort and resources to campus programming at Small Catholic.

Finally, the "faculty engagement scale" directly influences social integration at Small Catholic (β=.247; p=.032). This finding is both important and encouraging because the project team heard positive and negative comments (in seemingly near equal quantities) from faculty, staff, and students during the interview process about faculty engagement, or the lack thereof:

> "At Crossroads, just orientation in general, there is very little faculty buy-in. Outside of our system Provost, I have never seen a faculty member at Crossroads." [Faculty/Staff Comment]

> "First, I would say that relationship building with the faculty member is important because ratios are 12 to 1. You should know three faculty members pretty well. The faculty will meet you halfway or more. I would say that this is a relational place." [Faculty/Staff Comment]

> "I had several options going in and I visited Northwestern, Indiana Bloomington and here. Of all the schools that I visited, the faculty in my department seem the best here mainly because they actually met with the students. I found that to be pretty much true here that the faculty are willing to meet with you. And look at anything you give them. Right now I'm doing application process for graduate schools in different departments. Really every other day I go online and give them

> copies of my personal stuff in my applications and they are willing to go through and look at them." [Student Comment]

The project team recognizes that Small Catholic's intention of promoting participation in clubs, organizations, campus events, and affinity groups has the ultimate goal of increasing persistence. However, the project team posits that involvement and engagement's intermediate effect on social integration would be the better measure of program efficacy. The extant literature speaks clearly and loudly about the direct impact of social integration on subsequent institutional commitment and persistence (Braxton, et. al. (2004). The project team hypothesizes that testing the direct effect of involvement on social integration is a far better measure than testing against persistence for the purposes of this study. Said in a different way, Small Catholic's retention-oriented programming is successful when students demonstrate evidence of social integration attributable to that programming. Considering that social integration does not explain the entire variance in persistence, the more direct measure of involvement's influence on social integration would be the more meaningful measure.

1.b Does engagement in multiple categories of campus activities positively influence social integration?

The question concerning involvement at Small Catholic, upon which Small Catholic seeks advice and counsel, is difficult to approach in a traditional fashion because it speaks to efficiency, efficacy, marginal utility, and cost-effectiveness. Tests for associations, relationships, predictors, and influencers are helpful but do not necessarily get to the question of "how much is enough?" Perhaps, Small Catholic would choose at some future opportunity to develop an experimental design to test the propositions put forward in this study.

While the project team's analysis to answer Question 1.a shows that "involvement" is a predictor of social integration, there remains the

issue of "how much is enough". The project team created a "total involvement score" which represents the total number of categories (or types) of activities that the respondents participated in.

The total involvement score is a predictor of social integration (Appendix K: β = 1.884; p = .003). Said a different way, as total involvement increases, the greater the likelihood of social integration. The standardized beta of .584 (Appendix K) indicates that the total involvement score has the greatest influence on social integration than the other variables included in the model.

This linear analysis in Appendix K is helpful to inform the question of the influence that participation in multiple categories might have on social integration. However, it still does not get to the question of "can a student be over-involved" or "is there a point at which additional involvement becomes detrimental to the probability of social integration?"

Appendix L contains the results of a curve estimation employing the quadratic functional form in an effort to determine if there is such a point of diminishing returns in social integration when students are involved in increasing numbers of various types of clubs and activities. The quadratic functional form explained 11.9% of the variance in social integration and was statistically significant (β_1 = 1.802; β_2 = -.190; p < .001).

The chart in Appendix L shows that there is little increase in social integration beyond participation in four types of activities. However, the project team urges caution in interpreting and extrapolating the quadratic functional form due to the limited number of observations beyond participation in three types of activities.

While there were no observations in the sample beyond five categories of participation, the coefficients returned by the quadratic function could be used to extrapolate the result of increasing levels of participation. As Figure 2 shows, social integration is predicted to decrease after the fifth category of participation. Again, caution should be used in interpreting this

finding since there are no data points beyond five categories in the sample.

A less direct approach could be performed by dividing the respondents into groups based upon their level of participation and testing for statistically significant differences in those groups. T-tests for independent samples were performed by systematically testing increasing levels of participation (measured by number of categories of participation). To accomplish this, the project team first split the data (169 total respondents) into two groups (those who participated in at least one category of activities and those who did not participate) and tested the difference in the means of the construct of social integration. Next, the project team divided the two groups between those who participated in at least 2 categories and those who participated in one or less. The project team continued this analysis by dividing the two groups based upon increasing level of participation by category. The results from this study are shown in Table 3.

Table 3 shows that when students are divided into two groups based upon participation in at least one category of campus clubs or organizations, there is a difference in the means of 3.143 between those two groups on the construct of social integration (μ= 21.315). While data points become sparse when the groups are divided on the basis of increased categories of participation, there is no evidence to suggest that involvement in increasing numbers of categories negatively impacts social integration.

The analysis suggests that student's engagement in multiple campus activities positively influences social integration.

The project team recognizes that one could hold to the position that while social integration and campus engagement naturally increases, there could still be a detrimental impact on persistence. A similar analysis was performed by dividing groups in like manner and testing the mean difference of the construct of persistence. For all 169 respondents, "persistence" measured as intent to re-enroll had a mean of .9408. Intent to re-enroll has been

Figure 2. Total Involvement's Influence on Social Integration.
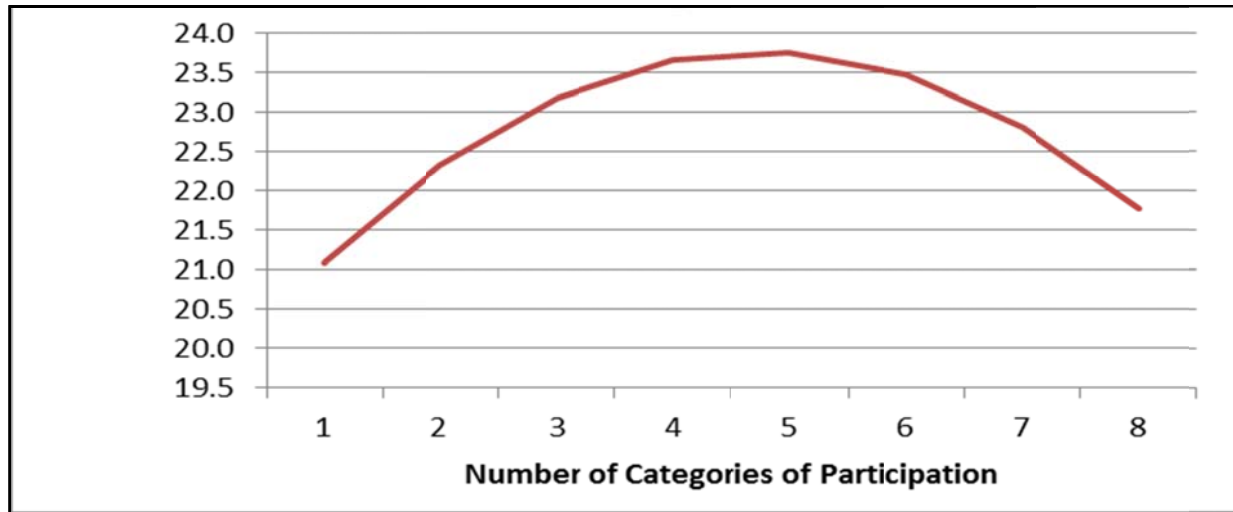
Table 3. Comparisons of social integration for students participating in at least X groups to those of students participating in less than X groups.

Categories of Sports, Clubs, &Organizations	N	μ of Group with Lesser Participation	μ of Group with Greater Participation	Diff. in μ of Social Integration	Sig.
At least 1	125	18.98	22.12	3.143	0.000
At least 2	64	20.65	22.39	1.737	0.005
At least 3	28	20.96	23.11	2.150	0.008
At least 4	10	21.15	23.90	2.748	0.031
At least 5	4	21.21	25.75	4.540	0.021

found to have a strong relationship with persistence (Bean, 1983). When the respondents were divided into two groups (those who participated in zero clubs and organizations versus those participating in one or more), there was a statistically significant difference in the means (mean difference = .104; p=.011). Because of the small number of respondents indicating their intention to not re-enroll, statistical significance could not be obtained by grouping students by increased levels of participation.

1.c Is there a positive relationship between hours spent in campus activities and social integration?

Hours per week spent in campus sponsored clubs directly affects social integration (β_1 =.828;

β_2 = -.079; p = .032) (Figure 3; Appendix M). While the model fit is extremely weak (explaining only 4.3% of the variance in social integration), the quadratic functional form does suggest that it is possible that students can be overly involved. The function suggests that six hours per week of involvement in campus sponsored clubs is the level at which the institution could begin to experience diminishing returns in the form of decreasing levels of social integration.

The project team finds the suggestion of diminishing returns of social integration to be counterintuitive, surprising, and worthy of additional analysis. The team posits that increased levels of participation in campus sponsored clubs could lead to such "high" levels

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Figure 3. Hours Per Week Spent in Clubs Influence on Social Integration.
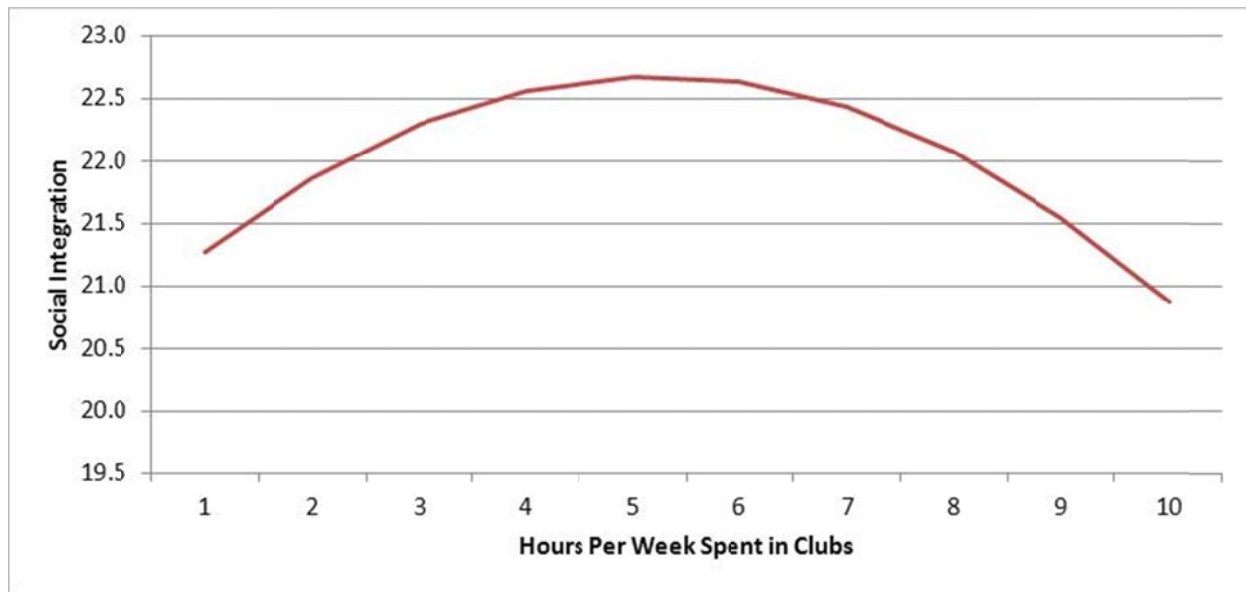
of social integration that the probability of persistence could be diminished. However, diminishing returns manifested in reduced levels of social integration seem counterintuitive. Perhaps, the finding of diminishing returns suggests that students could become so immersed in one activity that social integration into the total fabric of the campus does not occur.

This unexpected finding requires more analysis. The National Survey of Student Engagement (2009) data set is used to see if the quadratic functional form returns a similar curve estimate of diminishing returns at the same number of hours spent per week in clubs (Figure 4). This approach is somewhat problematic in that the NSSE (09) data set does not truly measure social integration. The "supportive campus environment" scale measures the extent to which students perceive the campus helps them succeed academically and socially, assists them in coping with non-academic responsibilities, and promotes supportive relations among students and their peers, faculty members, and administrative personnel and offices. While this measure does not measure social integration as defined in the conceptual framework, the capstone team posits that the measure of "support campus environment" might be related, and if so, might generate a

similar curve estimate thus providing further support for the unexpected finding.

Hours spent per week in co-curricular activities explains only 3.1% of the variance in the construct of "supportive campus environment"; however, it is statistically significant ($\beta1 = 5.107$; $\beta2 = -.501$; $p = .024$; Appendix N). The model suggests that hours per week in co-curricular activities are positively related to the construct of supportive campus environment with diminishing returns experienced at six hours of participation. This result with data from the NSSE (09) dataset supports the finding from the project team's survey.

Since the literature clearly speaks to the direct influence that social integration has on persistence (Braxton, Hirschy & McClendon, 2004), the project team posits that this finding should also manifest itself in the form of additional hours spent in co-curricular activities directly or indirectly affecting persistence. Since the project team's survey occurred in the fall term, the NSSE (09) dataset is used and matched with institutional data to determine those that actually returned for the subsequent fall term. Logistic regression is used to determine the probability of persistence based upon varying levels of hours spent in co-curricular activities. While this process is linear in nature and is unable to predict

a point at which diminishing returns exists, the project team posits that results showing the increase in the probability of persistence tending to level off at six hours per week of involvement is supportive of the previous finding.

Applying logistic regression to the larger data set (NSSE 09) found that hours spent per week in co-curricular activities such as clubs and organizations (variable cocurr01) should be included in the model (Appendix I). Logistic regression analysis was performed on the National Survey of Student Engagement data utilizing the following variables:

- Dependent Variable - Returned for 3rd Semester (3return)
- Independent Variables
  - Hours per week in academic preparation (acadpr01)
  - Hours per week in co-curricular activities (clubs and org) (cocurr01)
  - Hours per week working on campus (workon01)
  - Hours per week working off campus (workof01)
  - Hours per week in social and leisure activities (social05)
  - Hours per week caring for a dependent (carede01)

Converting the odds ratio to a probability statistic returns the probability of persistence with varying hours of co-curricular involvement for students at Small Catholic (Figure 5).

While the absolute values resulting from the model should be viewed with extreme caution, the additive benefit of additional hours of participation is informative for the Small Catholic University staff. According to the model, after 6 to 7 hours of participation in co-curricular events, increased levels of participation may do little to improve the probability of persistence.

Table 4 shows the frequency distribution of hours per week, during the fall 2010 semester, students were participating in clubs and organizations. Thirty-five percent of students participated between 1 and 4 hours per week.

Small Catholic University might find it advantageous to devote greater resources to student co-curricular involvement with a

targeted ceiling of six hours. While there is some evidence suggesting that additional hours of participation beyond six hours per week is detrimental to the probability of persistence, there is ample evidence that additional resource allocation could have diminishing returns.

For all students that participated in clubs, there were weak to moderate statistically significant positive correlations between hours spent participating in clubs and hours spent studying and attending class.

In other words, students that spent more hours in clubs and organizations tended to study more hours and spend more hours attending class. While this positive correlation does little to assert cause and effect, it does suggest that there is a positive relationship between hours spent in clubs and organizations and hours spent in academics (Table 5). This positive correlation suggests that the greater the level of involvement in clubs and organizations, the greater the level of hours spent in academic pursuits.

Students interviewed at Small Catholic indicate that the opportunities to be engaged in the social fabric of the institution are plentiful, open and varied:

"There are a ton of clubs on campus. Everybody worries because it's a small college and they're not going to meet people. Everybody always says about Small Catholic just get involved and you will be fine and that's true."

"I would also say getting involved and take as many opportunities as you can to educate yourself. Take advantage of guest speakers and stuff like that. Get homework done ahead of time so you don't have to stress out the night before or the morning of."

While students acknowledge the desire to take advantage of the opportunities, there is hesitancy and anxiety around getting involved too quickly or too much, including, those that are commuter students:

Figure 4. Hours in Co-Curricular Activities' Influence on Supportive Campus Environment (NSSE 09 Data Set).
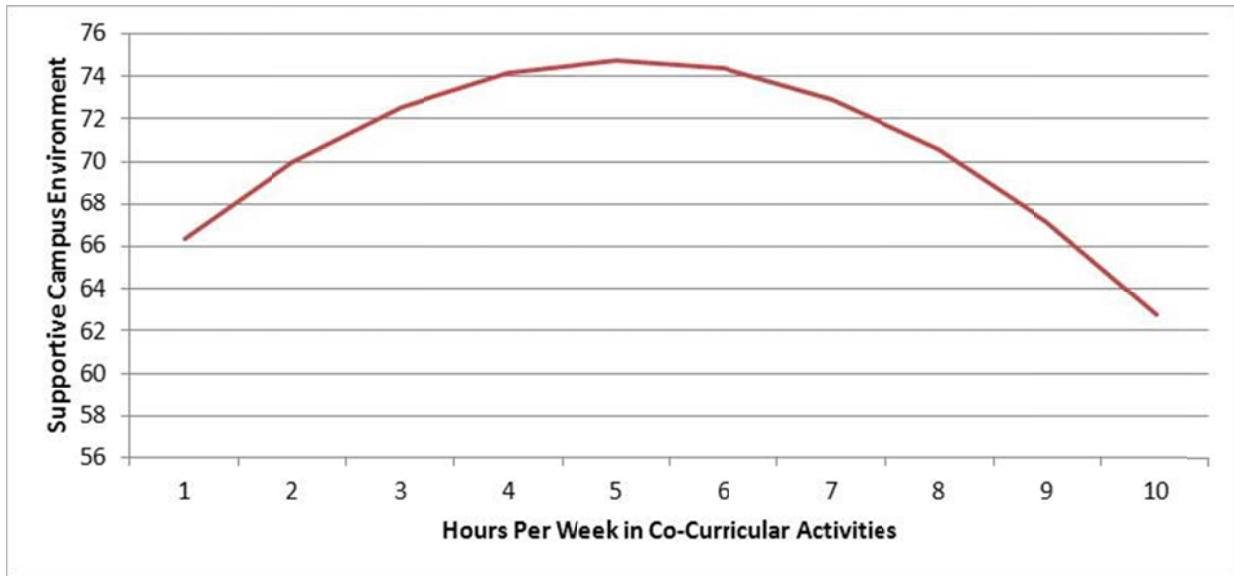
Figure 5. Probability of persistence based upon hours of participation.
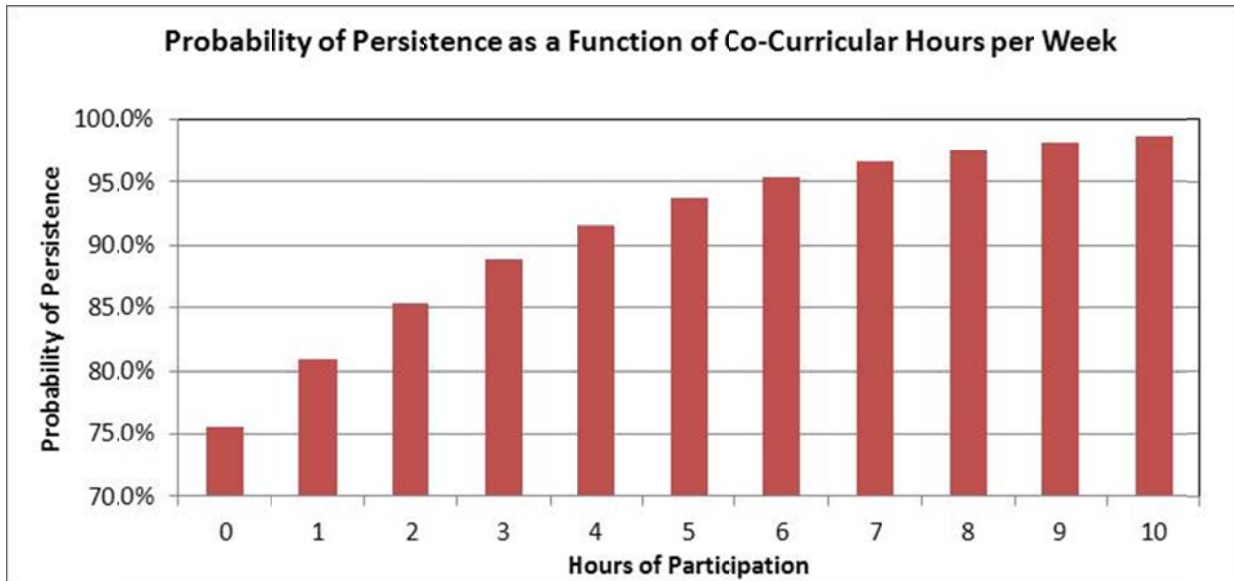
Table 4. Average hours per week of participation in clubs and organizations.

Hours	Frequency	Percent	Cumulative
0	76	45.5%	45.5%
1	23	13.8%	59.3%
2	15	9.0%	68.3%
3	13	7.8%	76.0%
4	7	4.2%	80.2%
5	11	6.6%	86.8%
6	2	1.2%	88%
7	1	0.6%	88.6%
8	5	3.0%	91.6%
9	2	1.2%	92.8%
10	7	4.2%	97%
>10	5	3.0%	100%
	Total 167		

Table 5. Correlation between hours studying or attending class and hours participating in clubs.

		IC-2	Fall Hours Per Wk: Clubs	Fall Hours Per Wk: Working off Campus	Fall Hours Per Wk: Studying	Fall Hours Per Wk: Attending Class
IC-2	Pearson Correlation	1	.004	-.162	.155	.125
	Sig. (2-tailed)		.971	.126	.143	.241
	N	91	91	91	91	90
Fall Hours Per Wk: Clubs	Pearson Correlation	.004	1	-.232*	.312**	.572**
	Sig. (2-tailed)	.971		.027	.003	.000
	N	91	91	91	91	90
Fall Hours Per Wk: Working off Campus	Pearson Correlation	-.162	-.232*	1	-.076	-.069
	Sig. (2-tailed)	.126	.027		.475	.517
	N	91	91	91	91	90
Fall Hours Per Wk: Studying	Pearson Correlation	.155	.312**	-.076	1	.497**
	Sig. (2-tailed)	.143	.003	.475		.000
	N	91	91	91	91	90
Fall Hours Per Wk: Attending Class	Pearson Correlation	.125	.572**	-.069	.497**	1
	Sig. (2-tailed)	.241	.000	.517	.000	
	N	90	90	90	90	90

*. Correlation is significant at the 0.05 level (2-tailed).
**. Correlation is significant at the 0.01 level (2-tailed).

"I have tried more this year now that I have my first year down and kind of felt out how it would go as far as timelines. I am in the Pioneer mentors, which is all first-generation students."

"I plan on being more involved. I just didn't think, like, I would like getting involved but with so much, but it's my first semester, as a freshman just try to get a feel for things."

"It's extremely difficult I think if you're a commuter and you don't want to get involved. If you're a passive student, which a decent number of students come here go to class and are not involved in campus activities. They don't spend a good deal of time on campus. If you only spend time on campus when you're here for your classes then I can see where it's hard to understand or figure out when things are and how things work."

Project Question 1: Summary of Findings

The project team found statistically significant results related to the influence of involvement on social integration, and persistence. The pertinent findings were as follows:

- A measure of involvement consisting of the number of different categories of programs that students are involved in explains 22.4% of the variance in social integration (Appendix H)
- Students identifying themselves as "athlete" was a statistically significant influencer of social integration in the model (β=2.148; p=.003).
- Attended "campus movies, plays, concerts" was statistically significant (β=1.042; p=.005)
- "Participation in campus sponsored clubs" also had a direct influence on social integration (β=1.884; p=.003)

- The "faculty engagement scale" directly influences social integration at Small Catholic (β=.247; p=.032)
- Social integration is directly influenced by the students' involvement in multiple categories of activities, with diminishing returns experienced at 6 categories of involvement (β_1=1.802; β_2=-.190; p.<.001) (Figure 2).
- When respondents are divided into two groups based upon the number of activities in which they are involved, there is a statistically significant difference in the means of social integration for each data separation (Table 3)
- There exists a statistically significant difference in the means of persistence when groups are divided based upon participation in at least one group (mean difference = .104; p=.011)
- Hours spent per week in campus sponsored clubs directly influences social integration with diminishing returns occurring around 6 hours of participation (β_1=.828; β_2= -.079; p.=.032) (Figure 3)
- From the National Survey of Student Engagement data set, hours spent in co-curricular activities directly influences the construct of "supportive campus environment" (proxy for social integration) with diminishing returns occurring around 6 hours (β_1 = 5.107; β_2 = -.501; p = .024).
- Logistic regression (from the National Survey of Student Engagement data set) determined a statistically significant relationship between persistence and hours spent in co-curricular activities (Appendix I)
- The above finding suggests that co-curricular involvement's influence on persistence may begin to optimize at 6 hours per week (Figure 2)
- For students that participated in clubs, there was a positive correlation between hours spent in clubs and hours spent studying (r=.312; p.=.003)

- For students that participated in clubs, there was a positive correlation between hours spent in clubs and hours spent attending class (r=.572; p.<.001)
- For students that participated in clubs, there was a negative correlation between hours spent in clubs and hours spent working off campus (r=-.232; p.=.027)

As the research team posited and as the extant literature supports (Braxton, et. al, 2004), social integration influences persistence at Small Catholic University. The institution's question of "how much is enough" is far more difficult to answer. The project team finds evidence that there is a point of diminishing returns at which additional involvement (by category of involvement or hours of participation) is detrimental to social integration. However, the data points of hours of involvement beyond five hours per week become sparse and not conducive to statistical analysis.

The project team affirms Small Catholic University's staff in its desire to obtain greater resources to involve greater numbers of students in co-curricular activities. For maximum utilization of resources, the project team recommends an informal target of six hours per week of co-curricular involvement. The project team finds evidence that hours beyond six per week could be detrimental to the student's probability of persistence. However, statistical evidence does suggest that optimum utilization of resources might occur at an informal target of six hours per week.

2. *What are the most significant risk factors of attrition for students at Small Catholic?*

The project team utilized Tinto's Theory Revised for Student Departure for Residential Colleges and Universities (Braxton, Hirschy, & McClendon, 2004) as the conceptual framework through which to analyze significant risk factors of student departure at Small Catholic University. The analysis that follows examines "predictors" determined by the institution as well as testable propositions generated by Braxton, et. al (2004).

Through focusing on the constructs within the conceptual framework, the institution could determine at-risk factors beyond student entering characteristics that cannot be changed. Said a different way, the institution may determine risk factors over which the institution has at least some degree of control.

Influencers of Initial Institutional Commitment (Appendix D)

Based upon the propositions put forward in Small Catholic University's predictive model for retention (see Instruments and Methods Section; Statistical Methods – Project Question 2), the results of logistic regression analysis (Appendix D) were somewhat unexpected. Small Catholic's predictive model states the following propositions:

1) first generation students are at higher risk
2) students with ACT scores greater than or equal to 24 are more likely to be retained;
3) African-American students are at higher risk;
4) low high school GPA (less than 3.2) are at higher risk; and
5) local students are more likely to be retained.

The project team's linear regression analysis shows that student characteristics of "residential status"(β = -1.468; p < .001) and "ability to pay" (β = -.905; p = .046) are the only statistically significant variables in the model. Both variables, residential status and ability to pay, are inversely related to initial institutional commitment. Said a different way, resident students are less likely to list Small Catholic as their first choice than are commuting students. Students with major concerns about their finances are less likely to list Small Catholic as their first choice than are students without major concerns about their ability to pay for college. High school grades, parental education, race, gender, and participation in a program for first-generation students are not statistically significant.

The variable "First-generation" was dropped from the model because of the risk of multicollinearity. The variable "First-generation" is a function of parental education so both should not be included in the model due to the extremely high correlation between the two measures.

The Small Catholic University Retention Committee meets weekly with the goal of being both intentional and interventional in their efforts to improve retention. This committee utilizes an "A List" which is comprised of students that the institution deems to be most "at-risk" for attrition. This "A List" contains individual level information about each student (Table 6).

The statistical significance of the variables "financial concern" and "resident status" should be of great interest to Small Catholic University. A measure of financial concern is not included in the institutions "A List" prediction model and is not currently being reported to the Retention Committee. The project team suggests that a measure of financial concern be considered in the at-risk student analysis for the Retention Committee's "A List".

Resident Status

At Small Catholic University there is an inverse correlation between "residential status" and initial institutional commitment. A crosstabulation of those variables shows that among non-residents, 44 out of 60 (73.3%) of students responded that Small Catholic University was their first choice (Table 7). Among resident students, only 48 out of 109 (44%) of the matriculants report that Small Catholic was their first choice. This difference between the means is statistically significant (µ Difference = .293; p < .001).

The odds ratio associated with resident status (.230 from Appendix D) indicates that there is an increase in the probability (odds/(odds+1)) of initial institutional commitment (measured here as first choice) of 18.7% when the student is not a resident. While one can posit a rationale for the finding, it is less than positive news for Small Catholic University

as the institution strives to increase the number of full-time students residing on campus to utilize the new housing facilities.

Ability to Pay (Financial Concern)

Considering the fact that "ability to pay" is not a variable that is in Small Catholic University's current predictive model for the development of the "A List", and further considering the commonality of the "cost" theme during interviews with faculty, staff, and students, the project team conducted further analysis of the "ability to pay" construct (Table 8).

Small Catholic University was the first choice of 92 students (54.4%) out of the sample of 169. Among the 92 student's listing Small Catholic as their first choice, only 16 of those students (17.4%) reported "major concerns" with their ability to pay for college.

To the contrary, for the students that did not select Small Catholic as their first choice, 22 out of 77 (28.6%) reported major concerns about their ability to pay for college. The difference in the means of the two groups (11.2%) was not statistically significant at α=.05; however, the dichotomy is so startling that it is of interest to the project team and the university.

A possible explanation would be that students who aspired to more selective institutions (first choice), matriculated to Small Catholic University because of its lesser net price. We know from qualitative interview data that Small Catholic's admissions strategy is intentional in its efforts to recruit out-of-state students that might otherwise attend higher-priced, aspirant institutions. If this were the primary driver of the phenomenon, one would posit that, among students not listing Small Catholic as their first choice, those with major financial concerns would tend to be students with higher levels of academic preparedness (Table 9).

Of the 22 students not listing Small Catholic as their first choice <u>and</u> reporting major concerns with their ability to pay, 16 students (72.7%) self-reported high school grades of "A" or above. To the contrary, only 32 out of 55

23

Table 6. Student characteristics listed on the "A list".

Student Characteristics		
Gender	Sub Program	First-Generation
Resident / Commuter	Advisor	Pioneer scholar
Hall Director	Major	Work-study
Ethnicity	Contacts	% Chance of Being Retained

Table 7. Cross tabulation: Residents and College Choice

	Non-Resident	Resident	Total
Not the Student's First Choice	16	61	77
Student's First Choice	44	48	92
Total	60	109	169

Table 8. Cross Tabulation: Financial Concern and College Choice

	Non-Major	Major Concern	Total
Not the Student's First Choice	55	22	77
Student's First Choice	76	16	92
Total	131	38	169

Table 9. Cross Tabulation of High school grades and financial concerns for only those students whose first choice was not Small Catholic.

	HS Grades - Any A		Total
	< A	>= A	
No major financial concerns	23	32	55
Major financial concerns	6	16	22
Total	29	48	77

students (58.2%) who did not list Small Catholic as their first choice <u>and</u> do not report major financial concerns have high school grades of "A" or better. Again, the small sample size after the data cut does not provide statistical significance to the intuitive and substantive finding.

The correlation between "Ability to Pay" and "Parental Education" (Pearson's r = -.344; p = .003) was statistically significant; however, the strength of the correlation was moderate. The relationship was intuitive as increased levels of parental education correlated to a decreased level of financial concern.

The odds ratio associated with the construct of "financial concern" (.405 in Appendix D) indicates that there is an increase in the probability (odds/(odds+1)) of initial institutional commitment (measured here as first choice) of 28.8% when the student does not have financial concerns.

During the course of the interview process with students and administrative staff, student's ability to pay and net cost were recurring themes. Cost was mentioned both as a barrier to entry and as a driver of attrition. The weak but statistically significant correlation between ability to pay and parental education are of great concern to the institution. These concerns are problematic as Small Catholic strives to make their campus more diverse. One member of the Small Catholic staff expressed their concern in this way:

> "Everybody puts all of their money into the merit-based basket. We have a need based grant program for out-of-state but that's really the only need-based institutional money that we offer. Which is a little bit of a struggle for me because I want to help the neediest students."

Student Entry Characteristics influence on Initial Institutional Commitment

Additional information from qualitative interviews with students (Appendix O) and from open-ended questions on the survey instrument (Appendix A) added depth to the project team's understanding of some of the reasons that

student's chose Small Catholic University. While examples of student's initial commitment to the institution vary greatly, "generous scholarship offers" represents a significant stream within those comments. One resident student summed up his college choice in this way:

> "And then it was the only school that I applied to away from home. They gave me a lot of money. So I came."

Initial institutional commitment could be stronger among non-residents because that student profile has geographic limitations, and consequently, a reduced number of substitute choices. Strong initial institutional commitment among non-residents is encouraging to the institution because Small Catholic University has a much higher gross tuition price than its public and private competitors in the Louisville area. The research team posits that strong professional programs and the institution's academic reputation help to solidify Small Catholic as the first choice for higher education among its non-resident student population.

The survey instrument included the open-ended question "I chose Small Catholic because?" Those responses were coded by the project team into ten categorical responses. Eight of those responses that inform the concept of initial institutional commitment appear in Table 10.

The variables in the table are arranged by the total number of responses. Majors offered and academic reputation is the primary reason that survey respondents chose Small Catholic University.

The project team found statistically significant differences between residents and commuters in their reasons to choose Small Catholic University (T-tests of independent samples, Table 10). Commuting students choose Small Catholic because of it majors and academic reputation more so than did residents (μ difference = .191; p = .007). Resident students chose Small Catholic because of athletics more so than did commuters (μ difference = .104; p = .031). While the group was extremely small, commuters chose Small Catholic because of encouragement

Table 10. Student reasons for choosing Small Catholic University.

	Non-Resident	Resident	Total	Non-Resident	Resident	Total	Sig.
Major/Academic Reputation	23	21	44	38.3%	19.3%	26.0%	0.007
Fit/Campus Environment	9	18	27	15.0%	16.5%	16.0%	0.799
Institution Size	7	18	25	11.7%	16.5%	14.8%	0.399
Scholarships/Cost	6	15	21	10.0%	13.8%	12.4%	0.481
Athletics	2	15	17	3.3%	13.8%	10.1	0.031
Don't Know	3	12	15	5.0%	11.0%	8.9%	0.191
Location or Close to Home	4	8	12	6.7%	7.3%	7.1%	0.872
Parents/Friends/Alumni	6	2	8	10.0%	1.8%	4.7%	0.017
	60	109	169	100%	100%	100%	

from parents, family, and alumni more so than did residents (μ difference = .082; p = .017).

Among the students responding that they did not know why they attended Small Catholic, 80% were resident students. The relationship was not statistically significant (μ difference = .060; p.=.191); however, the high proportion of residents who could not rationalize their reasons for school choice suggests additional challenges as Small Catholic continues on its path to become a more residential college, as well as a potential institutional identity crisis as competition for enrollment increases. The inverse correlation between resident status and initial institutional commitment is troubling for Small Catholic's faculty and staff.

In addition, the project team was surprised by the lack of evidence to support the institution's belief that the campus location in the east end of Louisville and the Catholic values of the institution are among the greatest recruiting strengths. When these concepts did not appear prominent during the qualitative interviews with students, the project team held to the belief that these institutional comparative, competitive advantages would be supported by the open-ended survey data.

Location was only mentioned in 8 out of 109 (7.3%) responses by residents when asked for the reasons why they chose Small Catholic. In some of those eight responses, location would not have been listed as the first reason. Commuter responses would likely be driven by proximity and not the metropolitan, affluent location itself in the Highlands section of Louisville.

During interviews with the enrollment management staff, each staff member stressed the value of the trendy, metropolitan location as a way of differentiating the institution from its peers. Intuitively, location should be a huge factor. The enrollment management staff are on the front lines of the recruiting war and obviously know what "sizzle to sell" to prospective students. However, it is surprising that the concept of location is not strongly supported in the survey results.

The Catholic affiliation is also said to be a differentiating factor and a comparative, competitive advantage by the staff at Small Catholic. One person interviewed stated "Students with Catholic backgrounds make up a little less than half of the student population now. It used to be more than half. We've slipped in the past ten years, about six or seven percent." The

enrollment management staff knows the Louisville area Catholic high schools to be feeder institutions for Small Catholic University, but it did not translate in the survey as a reason for attendance or persistence.

While 27 of 169 (16%) respondents did say that "Fit / Campus Environment" was the reason they chose Small Catholic, only four students actually used the word "Catholic" and only one used the word "values". These five students represent less than 3% of the total responses.

This unexpected finding could have many explanations. Among them, it could be that Catholic affiliation or a "values driven" environment is among the first cuts for students that matriculate to institutions such as Small Catholic. This sense of values could be "understood" and not necessarily included in a direct response to a question of college choice.

Influencers of Social Integration (Appendix E)

Building upon the student entry characteristics of the Small Catholic first year class, it is possible to engage the data to evaluate the level to which students are melding with the social fabric of the institution. Braxton, Hirschy, & McClendon (2004) posit that a student's level of social integration is influenced by constructs the researchers defined as institutional commitment to the welfare of students, institutional integrity, communal potential, proactive social adjustment, and psychosocial engagement. This study includes selected constructs defined by Braxton, Hirschy, & McClendon (2004) and includes a "Faculty Engagement Scale" as a proxy for the level of students' engagement with the faculty. The survey instrument measured each of these constructs. Appendix E contains the survey questions that comprise these scales along with reliability measures (Cronbach's alpha scores). The purpose of the following analysis is to determine those factors that put students at risk for not being socially integrated.

The following analysis of selected constructs from the conceptual framework developed by Braxton, Hirschy, & McClendon (2004) shows that the sign of the regression coefficient is in the anticipated direction that the researcher's testable propositions (Statistical Methods Section – Project Question 2) hypothesize. Therefore, the p-value measure of statistical significance is stated as a one-tailed test of significance.

Institutional Commitment to the Welfare of Students

The construct of institutional commitment to the welfare of students is defined as the institution's concern for the growth and development of its students (Braxton et. al, 2004). Implicit in this definition is the equal treatment of groups of students as well as individuals. The construct of institutional commitment to the welfare of students is not significant in the model (β=.085; p = .118). The project team was surprised by this lack of significance when qualitative data suggests that the institution goes to great lengths to provide programs and services to this end.

Institutional Integrity

Braxton and Hirschy (2005) define institutional integrity as "the extent to which a college is true to its espoused mission and goals". Institutional integrity directly influences social integration at Small Catholic University (β = .222; p = .007). Students' perceptions of the actions and policies of the administration positively influence social integration.

Communal Potential

The construct of communal potential refers to the notion that students have the expectation to find others with shared values, opinions, and beliefs (Braxton and Hirschy, 2005). Therefore, students have the expectation that they can become members of campus communities, thus leading to social integration. Communal potential is statistically significant (β = .459; p < .001) in the model. The construct is so inherent to the retention strategy at Small

Catholic, it is worthy of additional discussion and analysis.

Faculty Engagement

It should be noted that this construct is not a construct developed by Braxton, Hirschy, & McClendon but rather a measure of students' level of engagement with the faculty developed by the project team (Appendix E). Because this construct is not supported by prior studies, there is no formulated testable proposition. Therefore, statistical significance is stated as a two-tailed test. Faculty engagement was statistically significant (β = .343; p = .002) in the model.

Initial Institutional Commitment

Initial institutional commitment does not directly influence social integration (β = .585; p = .309). The project team views that finding, or rather the lack of a significant finding, as a positive development for Small Catholic's retention effort. In the logistic regression analysis of student's entry characteristics on initial institutional commitment (Appendix D), the project team viewed the significance of resident status as an "unfavorable" predictor of college choice. While one must use caution to assert anything from a "non-finding", it could be that it is good news that institutional choice does not influence social integration at Small Catholic. Said a different way, it could be the case that Small Catholic's retention efforts has been successful in fostering social integration even though Small Catholic was not the first choice of a number of residents.

Discussion of Selected Constructs from the Conceptual Framework and Faculty Engagement's influence on Social Integration

The discussion will be framed by discussing differences that exist between students when groups are divided upon the basis of residential status and ability to pay. When possible, the discussion will incorporate evidence from the interview process to add depth to the understanding.

At Small Catholic University, Institutional Integrity, Communal Potential, and Faculty Engagement directly influence social integration. As previously mentioned, the lack of statistical significance for the construct of Institutional Commitment to the Welfare of Students is puzzling considering the qualitative data indicating that the institution is exerting considerable efforts to signal its commitment to the student.

While the data could be cut any number of ways, the project team focused on a previous finding in which it was determined that resident status and ability to pay were significant influencers of initial institutional commitment (Appendix D). These constructs (resident status and ability to pay) were employed to divide the respondents into two groups and testing the means of each of the influencers of social integration on the basis of resident status and ability to pay (Table 11).

The difference in the means, on the construct of institutional integrity, between those students with major concerns about their finances and students without major concerns is statistically significant (μ difference = 1.64; p = .020). One possible explanation for this significant difference is that students with major financial concerns might feel that the institution could do more from a policy standpoint to assist them. It is possible that students perceive a disconnect between financial policies (presumably net price) and the values the institution espouses.

One staff member spoke of the potential for a "mixed message" that could be sent to students. The response was within the context of institutional fit and a target enrollment effort to engineer the first year student cohort. He/she expressed the dilemma in this way:

> "Not that we aren't a very good institution, still not all students can afford to be here. So when you look at a price tag of almost $40,000, most of our students do not pay that, but still when

Table 11. T- tests of independent samples: Financial Concern and Resident Status.

Variable	Mean	Financial Concern			Residential Status		
		Non-Major	Major	Sig.	Non-Res.	Res.	Sig.
Welfare of Students	34.07	34.40	32.92	0.086	35.80	33.18	0.000
Institutional Integrity	18.90	19.27	17.63	0.020	19.72	18.55	0.071
Communal Potential	14.62	14.92	13.55	0.004	14.28	14.80	0.225
Faculty Engagement	9.30	9.27	9.37	0..846	8.97	9.48	0.224

students even come from $5,000 to $20,000 out-of-pocket to be here, looking at taking out the student loans, and for first-generation students, parents know that they want their son and daughter to have a better place in life than what has been afforded to them. So Small Catholic is a great place and I think that we can afford them a great place to go to class and get involved. I think we can open up a new world for them. But also what does it mean for them on the financial issue. That New World also comes with a cost and they have to be prepared to pay that and to understand what it means. But we don't, those aren't good selling tools. So we can't talk about maybe there could be a better place for you when you think about taking out $7,000 or $8,000 worth of student loans your first year or what's that going to mean for four years. So that's not a good selling point so we don't talk about that on the front end. Yes we talk about the bill. We talk about you have to pay and how we can help you pay this because education is important. That's what we talk about. We don't talk about realities because they're not great selling points."

Looking again at Table 11, the project team was surprised at the results of the tests for differences in the means for both residents and students with financial concerns on the construct of Communal Potential. The project team posited that the concept of communal potential would manifest itself more noticeably among residents than commuters since residents have far greater access to campus programming designed to promote Communal Potential. The modest difference in the means is not statistically significant (p=.225). To support the notion that the concept of Communal Potential is strong among commuter students, here is an example of a commuter student's level of involvement on campus:

"Over the summer, right before I started my summer class, I met with some of the professors, the accounting professors here like Dr. S. and Dr. D.. They talked to me and my parents about accounting and why I should do it, and I asked a lot of questions. He had several managers come in to talk to us as well to get a real perspective. And then once school started we have the accounting Association here and there were events every week. New voices and new managers and new firms would come in to talk to us"

"The pioneer scholars. It's for first-generation. There's a group called the WINC group, Women in College group. That's about it. I plan on being more involved. I just didn't think, like, I would like getting involved but with so much,

but it's my first semester, as a freshman just try to get a feel for things."

As a commuter student, this student is involved in Pioneer Scholars, WINC, and is heavily invested in the accounting association. It was telling that the student sounded nearly apologetic for not getting involved to a greater extent.

The statistically significant difference between the means of the construct of Communal Potential when the groups are divided on the basis of financial concern was equally, but unpleasantly, surprising. The project team's first theory was that students with major concerns about their finances spend so many hours working that they do not perceive they can join communities or find peers with whom they have shared values or beliefs. To test this proposition, the project team calculated a difference in the means of communal potential when the groups were divided on the basis of "worked on or off campus" (1= worked on or off campus; 2= did not work). This test did not prove statistical significance (p=.296).

During the interviews, students spoke a great deal about participation in clubs and joining formal and informal groups of friends and peers. There were no qualitative findings to allow the project team to anticipate this significant difference. Since there is no cost to participation in most, if not all, activities and events on campus, the project team posits that this finding is a result of students' perception and not the impact of policies or practices unfavorable to the economically disadvantaged. The project team suggests that this topic be further discussed and analyzed among the Small Catholic retention staff.

On the construct of Faculty Engagement, there were no statistically significant differences between groups when students are divided on the basis of resident status or financial concern.

Influencers of Subsequent Institutional Commitment – Appendix F

Project question 2 speaks to an analysis of significant predictors of departure at Small Catholic University. To this point, consistent with the conceptual framework, the project team has analyzed significant predictors of initial institutional commitment as well as predictors of social integration. Since the overarching question relates to persistence, further testing of the constructs influence on subsequent institutional commitment and ultimately on persistence is paramount.

The linear regression model (Appendix F) analyzes the predictors of subsequent institutional commitment. Consistent with the model put forward by Braxton, Hirschy, and McClendon (2004), both initial institutional commitment (β=.538; p<.001) and social integration (β=.122; p<.001) influence subsequent institutional commitment. Several student entering characteristics were included as control variables in the model. Resident Status was the only variable that has a statistically significant relationship to subsequent institutional commitment (β=-.538; p=.027).

Influencers of Persistence – Appendix G

The logistic regression model (Appendix G) analyzes the predictors of persistence measured by intent to return as a proxy for persistence (Bean, 1983). Intent to return has been found to be strongly correlated with actual persistence. Again, consistent with the conceptual framework (Braxton, et. al, 2004), subsequent institutional commitment is a predictor of persistence (β=1.613; p=.001). Social integration is also a predictor of persistence (β = 2.205; p = .029).

Summary of Findings: Project Question 2 - Significant Predictors of Attrition

Figure 6 graphically represents the interconnectedness of the influencers related to project question number two in a manner similar to Tinto's original model and the revisions made to it by Braxton, Hirschy and McClendon (2004).

Figure 6. Model of Statistically Significant Findings at Small Catholic University.
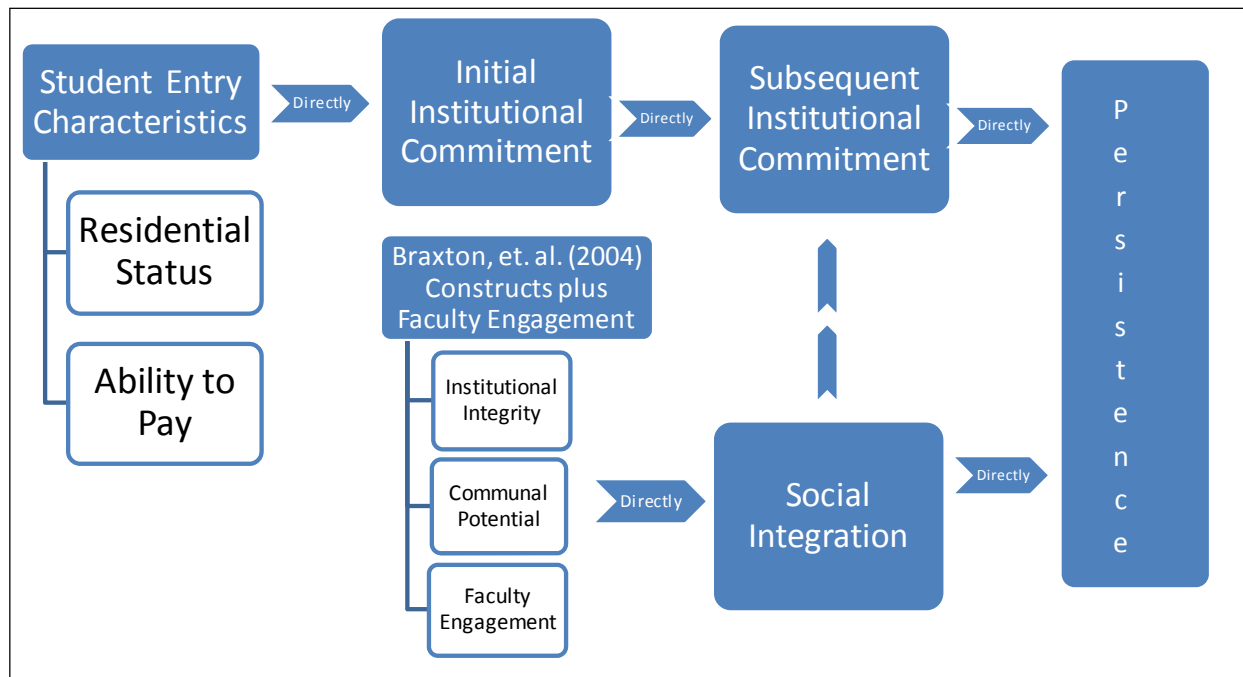
Residential Status: Residential status directly influences initial institutional commitment (β = -1.468; p < .001). The odds ratio associated with resident status (.230 from Appendix D) indicates that there is an increase in the probability if initial institutional commitment of 18.7% when the student is not a resident.

Financial Concern: Students demonstrating major concern about their ability to pay for college (Appendix D) directly influences institutional commitment (β = -.905; p = .046). The correlation between "Ability to Pay" and "Parental Education" (Pearson's r = -.344; p = .003) was statistically significant; however, the strength of the correlation was moderate.

Open-Ended Responses on College Choice: Faculty/Academic Reputation (26.0%), Fit/Campus Environment (16.0%), Institution Size (14.8%), and Scholarship/Cost (12.4%) were the most common response to the question "I chose Small Catholic because…" comprising 69.2% of all responses. Institutionally identified comparative competitive advantages of "Location" and "Catholic affiliation" were not strongly supported in the responses (Table 10).

Institutional Integrity: Institutional Integrity (Appendix E) directly influences social integration at Small Catholic University (β = .222; p = .007).

Communal Potential: Communal Potential (Appendix E) directly influences social integration at Small Catholic University (β = .459; p < .000).

Faculty Engagement: Faculty Engagement (Appendix E) directly influences social integration at Small Catholic University (β = .343; p = .002).

Initial Institutional Commitment: Initial Institutional Commitment (Appendix F) directly influences Subsequent Institutional Commitment (β=.538; p<.001).

Social Integration: Social Integration (Appendix F) directly influences Subsequent Institutional Commitment (β=.122; p<.001). Social Integration directly influences Persistence ($\beta = 2.205$; p = .029)(Appendix G).

Subsequent Institutional Commitment: Subsequent Institutional Commitment (Appendix G) directly influences Persistence ($\beta = 1.613$; p = .001)

These statistically significant findings can be translated into a list of at-risk factors to be used as a predictive model for persistence at Small Catholic University (Table 12). Some of these variables indirectly relate to persistence as they are directly related to an intermediate construct (such as subsequent institutional commitment) which in turn is directly related to persistence.

3. What organizational changes would increase student integration and retention?

Programmatically Small Catholic has been aggressive in the development and implementation of new programs aimed at increasing student retention. One senior level official phrased it this way:

> "I think people are getting pushed to develop new stuff. And of course there is always the issue of people not flying to the right program. There is a lot to it."

As a result of the program proliferation, a basis must be established from which to address project question number three that takes into consideration the non-quantitative characteristics of formal and informal organizational structures and cultures that influence student retention. In 1993 Tinto suggested that successful institutions and retention programs should be committed to the students, targeted, focused, committed to education, and provide a supportive environment. These concepts were translated into seven criteria for proper implementation of retention programs; 1. Provide adequate resources and incentives, 2. Commit to the long-term, 3. Ownership should be placed with those across campus that have the responsibility for retention, 4. Actions should be coordinated, collaborative and campus-wide, 5. Ensure that the faculty and staff have the necessary skills, 6. Front-load efforts to the first and second year, and 7. Continually assess actions with an eye toward the future.

Small Catholic has addressed some of the seven criteria forwarded by Tinto (1993) quite well, while persistence during the first year would benefit from renewed vigor for others. Through evaluation of program descriptions and interviews with faculty and staff the project team was able to witness the concerted institutional effort to develop first-year experience programs (#6) through investment of resources (#1) to positively impact retention, along with efforts to ensure that faculty and staff are prepared for the ever-evolving challenges of new student cohorts (#5). The institutions Vision 2020 plan is evidence of the institution's long-term commitment (#2) to student success and the presence of a planning process by which the goals can be achieved.

Alternatively, interviews and subsequent review of the organizational chart suggest that Tinto's criteria, #3, #4, and #7, have not occurred at the level or frequency that will have the greatest impact on student retention. Use of extant literature to further develop the context around each of these three criteria deficient at Small Catholic is necessary for the institutional leadership to grasp the potential and foregone opportunities available to increase student persistence through organizational changes.

Tinto's Criteria #3. Ownership should be placed with those across campus that have the responsibility for it

Currently the organizational structure of responsibility for recruitment, orientation and

Table 12. Predictive At-Risk Factors at Small Catholic University.

Construct	Finding
Residential Status	Resident students are at greater risk of departure (indirectly related)
Financial Concern	Students with major concerns about their ability to pay for college are at greater risk of departure (indirectly related)
Institutional Integrity	Students demonstrating lower perceptions of institutional integrity are at greater risk of departure (indirectly related)
Communal Potential	Students demonstrating lover perceptions of communal potential are at greater risk of departure (indirectly related)
Faculty Engagement	Students demonstrating lower perceptions of faculty engagement are at greater risk of departure (indirectly related)
Initial Institutional Commitment	Students with low levels of initial institutional commitment are at greater risk of departure (indirectly related)
Social Integration	Students with lower levels of social integration are at greater risk of departure (indirectly related)
Subsequent Institutional Commitment	Students with lower levels of subsequent institutional commitment are at greater risk of departure (indirectly related)

retention all rest along the same hierarchical line (Figure 7). While the official responsibility for retention rests in these offices, the ability to increase retention requires cross-campus commitments (Barefoot, 2004; Whitt, Kinzie, Schuh & Kuh, 2008).

Schartman and Rhee (2000) found that longitudinal tracking by, and within, academic units facilitated the early identification of trends, both along the lines of retention and persistence, as well as troubling trends of student departure or transfer for the institution as a whole. Schartman and Rhee (2000) utilized an environmental assessment to determine institutional flow or the cumulative nature of internal retention rate (percent of students in a particular department retained from year to year), external retention rate (retention rate of student moving from one department to another within the institution), and withdrawal (percent of students that left the institution). This matrix utilized eight labels; sustaining, modulating, persisting, decisive, digressive, departing, migrating, and attenuating (Table 13). The frequency of those environments on a campus identifies units that are losing students to other units on campus, losing students to other institutions, or are retaining students well, and the destination of students from other departments. A student flow analysis from departments distills the large institutional issue of retention into more visible, and potentially increasingly manageable and addressable scopes of work.

Utilizing the calculated metrics, departments are able to interact with students in ways that facilitated their progression towards internal and external retention. While Small Catholic knows the overall retention rate, the consideration of beginning retention modeling by academic department may be informative as to where targeted efforts of student engagement may need to take place. Attempting to increase the already high rate of retention for the entire class at SCU may be problematic; however, targeted interventions have potential to generate

change at the margins. This modeling would provide the administration with more accurate planning information for enrollment numbers the following year as well as the ability to spot emerging trends in student retention earlier.

An alternative or valuable supplement to the academic department having an increased role in student retention is for the institution to more clearly define its identity organizationally. In this process attention can be paid to ensuring that in the identity of the institution's culture as well as the unit level culture that retention of students through service is a priority. To this point, Small Catholic has demonstrated a programmatic commitment to students, but the perception among the students interviewed for the reason behind the programs has yet to be established. This could occur through surveys or interviews, but, at a school that has multiple programs targeting retention, a true cultural commitment and renewed vigor to student service from across all campus units may be the way to increase the already high retention rate.

As stated by a staff member at Small Catholic, the retention effort may best be described as "amazing people doing dynamic things." On the current organizational chart, the responsibility for retention rests clearly with the Academic Resource Center reporting up through the Vice President for Enrollment Management.

As the literature suggests, Small Catholic must shift its view and embrace retention as a campus-wide effort. Residence Life, Student Activities, Student Affairs, SOAR, Crossroads, Freshman Focus courses, Freshman Seminar, the Pioneer Scholars Program, RSOs (recognized student organizations), and other programs play an integral role in the effort. Students and staff often see these efforts as fragmented and disjointed. A senior student made the following remark:

> "From my experience, from what I've seen from working in the ARC and seeing the ARC's side of things, and I've worked as a Freshman Focus advisor in

Figure 7: Current Small Catholic University Organization Chart with retention (yellow), recruitment (blue), and orientation (red) responsibilities tracked.
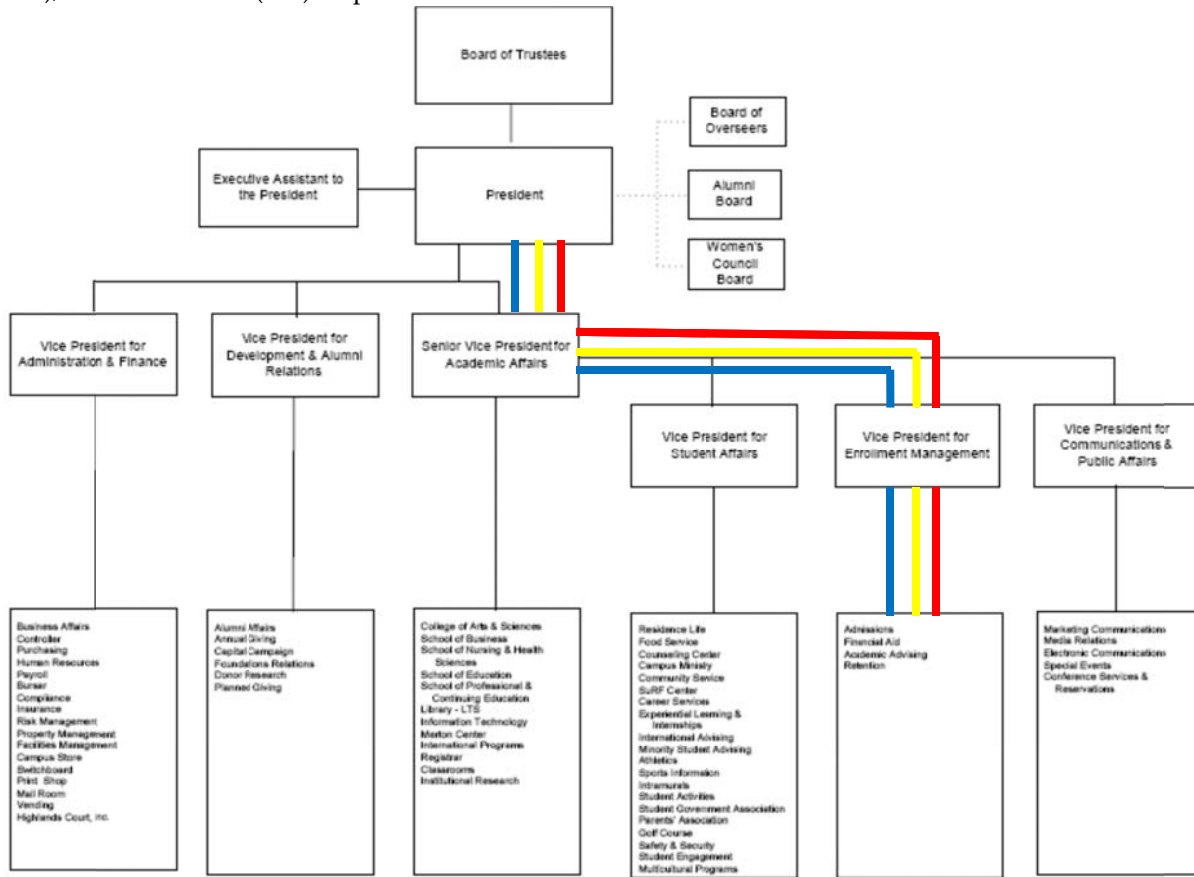
Table 13. Departmental and institutional environments of student flow (Schartman & Rhee, 2000).

Environment	Description
Sustaining	Internal and External retention up, while Withdrawal down
Persisting	Internal retention up, External retention and Withdrawals down
Departing	Internal and External retention down and Withdrawals up
Digressive	Internal rate down, External retention and Withdrawal rate up
Decisive	Internal retention and Withdrawal rates up, External retention down
Migrating	Internal retention and Withdrawal rates down, External retention up
Modulation	Withdrawal, Internal and External retention all up
Attenuating	Withdrawal, Internal and External retention all down

the Freshman Focus classes, and I've seen the Pioneer program since it's based in the ARC, and I've lived in residence life for one year, it is extremely fragmented. The communication is lacking if nonexistent between most of these programs. In some instances, you have faculty working on a freshman newsletter that's completely detached from residence life. That's extremely strange if you have a newsletter going out to freshman parents, their main concern is going to be residence life. "

The student's concerns are echoed by the staff. The concept of "fragmented" efforts was recurring throughout the process.

> "I think that what we want to look at is a couple of different things is a seamless approach to the first-year. Right now there are some fragments. Our goal is to have a seamless approach from the time a student is admitted until they register for class until they go for Crossroads - their orientation experience. The freshman focus should also be seamless so should first-year seminar. We want them to truly have a first-year experience that is tied into our traditions. We want to keep the class together as much as possible."

Tinto's Criteria #4. Actions should be coordinated, collaborative and campus-wide

Again, the project team utilizes the literature to define the challenges Small Catholic faces related to cross-campus coordination and connection between the academic units and student affairs units. Kuh, Whitt, and Strange (1989) examined the potential retention success of involving faculty and administrative leadership in activities that happened beyond the classroom as it influenced social integration, a precursor to persistence. The results suggested a strong connection of personnel and philosophy between student affairs and academic affairs staff is paramount to successful integration of students.

The cumulative impact of class experience and out-of-class experience is what influences a student's decision to persist, and if the messages from the two areas of the institution with the most contact with students (Student Affairs and faculty) are different it will negatively impact the student's perception of the institution, the institution's commitment to their success, and ultimately their decision to remain enrolled.

This coordination of personnel and philosophy begins with the faculty and Student Affairs, but it must be pervasive and collaborative across campus, starting with recruitment of students. Tinto (1987) suggested that in order to properly educate and advance students toward their education goals an institution must first know its students. Retention efforts ultimately begin at admission, is sustained through conscious efforts to encourage meaningful interaction between faculty and students outside of the classroom, and is accomplished by an institutional commitment to invest in and serve the students on their campus. This culture of service cannot be programmed or purchased, it must be cultivated and supported, which will translate into student social and intellectual growth.

Berger and Braxton (1998) presented research that showed three organizational pillars of strong retention programs; 1. Institutional communication, 2. Fairness in policy and enforcement, and 3. Participation. Kinzie and Kuh (2004) conducted similar research and expanded this to four common conditions found at institutions with high retention rates; 1. Strong senior leadership, 2. Partnerships between academic and student affairs personnel, 3. Student agency, defined as student self-responsibility, and 4. "The power of one", or one individual that is fully invested on a personal level with the success of students.

Creating greater formalized partnerships across campus to positively impact orientation and retention efforts will have an impact on retention. Small Catholic has an opportunity to capitalize upon a breadth of programs through some organizational alterations that will positively impact retention. Throughout the

interview process and during the development of the initial scope of work, it became apparent that Small Catholic wants to create additional touch points for students in the pivotal second semester. It is Small Catholic's belief that students' level of commitment to the institution wanes during the second semester. The project team's survey results showed that only 5.9% of those surveyed indicated they would not return for the spring semester. The institution's data for the 2009 academic year, showed that fall to spring attrition was 8.6%. In recent history, fall to fall attrition has been approximately 20%.

It is somewhat problematic to assert that the increase in attrition that occurs during the spring over the amount that occurs within the fall term is due to a lack of institutional commitment that solely occurs during the spring term. A student framed the conversation in this manner:

> "Most of the students that I've discussed that did move away did not move away in that first semester because it was just inconvenient to move to a different school halfway through the school year. And why not wait an entire year and apply when it is more reasonable. And it's also the first semester of college. They don't exactly understand what's expected. So taking two semesters instead of one semester makes sense. And also with funding set up for the entire year instead of just for the semester."

This student suggested that students may make up their mind, even during the fall semester that they are not going to return for their sophomore year. However, annual financial aid awards and other issues cause them to stay for the spring semester.

Regardless of one's position on the timing of the decrease in commitment to the institution, creating additional touch points in the spring semester could hardly be viewed as a bad plan. The First-year Experience Committee issued a report with both "short term" and "long term" strategies to improve retention (Small Catholic University First-year Experience

Committee – Strategies to Enhance the First-year Experience, 2010). Among the longer term strategies, the committee posited that all Freshman Seminar courses could be taught in the spring term to provide an additional touch point.

Tinto's Criteria #7. Continually assess actions with an eye toward the future.

The literature is clear that making some changes organizationally and continuing the status quo with programs will not yield the greatest return. Proliferation of interventions on-campus occurs over time without an equally aggressive assessment process for review of the programs implemented to determine if the programs being executed are reaching the needs of the students. This process can occur through quantitative and qualitative means, as was done through the project team's survey and interviews. Continual review and assessment of the programs being implemented is valuable to address the changing needs of students from recruitment, through their second year.

Wilcox, Winn, & Fyvie-Gauld (2005) research from the United Kingdom suggested that as students transition through the first semester their needs, as well as their locus of support, shifts from familial to peers. The first few days and weeks the role of the family is key in a student's retention, but as the semester progresses, the need for support from peers at the institution increases. This suggests that institutions should plan for this transition and structure their events and interventions in a way that facilitates this transfer and builds relationships between students. One of the most influential ways this relationship is built is within the living communities. Unfortunately, this is also the area that students have the most difficulty due to the small group environment and the potential to be incompatible with those assigned to the floor, or unit. The research suggests that much greater care be taken when assigning roommates and floor mates than prior existed in an effort to positively influence retention. The primary social networks during

the first year are not in the classroom, but in the residence halls.

Comparative Assessment of Students' Perception of Program Efficacy

The need for continual assessment was also a theme throughout the student and faculty interviews, specifically the issue of fragmented efforts, programs, and services. The project team left the interview sessions with the thought that Small Catholic University is blessed with a strong stable of programs and dedicated staff, but the organization of the efforts has more likely occurred in piecemeal fashion, in evolutionary form, rather than by intentional design as is evidenced by the current first-year programs:

SOAR (Student Orientation and Registration) is a series of campus events in which prospective students and parents come to campus during the summer. Goals of SOAR are to provide students with course schedules, familiarize students with the campus, orient students to available campus resources, and to promote a healthy level of parental involvement. SOAR is under the direction of the enrollment management staff and is viewed as a function of the recruiting process.

CROSSROADS is an off-campus (primarily) experience in which students go to a resort to learn more about life at Small Catholic, to understand better the academic rigor they will experience, and to be instructed on study habits and life skills to improve their chances of success. There is a portion of Crossroads that occurs on campus that is centered on the goal of improving the student's understanding of the campus and its available resources. Crossroads is under the direction of student affairs staff and has a definite slant toward student persistence.

FRESHMEN FOCUS is a one credit hour course that is mandatory for all freshmen students at Small Catholic. There are no common syllabi or common curriculum. This program is under the direction of Academic Affairs. Orientation issues including study habits, life skills, student engagement, and access to campus services was the recurring theme of the course during the student interview process.

FRESHMEN SEMINAR is the first of four interdisciplinary courses that are mandatory for Small Catholic graduates. Again, there are no common syllabi or common curriculum. However, these courses are scaffolded on the concept of "skill building" for the students. For Freshmen Seminar, the faculty has selected writing skills as the skill that should receive the focus of the student's time and effort. As one would expect, this program is under the direction of Academic Affairs. Small Catholic has a Director of Interdisciplinary Studies who is a member of the faculty.

PIONEER SCHOLARS is a program tailored (and limited to) first-generation students. This program is under the direction of the Academic Resource Center which reports to the Vice President for Enrollment Management.

The survey instrument administered to students asked questions concerning major programs and mandatory classes at Small Catholic. Students responding to this series of questions around program efficacy as "strongly agree" to each of program perception questions indicated their preference in rather consistent declining order; Crossroads, Focus, Seminar and SOAR (Figure 8). Obviously, these comparisons are relative comparisons to the other programs and represent student's perception and not evidence based outcomes. However, during

Figure 8. Student perception of first-year program efficacy.
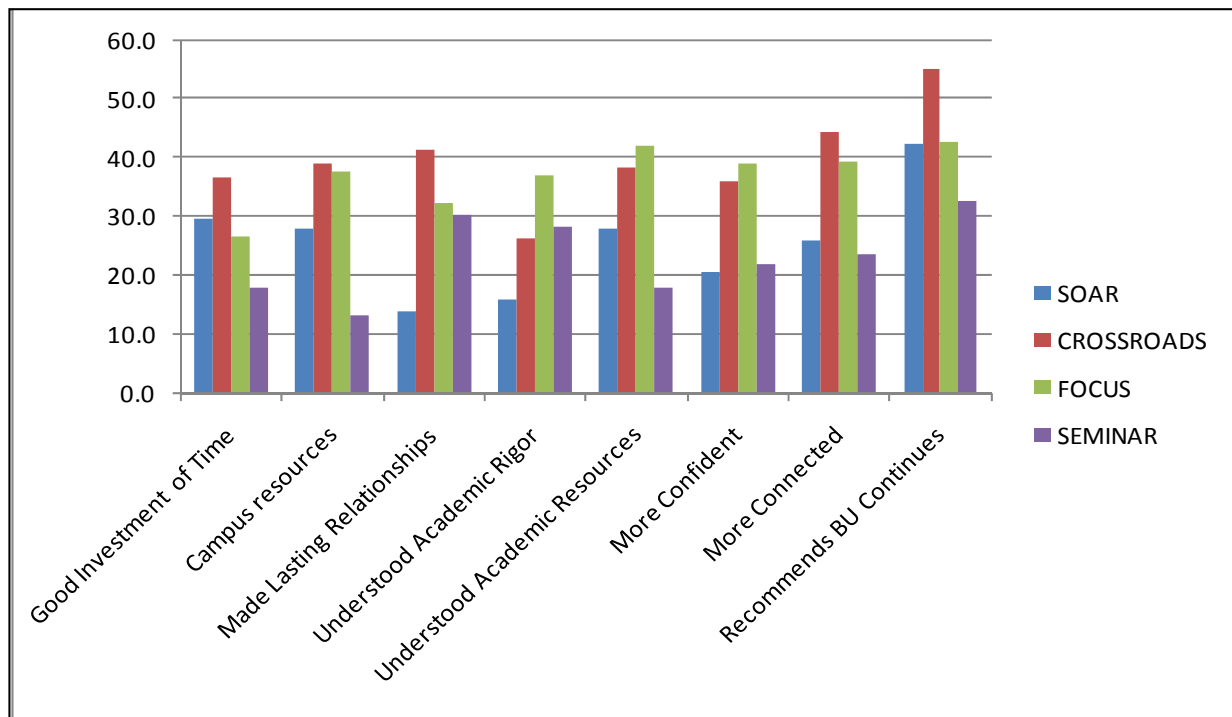
the course of the project team's work, the institution made the decision to discontinue SOAR.

Examining the goals of an intervention and comparing that to the outcomes reflected in student surveys and interviews would be valuable to the institution. For instance, the stated goal of Crossroads is for every freshman to leave with a greater understanding of what it means to be a Small Catholic University student, how to be successful academically and socially, and how to access the resources and support networks available on campus (Small Catholic Website, 2011). With these goals in mind, Crossroads is perceived very well relative to the other programs. Although the stated goals do not speak to the need for students to understand better the demands placed upon them by an academically rigorous university, the students' responses suggest that more emphasis could be placed on this topic during the Crossroads events.

Looking at the same data set, the Freshman Focus course did well in the survey responses. The project team was pleasantly

surprised because the program did not fare as well during the interviews with students. Common themes included a lack of consistency across sections of Freshmen Focus. One honors student reported that he was tasked with considerably more writing assignments for this one hour course than any of his other courses. Other common concerns revolved around statements like;

> "It's a colossal waste of time. We go to class and the instructor tells us about things that happened to him last week. Then he asks if any of us have any questions. That's the class".

While Freshman Seminar does not have a goal of introducing students to campus resources, making lasting relationships, or connecting students to campus, respondents gave this program the lowest relative scores in terms of "good investment of my time" and "recommend Small Catholic continues the program". If students are no more confident in their ability to succeed at Small Catholic after taking this "skill building" course, this could suggest that making

dramatic changes to the program may be worth the risk.

Peer Assessment at Small Catholic University

Assessment of institutional programs in the manner showcased above is necessary internally, but it is also important to select realistic benchmarks and peer institutions to which institutional data and outcomes can be compared.

The self-identified peer institutions that Small Catholic currently compares itself to is an aspirational list (Table 14). While there are institutions on the list to aspire towards as Small Catholic pursues its goal to be the premier Catholic university in the South, it is valuable to identify a group of institutions that fall on either side of Small Catholic on a few key quality measures to determine annual movement achieved on the laudable Vision 2020 Goals.

Table 14. Cluster Analysis of Small Catholic University's self- identified peer group (IPEDS).

Institution Name	Religious Affiliation	Ave. 75th Percentile ACT 2006-2010	% Receiving Pell Grants 2007-2008	Tuition & Fees as % of Total Rev. & Invest. Return 2008-2009	Full-time Retention Rate 2009	Size Category 2010
Virginia Intermont College	Baptist	23.25	16	43%	68	1 - 1,000
Wingate University	Baptist	24.25	31	58%	68	1,000 - 4,999
Samford University	Baptist	27.8	10	170%	82	1,000 - 4,999
Transylvania University	Disciples of Christ	28.8	23	200%	19	1,000 - 4,999
Belmont University	Interdenominational	28.4	9	90%	82	5,000 - 9,999
Valparaiso University	Lutheran Church in America	28.4	21	154%	83	1,000 - 4,999
Lincoln Memorial University	Not applicable	23.8	52	76%	65	1,000 - 4,999
Flagler College	Not applicable	25	14	72%	76	1,000 - 4,999
Catawba College	Not applicable	25.25	31	46%	70	1,000 - 4,999
Maryville University, Saint Louis	Not applicable	26.6	21	76%	82	1,000 - 4,999
Bradley University	Not applicable	27.4	18	121%	87	5,000 - 9,999
Elon University	Not applicable	28.25	6	81%	89	5,000 - 9,999
Presbyterian College	Presbyterian Church (USA)	26.6	20	300%	85	1,000 - 4,999
Eckerd College	Presbyterian Church (USA)	27.4	19	71%	81	1,000 - 4,999
Centre College	Presbyterian Church (USA)	30	13	-1903%	91	1,000 - 4,999
Sewanee-The University of the South	Protestant Episcopal	30.4	12	1541%	90	1,000 - 4,999
Sacred Heart University	Roman Catholic	0	10	77%	82	5,000 - 9,999
Marymount University	Roman Catholic	23	26	75%	70	1,000 - 4,999
Saint Xavier University	Roman Catholic	24.2	43	67%	76	5,000 - 9,999
Small Catholic University	Roman Catholic	26.6	19	85%	78	1,000 - 4,999
Catholic University of America	Roman Catholic	26.8	10	86%	81	5,000 - 9,999
University of San Francisco	Roman Catholic	26.8	21	99%	82	5,000 - 9,999
Rockhurst University	Roman Catholic	27.8	18	28%	84	1,000 - 4,999
University of Dayton	Roman Catholic	27.8	11	64%	87	10,000 - 19,999
Xavier University	Roman Catholic	28.4	13	83%	84	5,000 - 9,999
Fordham University	Roman Catholic	29.2	21	92%	90	10,000 - 19,999
Boston College	Roman Catholic	31.6	10	114%	95	10,000 - 19,999
Georgetown University	Roman Catholic	32.6	10	56%	96	10,000 - 19,999
University of Notre Dame	Roman Catholic	33.8	8	-34%	98	10,000 - 19,999
Southern Adventist University	Seventh Day Adventists	25.2	24	55%	70	1,000 - 4,999
Campbellsville University	Southern Baptist	23.2	48	64%	65	1,000 - 4,999
Lindsey Wilson College	United Methodist	0	59	62%	54	1,000 - 4,999
Pfeiffer University	United Methodist	22.6	30	70%	59	1,000 - 4,999
Shenandoah University	United Methodist	23.2	20	82%	71	1,000 - 4,999
Randolph-Macon College	United Methodist	23.5	15	153%	76	1,000 - 4,999
University of Indianapolis	United Methodist	24.8	33	94%	73	5,000 - 9,999
Wofford College	United Methodist	28.2	11	248%	86	1,000 - 4,999
Hendrix College	United Methodist	31.4	20	-289%	88	1,000 - 4,999
Range around Small Catholic U.	Exact Match	22 - 30	12% - 26%	71% - 99%	70% - 86%	Exact Match
Number withing range		12	8	5	4	3	1

Conducting a cluster analysis on the self-identified peer list using the most current IPEDS data for each category, only one institution fell within a reasonable range, above or below, of Small Catholic's characteristics related to religious affiliation, seventy-fifth percentile scores on the ACT, percentage of students receiving Pell grants, tuition and fees as percent of total revenue and investment return, full-time retention rate, and institutional size (Table 14). This comparison does not satisfy Tinto's Criteria #7 to "Continually assess actions with an eye toward the future."

The process by which Small Catholic was utilizing its peer list is hollow as a result of the disparity between institutions on the list.

Policy and Practice Recommendations

The project team has highlighted multiple opportunities for Small Catholic University to influence student persistence form the first to second year that vary from small to significant changes in policy or structure. The leadership at Small Catholic can determine whether some, all or none of the recommendations forwarded will be implemented. The project team forwards the following nineteen recommendations for consideration.

Project Question 1 – Engagement at Small Catholic University

Recommendation 1: The institution should continue to promote student engagement in multiple and varied activities and events across campus.

The project team found some evidence to indicate that a student can be "over-involved" or "over-engaged". The findings suggest that participation in multiple categories of activities and events furthers a student's perception of social integration at Small Catholic (Appendix D; Appendix K; Appendix L; Table 3). After participation in more than 5 types of activities, the likelihood of social integration could actually diminish.

Recommendation 2: The institution should set an informal target for co-curricular participation hours at six to seven hours per week.

The project team found some evidence to indicate that additional hours per week of co-curricular engagement is detrimental to a student's probability of persistence. However, the project team does posit that participation beyond six to seven hours per week might be accompanied by diminishing marginal returns in the related increase in the probability of persistence (Figure 2).

Project Question 2 – Significant Risk Factors of Attrition

Recommendations for Policy and Practice – Stemming from Analysis of Student Entering Characteristics' influence on Initial Institutional Commitment

Recommendation 3: The institution should reconsider the existing policy of awarding institutional aid solely on a merit basis.

The project team suggests that the institution revisit their financial aid awarding methodology which currently awards institutional scholarships based solely on academic and athletic merit. The current policy to award solely on merit is based upon increasing the probability of retention; however, failing to temper the merit policy with need based criteria could adversely influence retention for the most at-risk group within the cohort. Financial aid should be awarded to each applicant that demonstrates need (Braxton and McClendon, 2001-2002).

Recommendation 4: The institution should align recruiting strategies, financial aid awarding methodologies, and retention strategies.

This recommendation is supported by the quantitative finding that "ability to pay" directly influences initial institutional commitment (β = -.905; p = .046) (Appendix D). Further support for this recommendation stems from qualitative interview data (i.e., see quote

within *Discussion of Selected Constructs from the Conceptual Framework and Faculty Engagement's influence on Social Integration*; also see quote within *Discussion of Student Entry Characteristics influence on Initial Institutional Commitment)*

The project team suggests that there is a disconnect between existing policies and practices at Small Catholic University through which first-generation students are aggressively recruited (comprising 40% of the first-time, full-time Freshmen cohort) yet institutional aid is awarded solely on merit. Prospective students must receive a clear and accurate picture of the social and academic dimension of the institution (Braxton, Hirschy, & McClendon, 2004).

Recommendation 5: Further research should be conducted on drivers of institutional choice at Small Catholic University

The project team suggests that the institution conduct further marketing research on the drivers of institutional choice within Small Catholic University's market pool area. Academic reputation, campus environment, small campus size, and availability of scholarships were strongly supported in the open-ended responses in the survey (Question 108; Appendix A). Location (among resident respondents) and Catholic affiliation were not strongly supported in the survey. This suggestion directly affects retention because a more targeted recruitment strategy would likely strengthen initial institutional commitment, thus indirectly influencing subsequent institutional commitment and persistence.

Recommendations for Policy and Practice - Stemming from an Analysis of the Influencers of Social Integration

Recommendation 6: The institution should continually assess the extent to which its actions, policies, and practices are consistent with its espoused mission and goals.

The quantitative analysis to determine the influencers of social integration at Small

Catholic University (Appendix E) shows that the construct of "institutional integrity is a statistically significant influencer of social integration (β = .222; p = .007). Senior administration leadership should periodically evaluate and ensure that policies are clearly communicated to students and the rules, decisions, and practices of the institution remain consistent with the values and mission of the institution. The campus environment should be characterized by its fairness toward students (Berger 2001, 2002).

Recommendation 7: The institution should increase its investment in programming and activities providing additional opportunities for development of communal potential.

The quantitative analysis (Appendix E) shows that communal potential directly influences social integration at Small Catholic. The project team recommends that the institution lengthen the time spent in the Crossroads off-campus activity and expand programming related to introducing students to potential affinity groups.

Recommendation 8: The institution should encourage and incentivize faculty participation in programming such as Crossroads.

The institution should encourage and provide financial incentives to faculty to improve faculty participation in programming designed to promote retention. The instructor level faculty hired as a result of recommendation 19 would be contractually obligated to participate in lieu of committee and "other service to the college" requirements.

Recommendation 9: Residence hall assignments should be driven by academic major and "learning communities" should be developed.

While the project team posits that a true "residential college system" might not be an appropriate fit for Small Catholic University at this time, faculty engagement in the residence

halls is important. A sense of community should characterize each resident hall (Braxton & McClendon, 2001-2002; Braxton and Mundy, 2001-2002). Again, instructor level faculty hired as a result of recommendation 19 would be contractually obligated to participate in residence hall academic programming.

Project Question 3 – Organizational Structure to Increase Integration and Persistence

Recommendation 10: The institution should create an "Office of the First-Year Experience".

The project team recognizes that the simplicity of the current organization structure for recruitment and retention may facilitate accountability, but it may be viewed as problematic as the primary influences of retention are not under the sole control of these units. As a result, the project team recommends the creation of an Office of the First-Year Experience which will work across institutional organization lines to achieve the goal of increased retention and recruitment. While this concept has become somewhat common, the design of the organizational structure for Small Catholic University is quite unique.

The Office of the First-Year Experience would be under the responsibility of the Vice President for Enrollment Management. The office would be sited within or as close as possible to the Academic Resource Center. An existing director level position (perhaps Dean of Admissions or Assoc. Dean of Admissions) would have direct supervisory authority over the operations of the Office of the First-Year Experience.

Recommendation 11: The Office of the First-Year Experience would employ five new recruitment/retention specialists.

Recommendation 12: The duties of the new recruitment/retention specialists and the retrained staff of current recruiters would rotate annually between recruitment and retention.

The staff would consist of ten individuals, five present recruiters and five additional recruitment/retention officers. This office of ten recruitment/retention officers would form two groups and would alternate on an annual basis between the recruiting effort and the retention effort as recruitment officers likely have the most firsthand knowledge of the students that comprise the entering cohort than any other individual or office on campus (Figure 9). Leveraging this knowledge and relationship between the recruiter and the student may increase institutional commitment, goal commitment, social integration, and as a result positively impact student persistence. While it will not be possible for the current set of recruiters to capture the next class and build upon their relationship with the current class due to the enrollment expectations and time necessary to accomplish both tasks, it may be possible to utilize a system by which additional recruitment/retention officers are added to the staff and they rotate between recruiting new students and fostering healthy transitions for first-year students to life at Small Catholic. This structure is similar to the Bates College model of swing deans, where one dean focuses on recruitment while the other focuses on retention and they switch annually (Supiano, 2011). The addition of a dean to the Small Catholic system was not as attractive an option due to the strong enrollment push, the need to expand the recruitment area and the cost of adding an additional dean verse adding additional recruiters.

This structural change and increase in staff from five to ten will allow Group A to recruit while Group B focuses on retention of the class they brought in the prior year. This cycle will continue and the two groups of swing recruitment/retention officers will rotate each academic year as one is recruiting the other is retaining the class that they brought in the prior year (Figure 9).

This rotation will provide the institution with a host of benefits at a limited cost due to the typically low entry salaries of recruiters. The individuals hired as recruiters are often alumni of

the institution who were heavily engaged at the institution with high levels of both academic and social integration which they will be able to share with both their recruits and the students that enroll at SCU. There is the potential that the rotation proposed will limit the amount of time the recruiters spend on the road during their retaining year, which may increase the length of their stay at SCU gradually professionalizing the staff. Additionally, the structure proposed is extremely flexible. Due to the fact that recruitment/retention officers are trained to do both tasks, during times of extreme need in either discipline there will be staff capacity to handle the demand while smoothing out the transitions between the final year of high school and the first year of college.

While there may be some concern about the ability to engage five new recruitment/retention staff members, the amount of duties that can be performed by this group is nearly limitless. Some options, depending up on the assessed need of the current class being retained and the prospective class being recruited, for the five recruiters staying on campus include; personal contact with current students, continual yield analysis of the

recruiter/retention officers territory for trends, planning of parent programs to assist students in transition from high school to college, walk-in visitors, high school trips to the college, greater interaction with the academic units, execution of on campus engagement events, coordination of on campus visit days for the staff that is on the road, conducting focus groups with the current first-year class, participation in residence hall programming, and even participation in Focus and Seminar coordination. For those recruiter/retention officers on the road, they will have greater bandwidth to focus on creating relationships with the students targeted for recruitment.

Recommendation 13: The Office of the First-Year Experience should be sited near and work closely with (but not for) the Academic Resource Center (ARC).

Recommendation 14: The Office of the First-Year Experience should facilitate and coordinate (but not necessarily direct) all facets of the first-year experience.

Recommendation 15: The Director of the Office of the First-Year Experience should provide and coordinate resources and efforts to maximize the potential of both recruitment and retention.
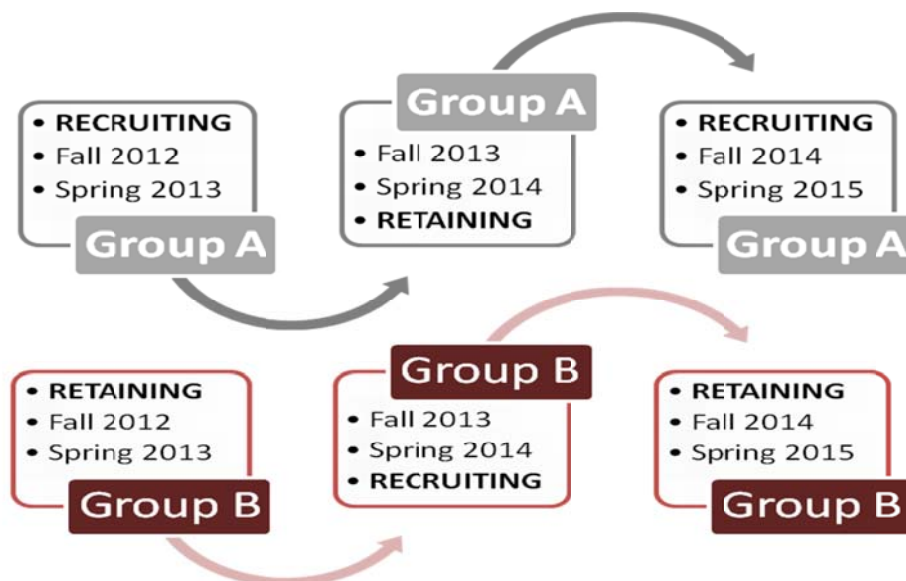
Recommendation 16: The institution <u>should not</u> execute this recommendation along the model of a "retention czar".

When fully implemented, the Office of the First-Year Experience would work hand-in-glove with the Academic Resource Center. Hopefully, the staff of the OFYE would be sited in close proximity to the ARC so that the staff would be available to serve as additional tutors and advisors during peak seasons. Obviously, the Director of the Academic Resource Center and the admissions official with direct supervisory responsibility of the OFYE would have to work closely together to make these shared efforts successful.

The project team recommends that the institution resists the temptation to assign direct reporting authority of the OFYE to the Academic Resource Center. Remembering that the goal is to support and elevate retention as a campus-wide effort, supervisory control in an academic function (regardless of the reporting channel) might suggest to other departments that their voice in the process is somewhat constrained.

In the first round-table session with Small Catholic's staff, it was mentioned that the university did not just want to create a new office. If the retention effort was not improved, if outcomes did not change, if the same people were doing the same things, having an office of retention that one could point toward was not desirable. This recommendation contains substance, and not just form.

The new Office of the First-Year Experience will coordinate and facilitate all programs and events designed for the first-year student, interacting with offices and individuals across campus (Figure 10).

Obviously, the Pioneer Scholars Program would remain a function of the Academic Resource Center, the Academic Peer Advocates Program would remain a function of residence life, and Student Activities would continue to be in charge of event programming. However, the difference would be that the Office of the First-Year Experience will assist in scheduling to make

sure that events do not overlap, in design so that programs aren't duplicitous in nature, and in implementation so that departments whose focus isn't solely on retention will have more "feet on the street" for first-year programming.

The huge advantage to this structure is that there is likely no other group on campus that is as intimately knowledgeable about the campus and its resources as recruiters, which typically are graduates of the institution. This provides the opportunity for a "one-stop shopping" experience for students with issues relating to their first year. This group has more than a working knowledge of the financial aid process. This group would be comprised of the individuals directly involved with bringing the class to campus. In most cases, the counselors would have formed relationships and bonds with the incoming class that would be most helpful when they switch their focus to retention.

At Small Catholic, as with all tuition-driven institutions, even a slight hiccup in the recruiting and retention cycle would be disastrous. This structure would require additional work and effort on the part of the leadership team for recruitment, especially in the year of implementation. The leadership team would have to be very intentional that the exiting counselor introduced the incoming counselor to high school guidance professionals, principals, coaches, and other important players in the recruiting process.

The Admissions leadership team should be comforted in the fact that the staff of the Office of the First-Year Experience represents an "addition" to the army of potential recruiters. During the peak recruiting season, the OFYE staff might be available to assist in the process and would certainly be available for on-campus visits and programming.

Equally important to defining the functions of the Office of the First-Year Experience is defining what it is not. Using the nomenclature of the current day, the project team is not recommending the creation of a "retention czar". That philosophy runs counter to a

Figure 10. Suggested Organization Chart (truncated) with retention responsibilities (yellow) and interactions related to recruitment (dotted lines).
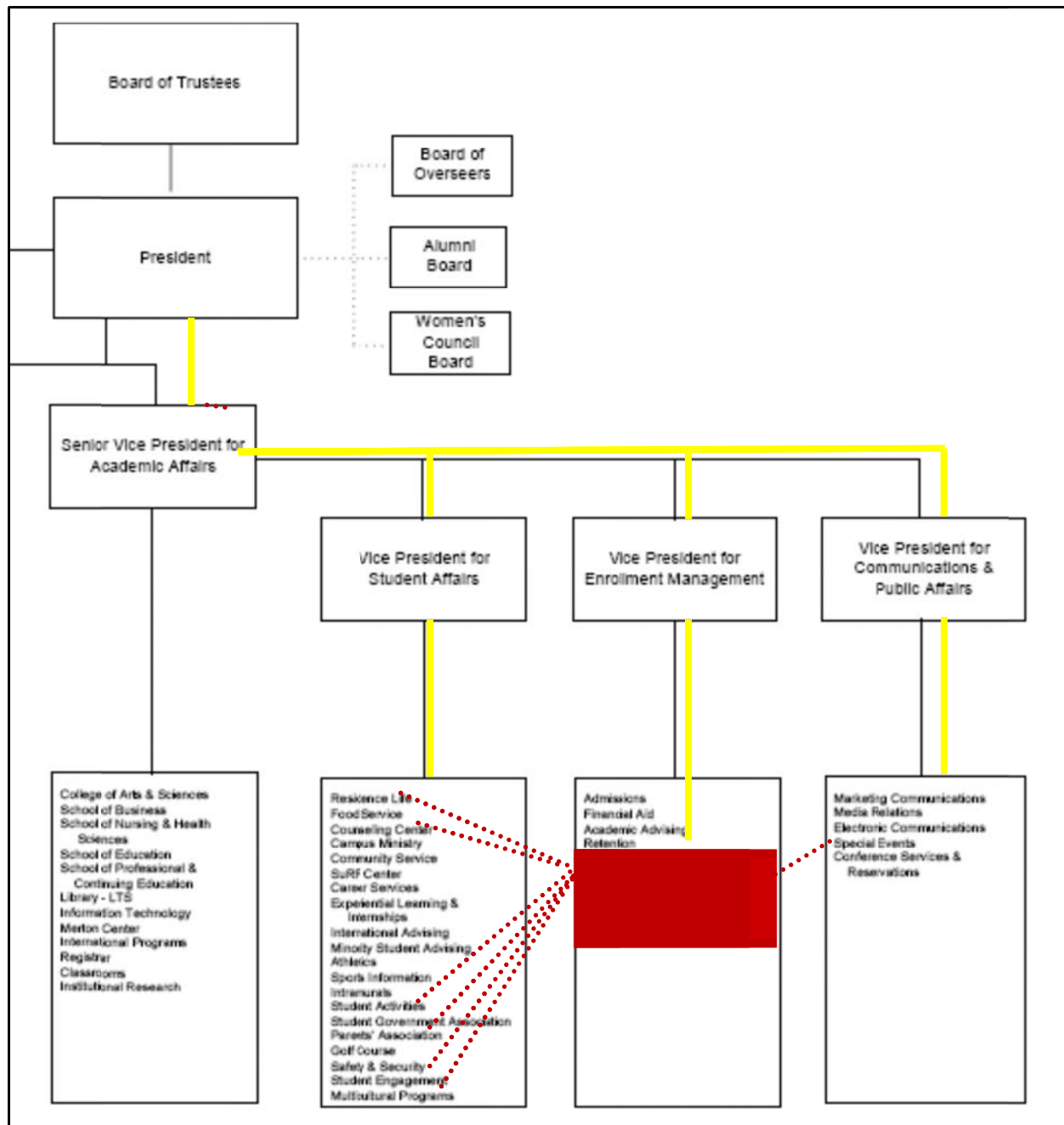
campus-wide effort for retention. First and foremost, any recommended change to the retention structure at Small Catholic University should not constrain those "amazing people doing dynamic things".

Recommendation 17: All sections of Freshman IDC should be taught in the spring.

Recommendation 18: All sections of Freshman IDC should deal with common themes such as 1) what does it mean to be a Small Catholic University student? 2) Thomas Merton 3) Benefits of a "values centered" education.

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Recommendation 19: The institution should employ five new "instructor" level faculty members for the freshmen program.

Recommendation 20: Full-time, tenured and tenure-track faculty should be paid a stipend to supervise multiple sections of "instructor" level faculty teaching Freshmen IDC courses.

The First-year Experience Committee issued a report with both "short term" and "long term" strategies to improve retention (Small Catholic University First-year Experience Committee – Strategies to Enhance the First-year Experience, 2010). Among the longer term strategies, the committee posited that all Freshman Seminar courses could be taught in the spring term to provide an additional touch point. The First-Year Experience Committee also suggested connecting those IDC courses through common themes while retaining "writing skills" as the skill base upon which the course is scaffolded.

The project team worked to find an affordable, effective structure under which these related goals could be accomplished. The availability of faculty has been the barrier that the Director of the Interdisciplinary Studies program has not been able to overcome in his desire to move all Freshman IDC courses to the spring semester due to the number of sections that need covered (Table 15).

Adjuncts (both full-time staff and part-time academic hires) account for over 91% of the instruction in the Freshman IDC courses. During the Fall of 2010 and Spring of 2011, Small Catholic offered 18 sections (each semester) with average enrollment of 14.6 students per section.

Beyond the Freshman IDC courses, the data shows a very similar lack of full-time involvement in mandatory freshman programming. A faculty member of long standing spoke of the phenomenon in this way:

> "I'll be honest with you. Where I think the issue lies, and I am a faculty member first and foremost, is with the curriculum and with the faculty. I don't think the faculty are as engaged with the first-year enterprise as obviously enrollment management, student affairs, the residence halls, folks like Dr. S. and the Academic Resource Center. But where I see a bit of a disconnect, is really the curriculum and faculty. We just did a first-year experience forum last week, which was well attended, and one of the pieces of information that we got out of the data was 75% of our full-time tenured track and tenured faculty do not teach first-year students. So only 25% of our full-time tenure-track and tenured faculty actually teach freshman. I think that is an issue. This was just for fall 2010

Table 15. Enrolled students and category of faculty members teaching courses.

Faculty Category	Freshman Focus	Fall IDC	Spring IDC	Total IDC	Freshman English
Adjunct – FT Staff	161	30	15	45	45
Adjunct – PT staff	78	210	224	434	434
Faculty (Non-Tenure Track)	159	-	-	-	47
Faculty (Tenure Track)	77	-	-	-	-
Faculty (Tenured)	94	30	17	47	-
Total Enrollment	569	270	256	526	526

so the numbers would vary a little bit from semester to semester, year to year. But generally speaking I think one of the problems that we have is that we do not have enough engagement by our faculty within the first year. That I think is primarily due to the fact that at the moment most faculty if they are not teaching first-year classes, don't see how they should get involved or need to get involved."

This same issue was framed by an admissions official in a different fashion but toward the same end:

"Part of that value piece, what we are selling is outstanding faculty. Faculty who know you, who get to know you, who support you and challenge you. Now you walk into your first freshman year and you have five classes and four of those five classes are being taught by adjuncts."

Concrete actions the institution could take to move in this direction include:

- Move all sections of Freshman IDC to the spring semester
- Consistent with the current curricular strategy, writing skills will continue to be the skill upon which the Freshman Seminar is scaffolded
- Common syllabi, with common student learning outcomes, should be created for all Freshman Seminar sections
- Freshman Seminar could be centered around the theme of "All things Small Catholic" to include:
  o What it means to be a Small Catholic University student
  o Thomas Merton
  o The "values-centered" university
  o The value of a Small Catholic degree
- Hire five "instructor" level, non-tenure track faculty and dedicate them to the freshman program
- Job descriptions for the freshman instructors would include activity outside

the classroom (residence hall programming, campus events, etc.)
- Course stewards (Full-time faculty) would be paid a stipend to supervise instructors
- Increase average class size for Freshman Seminar from 14.6 currently to 20 students

By increasing average class size, the number of sections would be reduced from thirty-six to twenty-six. Five new hires (teaching 4 courses per semester) would cover 20 of those sections. Six sections would continue to be covered from the pool of adjuncts that are currently teaching eighteen sections each semester.

While the instructor level hires would be totally consumed by the Freshman Seminar course load in the Spring, there would be twenty sections in the fall term that could now be covered by full-time, "instructor level" faculty.

This increased connection with faculty serves as another touch point students will have with fully engaged and invested members of the Small Catholic faculty. While the class sizes are larger, this is beginning to approach the level of intervention of faculty mentoring which can be an important tool to promote academic and social integration (Leppel, 2001). The role of the faculty in a student's early academic and social integration is important. Mortenson (1988) points out that retaining students is as important as finding them and posits that faculty need to help students overcome such feelings as "I feel I'm just a number here" and "nobody really cares about my future". Faculty can help by developing close relationships with students, determining their lesser strengths, and assisting them to find help and support through other institutionally offered tutoring and counseling services.

Recommendation 21: Institutional leadership should re-evaluate the set of peer institutions used for benchmarking in order to properly track progress.

Utilizing the IPEDS data set to identify a peer group with institutions above and below

Small Catholic on the same set of criteria, a group of eight hundred and four institutions were examined. Only fifteen of the eight hundred and four institutions were identified as falling within the set range of scores on the same set of six criteria (Table 16).

      Due to the sizable difference in the metrics of the self-identified peer group and the alternate peer group suggested by the project team, the institution is not currently providing itself a fair assessment of progress or achievement. The administration and the institution must recognize the limitations that Small Catholic faces when comparing itself to the University of Notre Dame in South Bend,

self-identified peer list is not effective in tracking year to year progress. The utilization of a closer set of peer institutions that straddle Small Catholic on a set of core criteria that the institution believes are core values will better serve the institution in both the short- and long-term. The creation of a new peer list does not diminish the fervor for which the institution should strive towards its Vision 2020 goals, nor does it degrade the progress the institution has made to this point. Appropriate comparisons will only foster greater gains on those criteria that are concrete and definable, which will ultimately move the institution towards its goal of being the premier Catholic institution in the South.

Table 16. Cluster Analysis of a potential peers for Small Catholic University (IPEDS).

Institution Name	Religious Affiliation	Ave. 75th Percentile ACT 2006-2010	% Receiving Pell Grants 2007-2008	Tuition & Fees as % of Total Rev. & Invest. Return 2008-2009	Full-time Retention Rate 2009	Size Category 2010
Madonna University	Roman Catholic	23	21	98%	77	1,000 - 4,999
College of Mount St. Joseph	Roman Catholic	23	24	97%	72	1,000 - 4,999
Marymount University	Roman Catholic	23	26	75%	70	1,000 - 4,999
DeSales University	Roman Catholic	24	17	82%	82	1,000 - 4,999
Mount Saint Mary College	Roman Catholic	24	22	78%	72	1,000 - 4,999
Edgewood College	Roman Catholic	24	23	84%	76	1,000 - 4,999
Salve Regina University	Roman Catholic	25	13	76%	76	1,000 - 4,999
Saint Ambrose University	Roman Catholic	25	19	83%	74	1,000 - 4,999
Small Catholic University	Roman Catholic	26	19	85%	78	1,000 - 4,999
Newman University	Roman Catholic	26	24	93%	71	1,000 - 4,999
The College of Saint Scholastica	Roman Catholic	26	24	76%	76	1,000 - 4,999
University of St Francis	Roman Catholic	26	24	88%	76	1,000 - 4,999
Saint Norbert College	Roman Catholic	27	20	91%	80	1,000 - 4,999
Carroll College	Roman Catholic	27	22	72%	81	1,000 - 4,999
Franciscan University of Steubenville	Roman Catholic	28	21	72%	84	1,000 - 4,999
University of Dallas	Roman Catholic	30	21	90%	82	1,000 - 4,999
Range around Small Catholic U.	-	22 - 30	12% - 26%	71% - 99%	70% - 86%	-
# of Potential Peers from 804	152	115	49	28	23	15

Indiana, Boston College, or Georgetown University in Washington D.C. The structural differences between these schools present a considerable barrier to Small Catholic University's rapid ascension into their ranks. While it is not insurmountable, it is necessary to discuss these limitations in the context of the goals Small Catholic hopes to achieve.

      While changes to the organizational structure and culture are valid, the institution must also be prepared to address Tinto's Criteria #7 and continually assess actions with an eye toward the future. The utilization of the current

Financial Feasibility of Recommendations:

Several of the recommendations contained in this report have no incremental costs associated with the actions. The project team recognizes that three of the recommendations have relatively high price tags attached (Table 17).

      While the initial cost is approaching $400,000 per year, the project team expects additional revenue would likely be generated by the recommendations. Incremental revenue would be generated from two revenue streams.

Table 17.The annual cost estimate of three specific recommendations.

Recommendation Strategy Number	Unit Cost (including est. fringes)	#	Total
11) Recruitment / Retention Officers	$36,000	5	$180,000
Operation Budget for Office of First-Year			$10,000
18) Five instructor level faculty members	$38,400	5	$192,000
19) Stipend for Course Stewards for IDC Seminar	$2,875	5	$14,375
Total Annual Cost			$395,375

First, it is reasonable to expect that the incoming class should be easier to recruit with five additional recruitment/retention specialists on campus to support campus visits, on-campus programming, and to assist in peak recruiting times.

The second incremental revenue stream could come from increased rates of retention. Increased retention of the freshmen cohort should lead to similar increases in the rate of third and fourth year retention. Therefore, in the financial analysis, the institution must consider the value of a student's continued enrollment throughout their course of study.

Comparing current enrollment /retention rates and revenue generated (Table 18), with an estimated 3% enrollment growth ([1]) and 1% increase in retention ([2]) (Table 19), the resulting gross tuition revenue would increase by $1,031,676. Keeping in mind that it will take four years to realize all of the increase, discounting the revenue at 5% yields a present value of the improvement (in gross tuition dollars) of $937,228. For each additional 1% increase in the rate of retention, the net present value would increase an additional $445,954.

It is beyond the scope of this project to assess the net effect of the change, as it would be necessary to also account for increases to expenses related to, but not necessarily limited to, scholarship aid, incremental instructional cost, and incremental student support services.

On the positive side of the financial equation, with the hiring of five full-time instructor level faculty, student/faculty ratios would decrease without the need to hire additional faculty to achieve the annual increase in gross tuition revenue. Increases in retention could manifest in larger enrollments in upper division courses rather than resulting in new sections and new faculty hires. The revenue analysis only considered the incremental benefit of gross tuition revenue and does not include fees, room, board, and other auxiliary enterprises revenue that would likely be the result of increased enrollment and retention.

The project team recognizes that the financial analysis is entirely dependent upon the projection of increased enrollment and retention. Ultimately, it is the institution that must weigh the relative value of improved retention in terms of cost, return on investment, and most importantly, on the basis of institutional mission.

Structural Limitations to Institutional Retention Goals

It is the goal of the institution to restore first year student cohort retention rates to the ninety percent levels, but the project team views achievement of this commendable goal as currently out of reach. The characteristics of the entering student cohorts, paired with the financial structure of the institution confines institutional progress below the level outlined in the Vision 2020 Plan. Small Catholic University's rate of retention has averaged approximately eighty percent over the last four years, but the administration fondly remembers days of old when cohort retention rates tended to average approximately ninety percent.

Table 18. Institutional revenue at current rates of enrollment and retention.

	Current Retention Rates	Enrollment Remaining from Cohort	Annual Tuition	Total Revenue over 4 years
Year 1 Enrollment		577	$29,800	$ 17,194,600
Students Retained to Year 2	83%	479	$29,800	$ 14,271,518
Students Retained to Year 3	71%	410	$29,800	$ 12,208,166
Students Retained to Year 4	67%	387	$29,800	$ 11,520,382
TOTAL				$ 55,194,666

Table 19. Impact of increased enrollment and retention rates on institutional revenue.

	Improved Retention Rates[2]	Enrollment Remaining from Cohort	Annual Tuition	Total Revenue over 4 years
Year 1 Enrollment[1]		594	$29,800	$ 17,710,438
Students Retained to Year 2	84%	485	$29,800	$ 14,443,464
Students Retained to Year 3	72%	415	$29,800	$ 12,380,112
Students Retained to Year 4	68%	392	$29,800	$ 11,692,328
TOTAL				$ 56,226,342
Projected increase in Gross Revenue over 4 years (undiscounted)				$ 1,031,676
Net Present Value of Projected Gross Revenue (Discounted at 5%)				$ 937,228

The entering characteristics of the cohort suggest that the first-year retention rate of 90% goal, while laudatory in nature, may be problematic. Since the time of the freshman 90% retention rate, changes to the institution strategy for enrollment has shifted. The drive to increase enrollment has outpaced the need to enroll students likely to be retained at 90% or above. During this same time period, the institution has not provided itself with reasonable or attainable interim goals to manage progress and track success.

Benchmarking was attempted to provide touchstones along the way for the institution as it stretched towards the Vision 2020 Plan goals. A self-identified peer group of thirty-seven institutions was identified and this peer group is unusual in its development as it contains highly selective institution such as the University of Notre Dame (75th percentile ACT of 33.8) and mission-driven, non-selective institutions such as Pfeiffer University (75th percentile ACT of 22.6).This range in "peers" does not provide adequate progress tracking for Small Catholic due to the wide breadth of institutions contained on the list and is indicative of Small Catholic's struggle to find its institutional identity.

In the Vision 2020 Plan (McGowan, 2005), the institution seeks to become the premier Catholic institution in the South. The institution strives for increased recognition as a selective, academically rigorous university. Small Catholic has been successful in positioning itself among the more selective private institutions in Kentucky. However, financial constraints and the resulting entering characteristics of the cohort pose serious limitations to the institution's ability to reach its stated retention goals.

Small Catholic, like all selective private colleges, strives to enroll greater numbers of

students with entering characteristics favorable for fostering improved retention and completion. Small Catholic is constrained by relatively low levels of endowment earnings with which to attract these highly competitive students. A comparison with two self-identified peer institutions demonstrated the disparity and challenges SCU faces when comparing themselves to some of the institutions listed as peers (Table 20).

Assuming an endowment earnings rate of five percent, and further assuming that all of Small Catholic's endowment earnings are available to fund student aid, Small Catholic generates only $601 per undergraduate from its endowed funds. Contrast that against the University of Notre Dame's $29,388 per undergraduate or Centre College's $6,558 of endowment earnings per undergraduate and one grasps a better understanding of the challenge that Small Catholic experiences in their effort to compete for the "best and the brightest".

When Small Catholic's more affluent aspirant institutions compete for their preferred profile of students, they have endowment earnings to support those scholarship offers. In Small Catholic's case, scholarship offers generally represent unfunded tuition discounts. The data in the table above suggests that Small Catholic has approximately nine percent of the endowment revenue per undergraduate than does Centre College and only two percent of the amount available to the University of Notre Dame.

During the interview process, an enrollment management official summed up the challenge from the perspective of the admissions process:

> "There is tension between engineering the class that we want and getting the enrollment numbers that we need to make our budget work. It is as if the institution is saying, do me these three things. Get me a better quality of students, give me a lower discount rate, and get me more students. And by the way, while you are at it, make it a more diverse class".

A common theme, especially among enrollment management officials, was a concept generally framed as "casting a wider net". The fact that multiple staff members across multiple departments used the same coined phrase suggests that the concept of the unfortunate tension between budget enrollment numbers and the entering characteristics of the cohort may be widely discussed at Small Catholic.

When asked "What could account for the fact that Small Catholic is now retaining ten percentage points less than it did ten years ago but are spending considerably more money, energy, and effort on the issue?", an enrollment management official responded:

> "I think we are attracting a different student now. Enrollment over a ten-year period has shifted fairly dramatically. We have more out-of-state than we would have had previously. The engagement of students is probably less. The commuter population was certainly a lot more as a percent of the student body. We are now getting 75% on average of the first-year students living on campus. So obviously that is a whole different dynamic than people who drive to school, go to class, go home, do their homework, and come back to school. I think the consumer as we branch out further into the out-of-state markets, obviously they are shopping more private options. So they become more of a sophisticated consumer."

To provide quantitative evidence that Small Catholic may be "casting a wider net", the project team gathered application, acceptance, matriculation and ACT data (FA10 Comparative Enrollment report – SCU Office of Institutional Research, 2011) (Table 21).

Table 20. Endowment value and value per student compared to self-identified peers (2009).

Institution	Endowment	Undergraduate Enrollment	Endowment per Undergraduate
University of Notre Dame	$ 920,742,000	8,372	$ 587,762
Centre College	$ 159,479,195	1,216	$ 131,151
Small Catholic University	$ 29,046,479	2,417	$ 12,018

Table 21. First-time, Full-time admission data for Small Catholic University (Small Catholic University, 2011).

Year	Applicants	Accepted	Acceptance Rate	Matriculants	Yield	Average ACT
2010	6816	3507	51%	577	16%	24.3
2009	6012	3214	53%	603	19%	24.9
2008	4336	2534	58%	572	23%	24.1
2007	3481	2187	63%	569	26%	24.4
2006	3168	1951	62%	432	22%	23.7
2005	2024	1427	71%	438	31%	24
2004	1504	1180	78%	412	35%	23.7
2003	1519	1232	81%	453	37%	23.5
2002	1285	1028	80%	332	32%	23.5

The data in Table 20 shows that applications have increased by 430% while acceptances have only increase by 241%. At first glance, this change in the annual acceptance rate of 80% in 2002 to only 51% in 2010 might be attributed to an increase in selectivity. However, average ACT scores show little gain over the same time period suggesting that the institution is garnering more applications and "casting a wider net" to enroll each year's class.

A linear regression model utilizing ACT 75th percentile, endowment per FTE, and instructional expenditures per FTE was created in an effort to predict Small Catholic's retention based upon its self-defined peer group of thirty-eight institutions. The resulting model had an adjusted R^2 measurement of .528. The regression equation predicted Small Catholic's retention to be 78.9% which is squarely within the range of Small Catholic's actual retention rates over the past few years.

Small Catholic's goal to retain at 90% should be tempered against the institutions that are currently retaining at that level. The table below shows that institutions with retention rates at or above 90% are vastly different institutions from Small Catholic University. The first three metrics comprise a model that accounts for over 40% of the variance in retention rates among highly retaining institutions. Small Catholic University's low level of endowment and instructional expenditures per student, relative to these high performing institutions, suggest that there are structural limitations to Small Catholic's potential to retain students (IPEDS, 2009)(Table 22).

As was pointed out by the project team, it might be necessary for Small Catholic to review the list of institutions that it considers peers and

Table 22. High retaining institution comparison with Small Catholic University (IPEDS, 2009).

Metric	Mean of 96 Institutions with Retention > = 90%	Bellarmine University
ACT Composite 75th percentile	31.3	27.0
Endowment per Undergraduate FTE	$355,239	$12,108
Education Expenditure per FTS	$40,035	$9,194
Retention Rate	93.8	78.0

establish a new baseline. The process for evaluation can occur through site visits, third-party assessments, surveys, data collections, and even focus groups and attempts to quantify and rank order performance on a set of defined metrics (Peischl, 1995). The creation of benchmarking is credited to the Xerox Corporation which was looking to re-establish itself in the market in the 1980's (McGregor & Attanasi 1998). Small Catholic would be well served by adopting the practice to determine its closest competition as well as identify those in the market that are performing well in order to emulate them. The disparity between the self-identified peers and a set of institutions selected based on criteria valued by Small Catholic is considerable. For benchmarking and peer analysis to be valuable a reasonable set of peer institutions must be utilized. Alteration of the institutional peer list does not diminish or degrade the goals set by the institution. Instead it provides the institution with more accurate reflection of progress made toward achieving the goals laid out in the Vision 2020 plan.

Utilizing the 2010 data, Small Catholic University should systematically and critically evaluate each aspect of its operations from recruitment to graduation. This campus-wide assessment does not need to happen all at one time, but logically should start with recruitment and prospect identification. Selecting, admitting and enrolling the right students will go a long way towards moving the needle on the quality metrics the institution is seeking to improve. After selecting the right class, there is a natural progression over the coming four years for the institution to track a class and implement

interventions along the way to maximize the student experience. This longitudinal assessment will not only help the class being tracked, but the classes that enroll the following years.

After the serious review of processes and procedures throughout the year, a targeted continual assessment and review process will maintain the gains achieved and further improve retention, improve student satisfaction, increase graduation rates, and move SCU along the path towards becoming the premier Catholic institution in the south.

Project Limitations

Small Catholic University is a unique institution. Therefore, generalizing findings within this report to other institutions could be problematic. Small Catholic has a reputation for academic rigor, yet first-generation students comprise approximately 40 percent of its freshman cohort. The institution utilizes a "high-tuition high-aid" business model (Garland, 2009) but has limited endowment holdings from which to fund merit awards. The reputation of its faculty, its location in metropolitan Louisville, and its strong professional programs combine to make the institution attractive to commuters in spite of its high net price relative to the public institutions in its primary market. Small Catholic is a residential university with a strong commuter program. It is an academically rigorous liberal arts college known for its professional programs. Again, Small Catholic is a unique institution.

The focus of the survey was on first-time, full-time, freshmen retention and the first-year experience at Small Catholic. Therefore, results

of the survey cannot be generalized to "overall" retention which would include the retention of upperclassmen.

The survey did not ask questions related to the students' perceptions of engagement at other institutions. It might have been interesting to learn more about the students' perceived level of satisfaction at Small Catholic relative to the students' perception of friends' level of satisfaction that attended other institutions.

The survey did not ask questions related to academic majors or course work currently undertaken. During the interview process, the academic rigor, reputation, and satisfaction of the students was thematic.

The project team also acknowledges that the sections purposefully selected for survey distribution were taught by Student Services faculty. This was done to generate a high participation rate from both the courses as well as the students. As was stated earlier, a comparison of the general student population characteristics and the frequency in the sample population found that the differences in the proportions of gender and ethnicity, between the total population (from institutional data) and the survey responses from the project team's sample, were not significant.

However, there is a statistically significant difference between the proportions of students in the sample who self-identified as residential students relative to the percentage of residential students in the population. Upon further investigation, it was found that two sections of students surveyed were comprised entirely of commuter students. The sample is not representative of the population in terms of residential status.

The survey did not contain unique identifiers that would have been helpful to confirm the students' responses through institutional data sources. For instance, more students answered questions about the Pioneer Scholars program for first-generation students than the total number of first-generation students. Unique identifiers would have allowed the project team to "clean up" those data

points rather than have those items potentially diluted by responses from non-participants.

Along these lines, the lack of a unique identifier limited the ability of the project team to confirm that a student's self-reported intent to persist translated into actual persistence. The survey used "intent to persist" as a proxy for actual persistence which has been shown through the literature to have a strong correlation with actual persistence (Bean, 1983).The study design did not allow for sufficient time to determine students that actually did not return for the subsequent semester.

The lack of unique identifiers also makes it problematic to link the survey responses to any future work that the institution may choose to undertake. Longitudinal analyses of student responses become problematic should the institution wish to conduct a related survey during the subsequent semester.

The project team decided to gather data in mid-November. The project team elected to survey students in the latter part of the fall term for two reasons. First, the leadership team at Small Catholic knew that the response rate would be better if the surveys were distributed during the Freshman Focus class that is only taught in the fall semester. Second, Small Catholic has existing data from surveys conducted during the spring term in the form of the National Survey of Student Engagement (NSSE - spring 2009) and Your First College Year (YFCY – spring 2010).

The data collection date was set in mid-November because the project team was hoping for an assessment point at which constructs of student perception were fully formed, yet the institution would have time remaining to act on those findings should future assessments be performed at that time in subsequent years (Brier, Hirschy, & Braxton, 2008). In the case of Small Catholic University, our data analysis could suggest that these and similar constructs may not have fully formed at Small Catholic by the tenth week of the fall semester. The project team posits that Small Catholic's tendency toward "excessive handholding" as frequently mentioned in the interview process could be a driver of the delayed development of these constructs within

the Small Catholic student population. One student stated;

> "I think they [Small Catholic] do somewhat. I think that in the freshman year there is a lot of handholding. But I think that as it progresses it will be a lot different. I think it is something that is necessary and it is important for a lot of people to stay here. It is like they need that support. I have a feeling that in the coming years it will be very much more independent... At this point, it feels like there is a lot of handholding but in talking to other people I feel like there's going to be a lot more independence in the years to come. It is hard to say because it's just our first semester. Even though we have been here for a while, at the same time we're still the newest kids on campus."

Conclusion

The project focused on three aspects central to institutional efforts of increasing student retention from the first to the second year at Small Catholic University; 1. Quantify the level of student engagement that accurately predicts retention, 2. Identify risk factors to retention within the current student population, and 3. Recommend organizational changes that would facilitate increased retention.

As the literature and our survey indicated, engagement of students during their first year is critical to retention. Students reporting participation in organizations and clubs outside of the classroom have higher levels of satisfaction and increased likelihood of persistence. Investing institutional resources, time and otherwise, to support student engagement is an investment that will not only yield returns in student satisfaction, but also financially.

The survey and interviews also found that programs aimed at transitioning at-risk students, like Pioneer Scholars, is a service that students desire and respond to positively. There

is the possibility to build upon the Pioneer Scholar program success and expand like programs to other at-risk populations, including, but not limited to students with major financial concerns. Programs aimed at these target groups may generate similar retention success stories as the Pioneer Scholars program.

While engagement is critical, a second component to increasing the retention rate is being cognizant of the needs entering students present. The profile of entering students has been changing and will continue to change. The institution must not rely on past techniques, programs or interventions when attempting to engage or influence new cohorts of students. Adjusting to the needs of the students demonstrates institutional commitment to their individual success and reinforces their choice of institution and meets the need itself.

Those students that are most at risk at Small Catholic are not dissimilar from those students nationally struggling to complete a degree. While institutions of higher education cannot solely be responsible for student success, there is an increasing expectation for institutions to meet the ever expanding list of student demands and consumer expectations.

In light of the increased consumer nature of college selection and retention, Small Catholic must critically examine the goals that have been set, the institutional capacity to achieve the desired outcomes, and the steps necessary along the way to achieving the stated goals. Small Catholic must set achievable incremental goals in the near term in order to place itself in a position to achieve the goals listed in the Vision 2020 plan. Achievement of the stated goals requires coordinated and targeted action. This action begins with Small Catholic clarifying its recruitment strategies. Not only does the institution need to recruit more students, it needs to recruit and enroll the right students.

To target, identify and secure the next class, Small Catholic should utilize the suggested organizational model of adding the swing recruitment/retention staff. The addition of these recruiters in the first year has the potential to increase the incoming cohort. Upon entry the

students will be facilitated in their transition to SCU life by the recruiters that helped them enroll. This support for the students during their first year will assist in their social integration, academic success, and retention to the sophomore year.

The addition of the recruitment/ retention officers will not be enough on its own. There will also need to be interventions throughout the entire first year leading to the second year. Making use of exemplary graduates and tapping into their passion for Small Catholic could potentially be the additional spark necessary to achieve the enrollment targets. Equipping the staff with tools, technology, resources, and human capital is necessary to maintain energy in the recruitment office and in the target communities they serve.

Once students are enrolled at SCU, interventions to improve persistence can also continue around the experience they have in the classroom. The suggestion to reinvigorate the faculty ranks with new hires, as well as utilize the faculty steward model, to teach more of the first-year courses is critical. While adjunct instruction can be sufficient and of high quality, the use of professional staff to teach academic course content is not ideal. In an effort to move the needle on student retention the investment of additional resources to increase the full time faculty is a viable option.

Finally, the institution must assess its position in the market. A clear answer to what makes Small Catholic unique, comparative competitive advantages that students can identify with, is important moving forward to recruit the right students. Student fit with the institution is a factor of persistence and that begins at the recruitment and admissions stage. Small Catholic cannot be satisfied with being a second, third or fourth choice institution for its students.

Moving forward from this project, Small Catholic should consider the possibility that an institution wide assessment of values, priorities and programs should take place. The evaluation of actions from all levels of staff and faculty may yield dividends. The market in which Small Catholic currently competes, and the market in which it soon hopes to compete, are increasingly demanding. Small Catholic needs to carve out a niche in the higher education sphere and be the best in that sphere.

While program and culture evaluation is integral to increasing enrollment and first-year retention, Small Catholic has the opportunity, as a result of this study, to implement some structural suggestions that will have an impact on retention. While there is an initial price tag to the recommendations, the return on investment has been demonstrated for the current year and beyond. The investment in core personnel that will influence the quality of recruitment, and teaching and learning is paramount to the success of higher education institutions. Investment in these two categories fuels the institutional machine to new heights. Small Catholic has the foundation upon which to build, but needs to identify and leverage the unique aspects of the Small Catholic experience to maximize its potential.

This project is a step along the path toward the institution's stated goal and contains objective views of the untapped resources at the institution's disposal, structural limitations that temper short term expectations, as well as areas for immediate improvement. Retention of the current cohort, due to the needs it presents, will be different than the previous cohort, as well as the fall 2011 cohort. Small Catholic University must continue to ask questions of its students and genuinely listen to the responses in order to deliver the services requested and achieve its stated goal of being the premier Catholic higher education institution in the South.

Appendix A

Survey Instrument

VANDERBILT PEABODY COLLEGE

Small Catholic University
Freshmen Survey

10-20-10

Dear Student:

You are being invited to answer the attached questionnaire about student engagement and retention for first year students. There are no risks or penalties for your participation in this research study. The information collected may not benefit you directly. The information learned in this study may be helpful to others. The information you provide will be used by individuals studying at Vanderbilt University as well as staff at Small Catholic University to improve the student experience at Small Catholic. Your completed questionnaire will be stored at Vanderbilt University in locked rooms and cabinets for security. The questionnaire will take approximately fifteen minutes to complete.

Individuals from the Dean of Student's Office and the Small Catholic University Institutional Review Board may inspect these records. In all other respects, however, the data will be held in confidence to the extent permitted by law. Should the data be published, your identity will not be disclosed.

Please remember that your participation in this study is voluntary. By completing and returning the attached questionnaire to your professor, you are voluntarily agreeing to participate. You are free to decline to answer any particular question that may make you feel uncomfortable or which may render you prosecutable under law.

You acknowledge that all your present questions have been answered in language you can understand. If you have any questions about the study, please contact Joshua Jacobs at 270-809-3763.

If you have any questions about your rights as a research subject, you may call the Institutional Review Board (IRB) office. You will be given the opportunity to discuss any questions about your rights as a research subject, in confidence, with a member of the committee. This is an independent committee composed of members of the University community and lay members of the community not connected with this institution. The IRB has reviewed this study.

Sincerely,

[Signature Joshua Jacobs]   [Signature Roger Drake]

Joshua Jacobs   Roger Drake

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1. Are you:
___ African American
___ American Indian/Alaska Native
___ Asian American/Asian
___ Caucasian/White
___ Mexican American/Chicano
___ Native Hawaiian/Pacific Islander
___ Puerto Rican
___ Other Latino
___ Other _____

2. Are you:

_____ Female   _____ Male

3. Your current age?

_____ 17 or younger   _____ 22-23
_____ 18-19   _____ 24 or older
_____ 20-21

4. Are you currently married?

_____ yes   _____ no

5. Where do you currently reside?

_____off campus with my parents
_____off campus with my spouse/life partner
_____off campus by myself and/or with my children
_____ On Campus

6. What were your average grades in high school?

___ A or A+   ___ A-   ___ B+
___ B   ___ B-   ___ C+
___ C   ___ C-   ___ D+
___ D or lower

7. Please circle your parents' highest level of education (F= Father; M= Mother):

Grammar school or less	F	M
Some high school	F	M
High school graduate	F	M
Postsecondary school other than college	F	M
Some college	F	M
College degree	F	M
Some graduate school	F	M
Graduate degree	F	M
Unsure	F	M

8. Are you an intercollegiate athlete?   ____ Yes   _____ No

9. If so, what sport do you play?

___ Lacrosse   ___ Basketball
___ Soccer   ___ Baseball
___ Volleyball   ___Cross-Country
___ Golf   ___ Softball

___ Tennis   ___ Track & Field
___ Field Hockey

Following is a list of statements that may characterize your university. Please indicate your level of agreement or disagreement with each statement as it applies to your experiences.

Strong Disagree=1 Disagree=2 Agree=3 Strong Agree=4

10. Most student services staff (e.g., dean of students office, student activities, housing, etc.) I have had contact with are genuinely interested in students.	1	2	3	4
11. Most other college/university staff (e.g., registrar, business office, financial aid, etc.) I have had contact with are genuinely interested in students.	1	2	3	4
12. Most of the campus religious leaders (e.g., campus ministry, priest, rabbi, etc.) I have had contact with are genuinely interested in students.	1	2	3	4
13. I have experienced negative interactions with faculty members.	1	2	3	4
14. I have experienced negative interactions with student services staff.	1	2	3	4
15. I have experienced negative interactions with other college/university staff.	1	2	3	4
16. In general, faculty members treat students with respect.	1	2	3	4
17. In general, student services staff treat students with respect.	1	2	3	4
18. In general, other college/university staff treat students with respect.	1	2	3	4
19. In general, I know where to go if I need more information about a policy	1	2	3	4
20. My interpersonal relationships with other students has had a strong positive influence on my intellectual growth and interest in ideas.	1	2	3	4
21. Since coming to this university, I have developed close personal relationships with other students.	1	2	3	4
22. My interpersonal relationships with other students has had a positive influence on my personal growth, values and attitudes.	1	2	3	4
23. It has been difficult for me to make friends with other students enrolled at this university.	1	2	3	4
24. Few of the students I know would be willing to listen to me and help me if I had a personal problem	1	2	3	4
25. The student friendships I have developed here have been personally satisfying.	1	2	3	4
26. Most students here have values and attitudes which are different from my own.	1	2	3	4

27. Is this college your:

___ first choice?   ___ third choice?
___ second choice?   ___ fourth choice or more?

Strongly Disagree=1 Disagree=2 Agree=3 Strong Agree=4

28. Instructors engage me in classroom discussion or debate of course ideas and concepts	1	2	3	4
29. Instructors' questions in class ask me to point out any fallacies in basic ideas, principles, or points of view presented in the course.	1	2	3	4
30. Instructors' questions in class ask me to argue for or against a particular point of view.	1	2	3	4
31. Course papers or research projects require me to argue for or against a particular point of view and defend my argument.	1	2	3	4
32. Course papers require me to propose a plan for a research project or experiment.	1	2	3	4
33. It is not important to me to graduate from THIS college/university.	1	2	3	4
34. I am confident that I made the right decisions in choosing to attend this University.	1	2	3	4

Please answer the following questions concerning the **SOAR (Student Orientation and Registration)** program you attended this summer.

Strongly Disagree=1 Disagree=2 Agree=3 Strong Agree=4

35. I found SOAR to be a good investment of my time	1	2	3	4
36. After SOAR, I knew about the campus resources that are available to me	1	2	3	4
37. During SOAR, I made lasting relationships with other students	1	2	3	4
38. During SOAR, I better understood how demanding college life can be	1	2	3	4
39. During SOAR, I better understood the academic resources that Small Catholic University offers	1	2	3	4
40. During SOAR, I became more confident in my ability to be successful at Small Catholic	1	2	3	4
41. After SOAR, I felt more connected to Small Catholic University	1	2	3	4
42. I recommend that Small Catholic University continues the SOAR program	1	2	3	4

Never – 1   Occasionally – 2   Often – 3   Very Often – 4

43. Met with faculty during their office hours…	1	2	3	4
44. Attended campus movies, plays, concerts, and/or recitals…	1	2	3	4
45. Studied with other students…	1	2	3	4
46. Participated in social activities with members of Greek organizations…	1	2	3	4
47. Gone out on a date with another student….	1	2	3	4

48. Had lunch or dinner with a faculty member…	1	2	3	4
49. Talked with classmates out of class…	1	2	3	4
50. Socialized with friends….	1	2	3	4
51. Talked with faculty outside of class…	1	2	3	4
52. Socialized with faculty….	1	2	3	4
53. Discussed course content with other students outside of class.	1	2	3	4
54. Been a guest in a professor's home.	1	2	3	4

55. What do you think you will be doing in Spring 2011?
   ___attending this college or university
   ___attending another college or university
   ___not attending any college or university

Please answer the following questions concerning the **CROSSROADS program (3 Day, 2 Night Experience at Cedarmore).**

Strongly Disagree=1 Disagree=2 Agree=3 Strong Agree=4

56. I found CROSSROADS to be a good investment of my time	1	2	3	4
57. After CROSSROADS, I knew about the campus resources that are available to me	1	2	3	4
58. During CROSSROADS, I made lasting relationships with other students	1	2	3	4
59. During CROSSROADS, I better understood how demanding college life can be	1	2	3	4
60. During CROSSROADS, I better understood the academic resources that Small Catholic offers	1	2	3	4
61. During CROSSROADS, I became more confident in my ability to be successful at Small Catholic	1	2	3	4
62. After CROSSROADS, I felt more connected to Small Catholic University	1	2	3	4
63. I recommend that Small Catholic University continues the CROSSROADS program	1	2	3	4

Never – 1   Occasionally – 2   Often – 3   Very Often – 4

64. There are students on campus that I would like to know better.	1	2	3	4
65. There are groups of students here that I would like to get involved with.	1	2	3	4
66. I see several ways that I can make connections with other students on campus	1	2	3	4
67. I recognize many students I see on campus.	1	2	3	4

68. Do you have any concern about your ability to finance your college education?
　　　____ None (I am confident that I will have sufficient funds)
　　　____ Some (but I probably will have enough funds)
　　　____ Major (not sure I will have enough funds to complete college)

69. What percentage of the SPRING SEMESTER'S EDUCATIONAL EXPENSE (ROOM, BOARD, TUITION AND FEES) is met by the following sources: (The total must add up to 100%)

	Parents, other relatives or friends		Stafford Loand
	Spouse		Perkins Loan
	Savings		College Loan
	Pell Grant		Other Loan
	Other Gov't Aid (ROTC VIA, Veteran, etc.		College Work Study
	Supplemental Education Opportunity Grant		State Grant
	College Grant/ Scholarship		Other Than Above

Strongly Disagree=1   Disagree=2   Agree=3   Strongly Agree=4

70. I care about what my neighbors on my residence hall floor think about my actions.	1	2	3	4
71. I would consider talking with my Academic Peer Advocate or resident advisor/assistant (APA/RA) about an academic difficulty I have.	1	2	3	4
72. I would consider talking with my Academic Peer Advocate or resident advisor/assistant (APA/RA) about a social problem I have.	1	2	3	4
73. I would consider talking with another student (other than the RA) on my floor about an academic difficulty I have.	1	2	3	4
74. I would consider talking with another student (who is not an RA) on my floor about a social problem I have.	1	2	3	4
75. Residence hall programs offer opportunities to interact with faculty members.	1	2	3	4
76. The policies of this institution are clearly communicated to me.	1	2	3	4
77. Since I have been a student here, the rules of this university appear in harmony with the values the institution espouses.	1	2	3	4
78. The values of this university are communicated clearly to the campus community.	1	2	3	4
79. Since I have been a student here, the decisions made at the university rarely conflict with the values it espouses.	1	2	3	4
80. My university almost always does the right thing.	1	2	3	4
81. The actions of the administration are consistent with the stated mission of this institution.	1	2	3	4

82. Please indicate what types of activities you participated in this year at this institution. Check all that apply.							
	Campus sponsored sports		Campus sponsored clubs		Arts		Faith Based Service Groups (i.e. youth church groups)
	Tutoring or writing labs		Crossroads		Campus Band or Choir		Other (please list)
	Ethnic or cultural club/organization		Campus sponsored services clubs (Rotaract etc.)		Greek organizations		

Please answer the following questions concerning the **FRESHMEN FOCUS** course.

Strongly Disagree=1 Disagree=2 Agree=3 Strong Agree=4

83. I found FRESHMEN FOCUS to be a good investment of my time	1	2	3	4
84 After FRESHMEN FOCUS, I knew about the campus resources that are available to me	1	2	3	4
85. During FRESHMEN FOCUS, I made lasting relationships with other students	1	2	3	4
86. During FRESHMEN FOCUS, I better understood how demanding college life can be	1	2	3	4
87 During FRESHMEN FOCUS, I better understood the academic resources that Small Catholic offers	1	2	3	4
88 During FRESHMEN FOCUS, I became more confident in my ability to be successful at Small Catholic	1	2	3	4
89. After FRESHMEN FOCUS, I felt more connected to Small Catholic University	1	2	3	4
90. I recommend that Small Catholic University continues the FRESHMEN FOCUS program	1	2	3	4

91. During the fall semester, approximately how many hours <u>per week</u> did you spend doing the following activities? (Write the hours per week in the blank on the left)

a.		Studying	e.		Working on campus
b.		Attending Class	f.		Working off campus
c.		Participating in clubs or student organizations	g.		Leisure
d.		Participating in sports	h.		Other:

92.   Are you a Pioneer Scholar?   _____Yes   _____No

92a.   If yes, do you find the Pioneer Scholars Program Rewarding? _____Yes   _____No

92b.   If yes, would you recommend it to others? _____Yes   _____No

Please answer the following questions concerning the FRESHMEN SEMINAR (ICD 100) course. NOTE: IF YOU ARE NOT ENROLLED IN THIS COURSE THIS FALL, PLEASE SKIP QUESTIONS 93 - 100.

Strongly Disagree=1 Disagree=2 Agree=3 Strong Agree=4

93. I found FRESHMEN SEMINAR to be a good investment of my time	1	2	3	4
94. After FRESHMEN SEMINAR, I knew about the campus resources that are available to me	1	2	3	4
95. During FRESHMEN SEMINAR, I made lasting relationships with other students	1	2	3	4
96. During FRESHMEN SEMINAR, I better understood how demanding college life can be	1	2	3	4
97. During FRESHMEN SEMINAR, I better understood the academic resources that Small Catholic offers	1	2	3	4
98. During FRESHMEN SEMINAR, I became more confident in my ability to be successful at Small Catholic	1	2	3	4
99. After FRESHMEN SEMINAR, I felt more connected to Small Catholic University	1	2	3	4
100. I recommend that Small Catholic University continues the FRESHMEN SEMINAR program	1	2	3	4

101. Please indicate what types of activities you participated in during the four years before college. To the left of each activity, write the number of years in which you participated in that activity or club.

# OF YEARS	ACTIVITY	# OF YEARS	ACTIVITY
	Athletics		Arts
	Boys or Girls Club		School Band or Choir
	Precollege/Upward Bound/or TRIO		Girl or Boy Scouts
	Other Academic Programs outside of School		Faith Based service groups (i.e. youth church groups)
	School sponsored clubs		Other (Please List)
	4-H		
	School sponsored services clubs (Key Club, etc.)		

The following questions pertain to the **Academic Resource Center (ARC).**

Strongly Disagree=1 Disagree=2 Agree=3 Strong Agree=4

102. I am a better student because of my participation at the ACADEMIC RESOURCE CENTER	1	2	3	4
103. I am more confident in my ability to be successful at Small Catholic because of the ACADEMIC RESOURCE CENTER	1	2	3	4
104. I recommend that Small Catholic University continues the ACADEMIC RESOURCE CENTER	1	2	3	4

105. Indicate below the hours per week **(ON AVERAGE)** that you use the **Academic Resource Center (ARC)**   (Mark an X by the appropriate response – Mark only 1 box)

I don't use the Academic Resource Center (ARC)	
I use the ARC but less than 1 hour per week	
More than 1 hour but less than 3 hours per week	
More than 3 hours but less than 5 hours per week	
More than 5 hours per week	

106. If there was one thing related to how the institution interacted with you as a student that you would change, what would it be?

_____
_____
_____
_____
_____

Please complete the following statements…….

107. "I learned about Small Catholic University through…"	
108. "I choose Small Catholic University because…"	
109. "The reason students enroll at Small Catholic University is because…"	
110. "I feel a part of the Small Catholic University community due to…."	
111. "The reason students leave Small Catholic University prior to finishing their degree is because…"	

112. "The thing that I dislike the most about SCU is…"	
113. "The thing I appreciate most about BU is…"	

Thank you for your participation.

Appendix B

Instructions for Survey Administration

Introduction of Survey to Students

Please present the following information about the survey to the students in your class:

As first year students you are being invited to answer a survey about student engagement and retention.

The information you provide will be used by individuals studying at Vanderbilt University as well as staff at Small Catholic University to improve the student experience at Small Catholic.

The data will be held in confidence to the extent permitted by law.

Your identity will not be disclosed.

Your participation in this study is voluntary.

The questionnaire will take approximately fifteen minutes to complete.

Please note that the survey sheets are two-sided.

If you have any questions about the study, please contact one of the researchers whose information is on the first sheet of your survey, or you may contact the Institutional Review Board (IRB) office here at Small Catholic.

Please return the completed surveys to me.

Thank you. You may begin.

Appendix C

Survey Distribution Methodology

10-21-10

THIS IS BOX 1 of 2

Hello –

Included in this box are 10 individual packets, each with an "Introduction of the Survey to Students" sheet and 16 surveys clipped together. I also included numbered envelopes for distribution to the professors for ease of delivery and return to you.

When the surveys are completed, please ship them to the following address:

> Roger Drake
> Vice President for Administration and Finance
> L.R. McDonald Administration Building
> 210 Lindsey Wilson St.
> Columbia, KY 42728

Thank you again for your assistance with this project. Please don't hesitate to call if you have any questions.

Sincerely,

[Signature Joshua Jacobs]

10-21-10

THIS IS BOX 2 of 2

Hello –

Included in this box are 10 individual packets, each with an "Introduction of the Survey to Students" sheet and 16 surveys clipped together. I also included numbered envelopes for distribution to the professors for ease of delivery and return to you.

When the surveys are completed, please ship them to the following address:

>Roger Drake
>Vice President for Administration and Finance
>L.R. McDonald Administration Building
>210 Lindsey Wilson St.
>Columbia, KY 42728

Thank you again for your assistance with this project. Please don't hesitate to call if you have any questions.

Sincerely,

[Signature Joshua Jacobs]

Appendix D

Logistic Regression: Model for Initial Institutional Commitment
Constructs and Measures

Variables considered in Initial Institutional Commitment Model:

Descriptive Statistics				
Variable	**N**	**Mean**	**Std. Deviation**	**Coding**
Gender	168	0.6012	0.491	Male =0; female =1
Minority	169	0.1598	0.367	(Majority =0, Minority=1)
Resident Status	169	0.6450	0.480	1 = Resident; 0 = Non-resident
Parental Education	166	10.9880	3.296	Grammar School or less for both = 2; Graduate Degree for both = 16
Financial Concern	169	0.2249	0.419	1 = Major Concern; 0 = None or Some Concern
Pioneer Scholar	154	0.3636	0.483	1 = Pioneer; 0 = Non-Pioneer
High School Grades	169	8.6805	1.513	1 = D or lower; 10 = A or higher
College Choice (Dependent Variable)	169	0.5444	0.500	1 = First Choice; 0 = NOT First Choice

Logistic Regression Result: Model for Initial Institutional Commitment

Variable	B		S.E.	Sig.	Exp(B)
Gender	.252		.372	.499	1.286
Race	-.066		.476	.890	.936
Resident	-1.468	***	.409	.000	.230
Parental Education	-.044		.076	.565	.957
Financial Concern	-.905	*	.452	.046	.405
Pioneer Scholar	-.491		.527	.351	.612
RC High School Grades	.053		.120	.660	1.054
Constant	1.456		1.507	.334	4.290
Chi-square	20.946				
Significance of Chi-square measure	.004				
Df	7.000				

*p.<.05; **p.<.01; ***p.<.001

Appendix E

Linear Regression Result: Model for Social Integration

	Unstandardized Coefficients		Standardized Coefficients	
Variable	**Beta**		**Beta**	
Welfare of Students	0.085		0.099	
Institutional Integrity	0.222	**	0.208	**
Communal Potential	0.459	***	0.311	***
Faculty Engagement	0.343	**	0.233	**
Initial Institutional Commitment	0.585		0.074	
Constant	4.087			
SE	2.362			
N	148			
Adjusted R Squared	0.307			
Standard Error of the Estimate	3.271			
F Statistic	14.003	***		
Df	147			

*p.<.05; **p.<.01; ***p.<.001

Linear Regression: Model for Social Integration
Constructs and Measures

Institutional Commitment to Welfare of Students (Braxton, Jones, Hirschy, Hartley 2008) - Cronbach's alpha = .85

Item #	Survey Question	N	Mean	St. Dev.	Coding
10	Most student services staff (e.g., dean of students office, student activities, housing, etc.) I have had contact with are genuinely interested in students.	169	3.49	.637	1 = Strongly Disagree; 2 = Disagree; 3= Agree; 4=Strongly Agree
11	Most other college/university staff (e.g., registrar, business office, financial aid, etc.) I have had contact with are genuinely interested in students.	169	3.25	.705	1 = Strongly Disagree; 2 = Disagree; 3= Agree; 4=Strongly Agree
12	Most of the campus religious leaders (e.g., campus ministry, priest, rabbi, etc.) I have had contact with are genuinely interested in students.	164	3.37	.760	1 = Strongly Disagree; 2 = Disagree; 3= Agree; 4=Strongly Agree
13	I have experienced negative interactions with faculty members.	169	3.29	.834	1 = Strongly Disagree; 2 = Disagree; 3= Agree; 4=Strongly Agree - Reverse Coded
14	I have experienced negative interactions with student services staff.	169	3.49	.788	1 = Strongly Disagree; 2 = Disagree; 3= Agree; 4=Strongly Agree - Reverse Coded
15	I have experienced negative interactions with other college/university staff.	168	3.48	.750	1 = Strongly Disagree; 2 = Disagree; 3= Agree; 4=Strongly Agree - Reverse Coded
16	In general, faculty members treat students with respect.	169	3.54	.556	1 = Strongly Disagree; 2 = Disagree; 3= Agree; 4=Strongly Agree
17	In general, student services staff treat students with respect.	168	3.52	.568	1 = Strongly Disagree; 2 = Disagree; 3= Agree; 4=Strongly Agree

Item #	Survey Question	N	Mean	St. Dev.	Coding
18	In general, other college/university staff treat students with respect.	169	3.46	.556	1 = Strongly Disagree; 2 = Disagree; 3= Agree; 4=Strongly Agree
19	In general, I know where to go if I need more information about a policy	169	3.15	.792	1 = Strongly Disagree; 2 = Disagree; 3= Agree; 4=Strongly Agree

Institutional Integrity (Domas, Hicks) - Cronbach's alpha .890

Item #	Survey Question	N	Mean	St. Dev.	Coding
76	The policies of this institution are clearly communicated to me.	157	3.18	.783	1 = Strongly Disagree; 2 = Disagree; 3= Agree; 4=Strongly Agree
77	Since I have been a student here, the rules of this university appear in harmony with the values the institution espouses.	161	3.19	.746	1 = Strongly Disagree; 2 = Disagree; 3= Agree; 4=Strongly Agree
78	The values of this university are communicated clearly to the campus community.	161	3.20	.723	1 = Strongly Disagree; 2 = Disagree; 3= Agree; 4=Strongly Agree
79	Since I have been a student here, the decisions made at the university rarely conflict with the values it espouses.	162	3.07	.785	1 = Strongly Disagree; 2 = Disagree; 3= Agree; 4=Strongly Agree
80	My university almost always does the right thing.	162	3.12	.775	1 = Strongly Disagree; 2 = Disagree; 3= Agree; 4=Strongly Agree
81	The actions of the administration are consistent with the stated mission of this institution.	163	3.16	.711	1 = Strongly Disagree; 2 = Disagree; 3= Agree; 4=Strongly Agree

Communal Potential (without support of prior studies) - Cronbach's alpha .704

Item #	Survey Question	N	Mean	St. Dev.	Coding
64	There are students on campus that I would like to know better.	169	3.09	.750	1 = Strongly Disagree; 2 = Disagree; 3= Agree; 4=Strongly Agree

Item #	Survey Question	N	Mean	St. Dev.	Coding
65	There are groups of students here that I would like to get involved with.	169	2.92	.767	1 = Strongly Disagree; 2 = Disagree; 3= Agree; 4=Strongly Agree
66	I see several ways that I can make connections with other students on campus	169	3.01	.707	1 = Strongly Disagree; 2 = Disagree; 3= Agree; 4=Strongly Agree
67	I recognize many students I see on campus.	169	3.18	.792	1 = Strongly Disagree; 2 = Disagree; 3= Agree; 4=Strongly Agree
26	Most students on campus have values which are different from my own	169	2.41	.869	1 = Strongly Disagree; 2 = Disagree; 3= Agree; 4=Strongly Agree - Reverse Coded

Faculty Engagement Scale - Cronbach's alpha = .703

Item #	Survey Question	N	Mean	St. Dev.	Coding
43	Met with faculty during their office hours…	169	2.14	.710	1 = Strongly Disagree; 2 = Disagree; 3= Agree; 4=Strongly Agree
48	Had lunch or dinner with a faculty member…	169	1.31	.645	1 = Strongly Disagree; 2 = Disagree; 3= Agree; 4=Strongly Agree
51	Talked with faculty outside of class…	169	2.58	.877	1 = Strongly Disagree; 2 = Disagree; 3= Agree; 4=Strongly Agree
52	Socialized with faculty….	169	2.02	.926	1 = Strongly Disagree; 2 = Disagree; 3= Agree; 4=Strongly Agree
54	Been a guest in a professor's home.	169	1.24	.650	1 = Strongly Disagree; 2 = Disagree; 3= Agree; 4=Strongly Agree

Initial Institutional Commitment (Braxton, Jones, Hirschy, Hartley 2008)

Item #	Survey Question	N	Mean	St. Dev.	Coding
27	College Choice - Binary	168	.54	.500	1= 1st Choice; 0= Not 1st Choice

Social Integration (Braxton, Jones, Hirschy, Hartley 2008) - Cronbach's alpha .775

Item #	Survey Question	N	Mean	St. Dev.	Coding
20	My interpersonal relationships with other students has had a strong positive influence on my intellectual growth and interest in ideas.	169	3.21	.773	1 = Strongly Disagree; 2 = Disagree; 3= Agree; 4=Strongly Agree
21	Since coming to this university, I have developed close personal relationships with other students.	169	3.20	.791	1 = Strongly Disagree; 2 = Disagree; 3= Agree; 4=Strongly Agree
22	My interpersonal relationships with other students has had a positive influence on my personal growth, values and attitudes.	169	3.17	.829	1 = Strongly Disagree; 2 = Disagree; 3= Agree; 4=Strongly Agree
23	It has been difficult for me to make friends with other students enrolled at this university.	169	3.12	.937	1 = Strongly Disagree; 2 = Disagree; 3= Agree; 4=Strongly Agree - Reverse Coded
24	Few of the students I know would be willing to listen to me and help me if I had a personal problem	168	2.90	1.030	1 = Strongly Disagree; 2 = Disagree; 3= Agree; 4=Strongly Agree - Reverse Coded
25	The student friendships I have developed here have been personally satisfying	169	3.27	.752	1 = Strongly Disagree; 2 = Disagree; 3= Agree; 4=Strongly Agree
26	Most students here have values and attitudes which are different from my own.	169	2.41	.869	1 = Strongly Disagree; 2 = Disagree; 3= Agree; 4=Strongly Agree - Reverse Coded

Appendix F

Linear Regression: Model for Subsequent Institutional Commitment
Constructs and Measures

Variables considered in Subsequent Institutional Commitment Model:

Descriptive Statistics				
Variable	**N**	**Mean**	**Std. Deviation**	**Coding**
Initial Institutional Commitment	168	3.185	1.042	1 = 1st Choice; 2 = 2nd Choice; 3=3rd Choice; 4= 4th Choice or Higher - Reverse Coded
Social Integration	168	21.315	3.911	Aggregate score on items 20-26. See Appendix B (Social Integration) for Coding
Gender	168	.601	.491	Male =0; female =1
Minority	169	.160	.367	(Majority =0, Minority=1)
Resident Status	169	.645	.480	1 = Resident; 0 = Non-resident
Parental Education	166	10.988	3.296	Grammar School or less for both = 2; Graduate Degree for both = 16
Financial Concern	169	.225	.419	1 = Major Concern; 0 = None or Some Concern
High School Grades	169	8.680	1.513	1 = D or lower; 10 = A or higher
Working on/off Campus	167	.509	.501	1= Working; 0=Not working

Linear Regression Result: Model for Subsequent Institutional Commitment

Variable	Unstandardized Coefficients		Standardized Coefficients	
	Beta		Beta	
Initial Institutional Commitment	0.538	***	0.361	***
Social Integration	0.122	***	0.304	***
Gender	0.371		0.118	
Minority	0.102		0.025	
Resident Status	-0.561	*	-0.713	*
Parental Education	-0.006		-0.013	
Financial Concern	-0.148		-0.04	
High School Grades	0.102		0.1	
Working on/off Campus	-0.133		-0.043	
Constant	1.631			
SE	1.082			
N	160			
Adjusted R Squared	0.297			
Standard Error of the Estimate	1.301			
F Statistic	8.507	***		
Df	9			

*p.<.05; **p.<.01; ***p.<.001

Appendix G

Logistic Regression: Model for Persistence
Constructs and Measures

Variables considered in Subsequent Institutional Commitment Model:

Descriptive Statistics				
Variable	**N**	**Mean**	**Std. Deviation**	**Coding**
Subsequent Institutional Commitment	169	6.544	1.570	Aggregate score on: #33) It is not important to me to graduate from this university - Reverse Coded; #34) I am confident that I made the right decision in choosing to attend
Social Integration	168	.732	.444	See Social Integration Scale in Appendix B - Recoded as Binary
Initial Institutional Commitment	169	.544	.500	1= 1st Choice; 0=Not 1st Choice
Persistence (Dependent Variable)	169	.941	.237	1=attend this institution; 0=not attend this institution

Logistic Regression Result: Model for Persistence

	B		S.E.	Sig.	Exp(B)
Subsequent Institutional commitment	1.613	**	.468	.001	5.019
Social Integration	2.205	*	1.010	.029	9.074
Initial institutional commitment	-1.382		1.167	.236	.251
Constant	-5.868	**	1.971	.003	.003
Chi-square	41.766	***			
Significance of Chi-square measure	<.001				
Df	3.000				

*p.<.05; **p.<.01; ***p.<.001

Appendix H

Logistic Regression: Model for Involvement's influence on Social Integration
Constructs and Measures

Variables considered in the model to predict Involvement's influence on Social Integration

Descriptive Statistics				
Variable	**N**	**Mean**	**Std. Deviation**	**Coding**
Athlete	169	.189	.393	1=Yes; 0=No
Attended campus movies, plays, concerts	169	2.077	.919	1=Yes; 0=No
Participated in: Ethnic or cultural organizations	169	.219	.415	1=Yes; 0=No
Participated in: Campus sponsored clubs	169	.538	.500	1=Yes; 0=No
Participated in: Campus sponsored service clubs	169	.148	.356	1=Yes; 0=No
Participated in: Arts	169	.124	.331	1=Yes; 0=No
Participated in: Faith Based Groups	169	.148	.356	1=Yes; 0=No
Social Integration	168	21.315	3.911	See Appendix B for questions and coding

Linear Regression Result: Model to Predict Involvement's influence on Social Integration

Variable	Unstandardized Coefficients Beta		Standardized Coefficients Beta	
Athlete	2.148	**	.216	**
Attended campus movies, plays, concerts	1.042	**	.245	**
Participated in: Ethnic or cultural organizations	-.682		-.072	
Participated in: Campus sponsored clubs	1.884	**	.241	**
Participated in: Campus sponsored service clubs	.769		.070	
Participated in: Arts	.920		.078	
Participated in: Faith Based Groups	-.181		-.017	
Faculty Engagement Scale	.247	*	.165	*
Constant	15.363	***		
SE	1.049			
N	167			
Adjusted R Squared	0.224			
Standard Error of the Estimate	3.446			
F Statistic	7.011	***		
Df	8			

*p.<.05; **p.<.01; ***p.<.001

Appendix I

Logistic Regression: Hours in Various Activities Influence on Persistence
National Survey of Student Engagement Data
Constructs and Measures

Variables considered in the model to Involvement's influence (measured in hours) on Persistence

Descriptive Statistics				
Variable	**N**	**Mean**	**Std. Deviation**	**Coding**
Hours: Academic preparation	238	4.28	1.461	1=0 hours per week; 2= 1-5; 3=6-10; 4=11-15;5=16-20; 6=21-25; 7= 26-30; 8= >30
Hours: Working on campus	239	1.61	1.110	1=0 hours per week; 2= 1-5; 3=6-10; 4=11-15;5=16-20; 6=21-25; 7= 26-30; 8= >30
Hours: Working off campus	239	2.39	1.917	1=0 hours per week; 2= 1-5; 3=6-10; 4=11-15;5=16-20; 6=21-25; 7= 26-30; 8= >30
Hours: Co-curricular activities	238	2.70	1.871	1=0 hours per week; 2= 1-5; 3=6-10; 4=11-15;5=16-20; 6=21-25; 7= 26-30; 8= >30
Hours: Social Activities	238	3.70	1.498	1=0 hours per week; 2= 1-5; 3=6-10; 4=11-15;5=16-20; 6=21-25; 7= 26-30; 8= >30
Returned for 3rd Semester (matched from institutional data) Dependent variable	538	.77	.419	1= Returned; 0=did not return

Logistic Regression: Hours in Various Activities Influence on Persistence
National Survey of Student Engagement Data
Constructs and Measures

	B		S.E.	Sig.	Exp(B)
cocurr01	.314	*	.145	.030	1.368
Constant	1.131	**	.357	.002	3.099
Chi-square	6.083	***			
Significance of Chi-square measure	.014				
Df	1.000				

*p.<.05; **p.<.01; ***p.<.001

Appendix J

Linear Regression: Predictors of Peer Retention from IPEDs Data
IPEDS 2009
Constructs and Measures

Variables considered in the model to predict retention among peers

Descriptive Statistics				
Variable	**N**	**Mean**	**Std. Deviation**	**Coding**
ACT 75th Percentile	38	25.59	6.722	Per IPEDS Data Set
EndFTE2	38	28.68	42.697	Per IPEDS Data Set
InstFTE2	38	26.47	11.204	Per IPEDS Data Set
Retention	38	80.24	9.719	Per IPEDS Data Set

Linear Regression: Predictors of Peer Retention from IPEDs Data
IPEDS 2009
Constructs and Measures

Variable	Unstandardized Coefficients Beta		Standardized Coefficients Beta	
ACT 75th Percentile	.563	**	.389	**
Endowment per FTE	.001		.003	
Expenditures on Instruction per FTE	.413	*	.476	*
Constant	54.892	***		
SE	4.809			
N	38			
Adjusted R Squared	.528			
Standard Error of the Estimate	6.676			
F Statistic	14.802	***		
Df	37			

*p.<.05; **p.<.01; ***p.<.001

Appendix K
Linear Regression: Model for Involvement's influence on Social Integration
Constructs and Measures

Variables considered in the model to predict Involvement's influence on Social Integration

| Descriptive Statistics				
Variable	N	**Mean**	**Std. Deviation**	**Coding**
Athlete	169	.189	.393	1=Yes; 0=No
Attended campus movies, plays, concerts	169	2.077	.919	1=Yes; 0=No
Participated in: Ethnic or cultural organizations	169	.219	.415	1=Yes; 0=No
Participated in: Campus sponsored clubs	169	.538	.500	1=Yes; 0=No
Participated in: Campus sponsored service clubs	169	.148	.356	1=Yes; 0=No
Participated in: Arts	169	.124	.331	1=Yes; 0=No
Participated in: Faith Based Groups	169	.148	.356	1=Yes; 0=No
Faculty Engagement Scale	169	9.296	2.604	See Appendix E for questions and coding
Total Involvement Score	169	1.367	1.213	Calculated variable representing total "types" of activities in which respondents participated
Social Integration	168	21.315	3.911	See Appendix B for questions and coding

Linear Regression Result: Model to Predict
Involvement's influence on Social Integration

| Variable	Unstandardized Coefficients Beta		Standardized Coefficients Beta	
Athlete	.264		.027	
Attended campus movies, plays, concerts	1.042	**	.245	**
Participated in: Ethnic or cultural organizations	-2.566	*	-.273	*
Participated in: Campus sponsored service clubs	-1.115		-.102	
Participated in: Arts	-.964		-.082	
Participated in: Faith Based Groups	-2.065		-.189	
Faculty Engagement Scale	.247	*	.165	*
Total Involvement Score	1.884	**	.584	**
Constant	15.363	***		
SE	1.049			
N	167			
Adjusted R Squared	0.224			
Standard Error of the Estimate	3.446			
F Statistic	7.011	***		
Df	8			

*p.<.05; **p.<.01; ***p.<.001

Note: Participated in Campus Sponsored Clubs is excluded from the model due to
multicollinearity after inclusion of the total involvement score in the model

Appendix L
Curve Estimation: Quadratic Function
Social Integration (DV) and Total Involvement Score (IV)
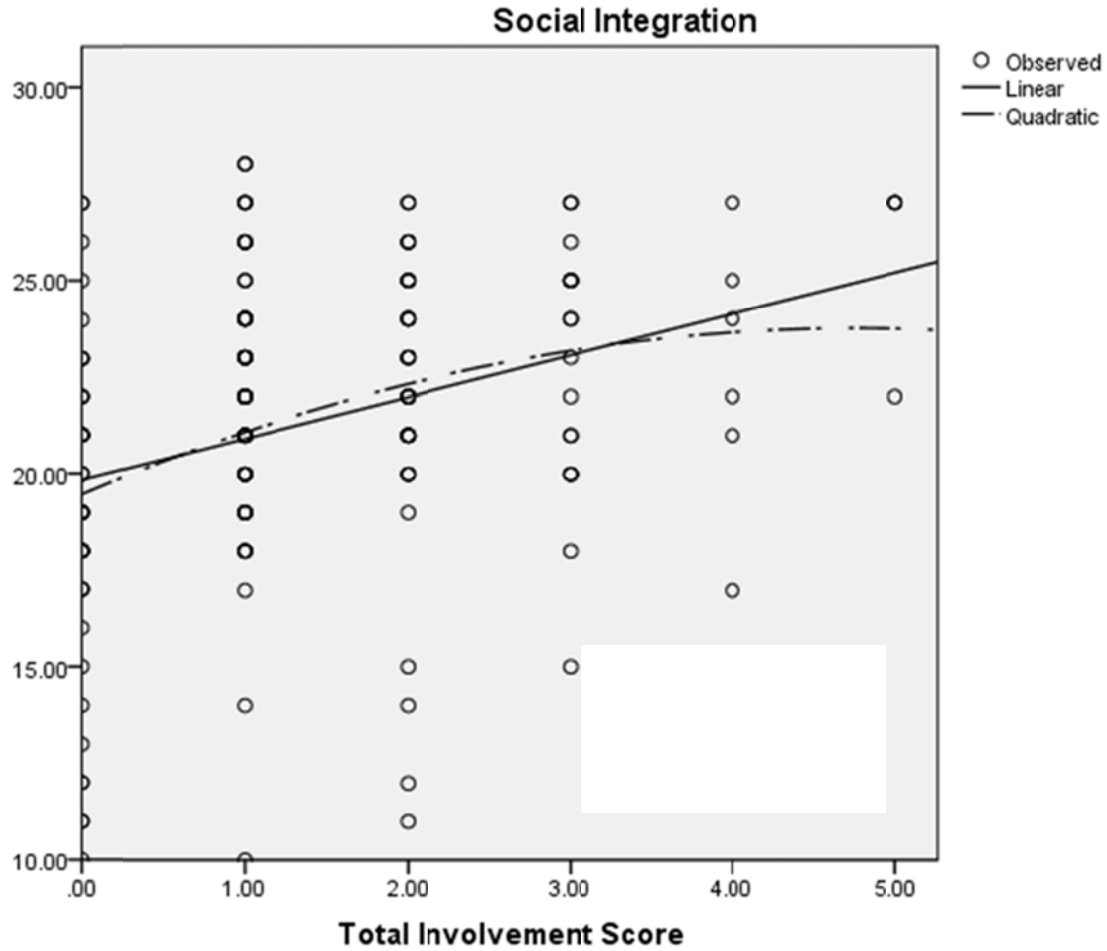
	Linear	Quadratic
R Square	0.110	0.119
F Statistic	20.614	11.142
p-value	<.001	<.001
Df	166	165

Appendix M
Curve Estimation: Quadratic Function
Social Integration (DV) and Hour Per Week in Clubs (IV)

Social Integration
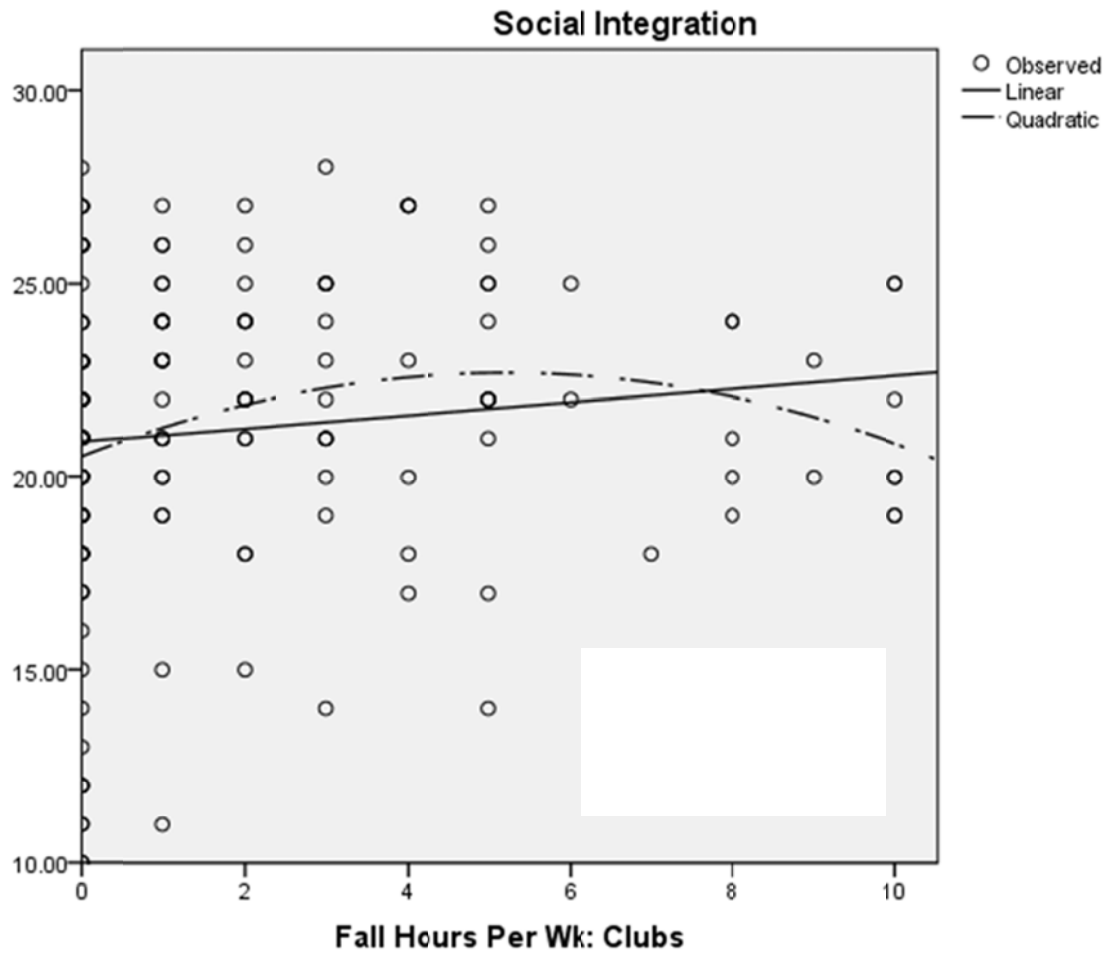
	Linear	Quadratic
R Square	0.015	.043
F Statistic	2.388	3.512
p-value	.124	.032
Df	159	158

Appendix N

Curve Estimation: Quadratic Function
NSSE (09) Data Supportive Campus Environment (DV) and
Hour Per Week in Co-Curricular Activities (IV)
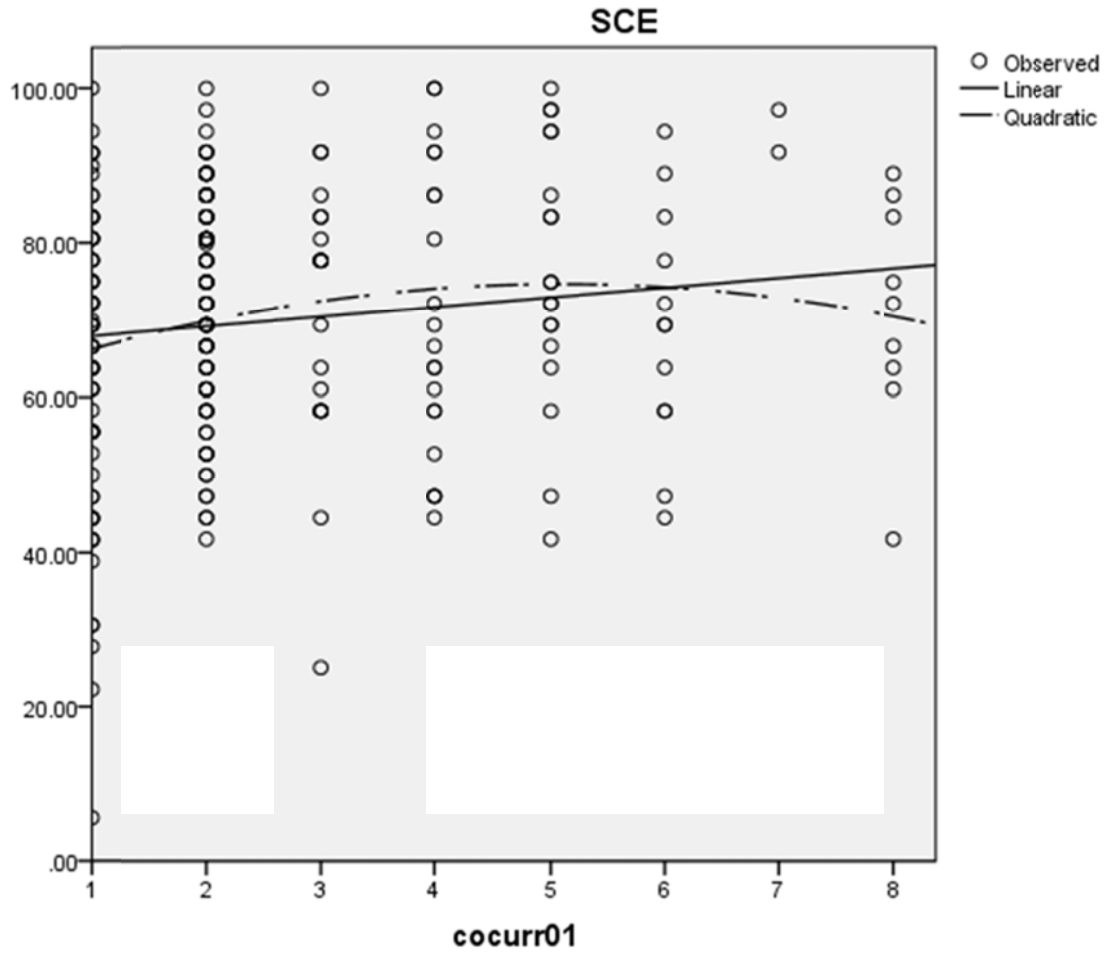
	Linear	**Quadratic**
R Square	0.019	.031
F Statistic	4.440	3.772
p-value	.036	.024
Df	234	233

Appendix O

Interview Protocols for Students and Staff Members

STUDENT PROTOCOL

What are the drivers of persistence among students at Small Catholic University?

Conceptual Frameworks: future plans/goals, academic preparation, social and academic integration, and interventions.

ICE BREAKERS:

- Did you have a good weekend?

- Do you live on campus or off campus?

- What is your major? What is your favorite class?

FUTURE PLANS & GOALS:

- Do you plan on continuing at Small Catholic next semester? Have you ever considered taking time off from school? What are the drivers of your consideration for taking time off?

- What is your current degree program? Why did you select this program? What do you see as your future career? Do you know anyone who is currently in that field? Do you intend to go to graduate school after graduation?

ACADEMIC PREPAREDNESS:

- What high school did you attend? What courses did you take in high school? How many hours a week did you study in high school?

- When did you decide that you wanted to attend college? Who was the largest influencer in your decision to attend college? How did you find out about this college/program? Who was the largest influencer in your decision to attend this college?

- What's been your greatest source of support you've had in making the decision about attending college? What's been your greatest source of support that's enables you to stay in college? How has the support you received helped you to continue or succeed?

- Did you take the ACT? At what point in the college decision process did you take the ACT? How did you prepare for it?

- What were the primary factors in your undergraduate college choice? What brought you here to college?

SOCIAL & ACADEMIC INTEGRATION:

- Do you have brothers or sisters? Did they or your parents go to college? Did they get a degree? If so, in what fields?

- What aspects of your life have prepared you for your current academic life? Illustrative example?

- What are two to three things you feel all rising high school students should know about college life and why they are important from your perspective and experience? What would you describe as the biggest difference between high school and college social life? What advice do you have for students in regards to making new friends and adapting to the college community? What is the social climate like at this school?

- What did you expect your first year in college to be like? What were your expectations about the kind of academic or social support you would receive here? Has it been less than what you expected, or exceeded your expectations?

- What do you think are the most important factors that will allow you to be successful in pursuing your undergraduate degree?

- How would you describe what a successful college student looks like?

- Can you think of any circumstances in your life that has made it difficult for you to graduate from high school? Attend college? Eventually graduate from college?

- Could you identify a faculty member who was important to you in your time at this school? What factors led you to connect with him or her? How did that person influence you? How did you engage with that faculty member?

- What experiences from your freshman year stand out in your memory?

INTERVENTIONS:

- What clubs, groups and other activities were you involved in? Do you enjoy them?

- Who are your closest friends?

- What programs do you think are the most beneficial for your academic success? If you had the ability to change a program or create a new program to help you succeed, what would it be?

- Have you utilized, or plan to utilize any academic supports? (Tutoring, study tables, extra help from professors, etc.) If yes, can you give some examples of your experiences?

- Did you attend Crossroads? Did you attend SOAR? Were these offerings beneficial to you as a student? What aspects were the most helpful? What would you change about them to make them more effective?

- What is your impression of the Freshman Seminar course to this point? What would you suggest changing about the Freshman Seminar? Do you feel that it has helped you navigate the transition to college from high school?

- What is your impression of the IDC seminar to this point? What would you suggest changing about the IDC seminar? Do you feel that it has helped you gain skills that will assist you moving forward at Small Catholic?

- Have you taken advantage of the services provided by the ARC (Academic Resource Center)?

- Have you interacted with your APA (Academic Peer Advocate)? In what ways has your APA been of help in navigating this first semester? Are there additional things you wish your APA would have been able to assist with?

- Do you feel that you are a valued part of the Small Catholic Community? What actions have shown that to you? In what meaningful ways could Small Catholic as an institution demonstrate its commitment to your success?

STAFF PROTOCOL

What are the drivers of persistence among students at Small Catholic University?

Conceptual Frameworks: future plans and goals, academic preparation, social and academic integration, and interventions.

ICE BREAKERS:

- Did you have a good weekend?
- How long have you worked for the institution?

FUTURE PLANS & GOALS:

- How would you describe a typical day in your role?
- Are you currently working on, or developing new programs to assist students in their progress toward graduation? Are you collaborating with any other departments on this initiative?

ACADEMIC PREPAREDNESS:

- Where do most students who attend this institution come from? Are students well prepared for courses here? Are a disproportionate percentage of conditionally admitted students from specific areas?
- At what time of the year do you start fielding increases in questions about attending in the coming fall? Are the questions educated and specific, or are they open searches for general information?
- What are the resources you typically suggest students familiarize themselves with prior to enrolling, or after they are enrolled that will help them graduate?
- If students come in under prepared, in what subjects are students typically deficient?
- What do you perceive as the primary factors in students choosing this institution or other institutions?

SOCIAL & ACADEMIC INTEGRATION:

- What are two to three things you feel all rising high school students should know about college life? Why are these important from your perspective and experience? What would you describe as the biggest difference between high school and college social life? What advice do you have for students in regards to making new friends and adapting to the college community? What is the social climate like at this school?
- What barriers do you anticipate students encountering during their first year on campus?
- What do you think are the most important factors that allow students to be successful in pursuing their undergraduate degree?
- How would you describe what a successful college student looks like?

- What do you perceive as the primary factors in student college choice?

- What offices or departments on campus do a good job of providing services that encourage students to persist? Can you give me an example of a successful initiative or program?

- What aspects of the freshman year experience should be focused upon? If additional resources came available, what programs in the freshman year should be invested in or started with the funding?

INTERVENTIONS:

- Are you an active member of any professional organizations, list-serves, or networks that share information about increasing student persistence?

- Which offices do you partner with most often to improve retention services for students?

- What do you perceive as the greatest support asset available to students? How is that service publicized? Do you feel is it understood by the students who need the most help?

- Did you participate of volunteer at Crossroads? Did you participate of volunteer at SOAR? Do you believe these offerings were beneficial to students? What aspects do you believe are the most helpful? What would you change about them to make them more effective?

- What is your impression of the Freshman Seminar course? What would you suggest changing about the Freshman Seminar? Do you feel that it accomplishes its goal to help students navigate the transition to college from high school?

- What is your impression of the IDC seminar? What would you suggest changing about the IDC seminar? Do you feel that it is valuable in instilling general academic skills in students as they progress through Small Catholic?

- Have you referred a student to advantage of the services provided by the ARC (Academic Resource Center)?

- Have you referred a student to or partnered with a APA (Academic Peer Advocate)? In what ways do you believe the APA's have been of helpful? Are there additional things you the APA's would be able to assist with?

- Do you feel like a valued part of the Small Catholic Community? Do you feel that the institution demonstrates that they care about the students? What actions have shown that to you? In what meaningful ways could Small Catholic as an institution demonstrate its commitment to student success?

References

ACT (2010a) 2010 Retention/Completion Summary Tables. ACT, Inc. Retrieved January 21, 2011, fromwww.act.org/research/policymakers/pdf/10retain_trends.pdf

ACT (2010b). Retention: Diverse Institutions = Diverse Retention Practices? ACT, Inc. Presented at AIR Forum, Chicago, IL, June 2. Retrieved January 21, 2011, from http://www.act.org/research/policymakers/pdf/AIR_ForumPaper.pdf

ACT (2004). What works in College Retention: Private Four-year Colleges and Universities Report. ACT, Inc. Retrieved January 21, 2011, from http://www.act.org/research/policymakers/reports/retain.html

Association for the Study of Higher Education (ASHE) (2003).Implementation and Leadership. *ASHE-ERIC Higher Education Report*, *30*(2), 113-127.

Association for the Study of Higher Education (ASHE) (2004).Exemplary Student Retention Programs. *ASHE-ERIC Higher Education Report*, *30*(3), 53-66.

Barefoot, B. (2004). Higher education's revolving door: confronting the problem of student drop out in us colleges and universities. *Open Learning*, *19*(1), 9-18.

Bean, J. P. (1980). Dropouts and turnover: The synthesis and test of a causal model of student attrition. *Research in Higher Education*, 12, 155–187.

Bean, J. P. (1983). The application of a model of turnover in work organizations to the student attrition process. *Review of Higher Education*, 6, 127-148

Berger, J. and Braxton, J.M. (1998). Revising Tinto's Interactionalist Theory of Student Departure Through Theory Elaboration: Examining the Role of Organizational Attributes in the Persistence Process. *Research in Higher Education*. 39:2, 103-119.

Berger, J., & Milem, J. (1999).The Role of Student Involvement and Perceptions of Integration in a Causal Model of Student Persistence. *Research in Higher Education*, *40*(6), 641-664.

Braxton, J. (2008). *Higher Education: Handbook of Theory and Research.* J. C. Smart (ed.). New York: Agathon Press.

Braxton, J. M. &Hirschy, A. S. (2005).Theoretical developments in college student departure. In A. Seidman, (Ed.), College student retention: Formula for student success (pp. 61-87). Westport, CT: Greenwood Press.

Braxton, J.M., Milem, J., and Sullivan, A.S. (2000). The influence of Active Learning on the College Student Departure Process: Toward a Revision of Tinto's Theory. *The Journal of Higher Education*. 71:5, 569-590.

Brier, E.M., Hirschy, A.S., and Braxton, J.M. (2008). The Strategic Retention Initiative: Theory based Practice to Reduce College Student Departure. *About Campus*. September-October, 18-20.

Bonwell, C. & Eison, J. (1991). Active Learning: Creating Excitement in the Classroom AEHE-ERIC Higher Education Report No. 1. Washington, D.C.: Jossey-Bass.

Braxton, J.M, Hirschy, A.S. and McClendon, S.A. (2004).*Understanding and Reducing College Student Departure*. San Francisco, CA: Jossey –Bass.

Braxton, J.M, Vesper, N., & Hossler, D. (1995).Expectations for College and Student Persistence. Research in Higher Education, 36:5, 595-611.

Brint, S. (2003).Few remaining dreams: Community colleges since 1985.*The ANNALS of the American Academy of Political and Social Science, 586,* 16-37.

Bourdieu, P. (1977). Cultural reproduction and social reproduction, in *Power and ideology*, J. Karabel and A.H. Halsey (eds), Oxford Press, Chap 29.

Bowles, S. &Gintis, H. (1976).Schooling in capitalist societies, from *Schooling in capitalist America*, by Samuel Bowles and Herbert Gintis, Basic Books.

Cabrera, A. F., Nora, A., & Castaneda, M. B. (1993). College persistence: Structural equations modeling test of an integrated model of student retention. *Journal of Higher Education*, 64, 123–139.

Coleman, J.S. (1988). Social capital in the creation of human capital. American Journal of Sociology, 94 (Suppl.95), S95-S120.

Cuseo, J. (NA). Academic Advisement and Student Retention: Empirical Connections & Systemic Interventions. *National Academic Advising Association (NACADA)*.Retrieved from www.nacada.ksu.edu/clearinghouse/advisingissues/retain.htm

Donnison, S. (2010). Beyond Integration or Adaptation: The Challenge for Higher Education and Gen Y. *International Journal of Learning*, *17*(2), 407-416.

Elkins, S.A., Braxton, J.M., and James, G.W. (1998).Proceedings from the annual meeting of the Association for Institutional Research. *Tinto's Separation Stage and Its Influence on First-Semester College Student Persistence.* Minneapolis, MN.

Elkins, H., Buckingham, T., and Cochran, L. (2003).Proceedings from the Annual Meeting of the Mid-Western Educational Research Association. *In Their Own Words: Assessment to Understand the Dynamics of College Retention.* Columbus, OH.

Elliott, K., & Healy, M. (2001). Key Factors Influencing Student Satisfaction Related to Recruitment and Retention. *Journal of Marketing for Higher Education*, *10*(4), 1-11.

Ellwood, D. T. & Kane, T. J. (2000). Who is getting a college education? Family background and the growing gaps in enrollment. In S. Danziger & J. Waldfogel (Eds.), *Securing the future* (pp. 283-324)*. New York: Russell Sage.*

Epstein, J. (2010). The Retention Guru. *Inside Higher Education*. Retrieved June 30, 2010 from http://www.insidehighereducation.com/news/2010/06/30/xavier

Freeman, J., Hall, E., & Bresciani, M. (2007). What leads students to have thoughts, talk to someone about, and take steps to leave their institution? *College Student Journal*, *41*(4, Pt A), 755-770.

Furstenberg, Frank F. Jr., and Hughes, Mary Elizabeth. Social Capital and Successful Development Among At-Risk Youth. Journal of Marriage and Family, Vol. 57, No. 3. August 1995. pp. 580-592.

Gansemer-Topf, A., & Schuh, J. (2006). Institutional Selectivity and Institutional Expenditures: Examining Organizational Factors that Contribute to Retention and Graduation. *Research in Higher Education*, *47*(6), 613-642.

Garland, J.C. (2009). Saving Alma Mater: A Rescue place for the America's Public Universities. Chicago, IL: University of Chicago Press.

Hausmann, L., Schofield, J., & Woods, R. (2007).Sense of Belonging as a Predictor of Intentions to Persist Among African American and White First-Year College Students. *Research in Higher Education*, *48*(7), 803-839.

Hodges, J. L. (1999). *The effects of first-generation status upon the first-year college success patterns of students attending an urban multi-campus community college*. ERIC Digest, ED474344.

Herzog, S. (2005).Measuring Determinants of Student Return VS. Dropout/Stopout vs. Transfer: A First-to-Second Year Analysis of New Freshmen. *Research in Higher Education*, *46*(8), 883-928.

Hirschy, A. (2005). Organizational Influences on Student Persistence: Antecedents to Social Integration. (Doctoral Dissertation). Retrieved from http://discoverlibrary.vanderbilt.edu/

Integrated Postsecondary education Data System (IPEDS).(2011). [Data Center]. Retrieved from http://nces.ed.gov/ipeds/datacenter/

Ishitani, T. T. (2006). Studying Attrition and Degree Completion Behavior among First-Generation College Students in the United States. *The Journal of Higher Education, 77*(5), 861-885.

Jamelske, E. (2009). Measuring the impact of a university first-year experience program on student GPA and retention. *Higher Education, 57*(3), 373-391.

Kentucky Council on Postsecondary Education (CPE). (2007). Retrieved January 10, 2011 from http://cpe.ky.gov/

Kinzie, J. and Kuh, G.D. (2004) Going DEEP: Learning from Campuses that Share Responsibility for Student Success. *About Campus.* November-December, 2-8.

Koljatic, M. and Kuh, G.D. (2001) A Longitudinal Assessment of College Student Engagement in Good Practices in Undergraduate Education. Higher Education, 42: 351-371.

Kolowich, S. (2010). Can you hear me now? *Inside Higher Education.* Retrieved August 19, 2010 from www.insidehighereducaiton.com

Kramer, M. (1993).Lengthening of time to degree. *Change, 25*(3), pp. 5-7.

Kuh, G.D., Whitt, E.J. and Strange, C.C. (1989). Proceedings from the annual meeting of the American Educational Research Association, *The Contribution of Institutional Agents to High Quality Out-of-Class Experiences for College Students.* San Francisco, CA.

Laird, T., Chen, D., &Kuh, G. (2008). Classroom practices at institutions with higher-than-expected persistence rates: What student engagement data tell us. *New Directions for Teaching & Learning, 2008*(115), 85-99.

Lehmann, W. (2007). "I just didn't feel like I fit in": The role of habitus in university dropout decisions. *Canadian Journal of Higher Education, 37*(2), 89-110.

Leppel, K. (2001). The Impact of Major on College Persistence among Freshmen. *Higher Education, 41*(3), 327-342.

Longden, B. (2006). An Institutional Response to Changing Student Expectations and their Impact on Retention Rates. *Journal of Higher Education Policy & Management, 28*(2), 173-187.

Lowis, M., & Castley, A. (2008). Factors affecting student progression and achievement: prediction and intervention. A two-year study. *Innovations in Education & Teaching International, 45*(4), 333-343.

McGowan, J.J (2005). Vision 2020 Plan. Retrieved December 10, 2010 from http://www.bellarmine.edu/vision/

McGregor, E.N. & Attanasi, L.C. (1998). The craft of benchmarking: District-level, campus-level, and program-level standards. Presented at the Annual Meeting of Rocky Mountain Association for Institutional Research. Bozeman, MT.

Milem, J. F., & Berger, J. B. (1997). A modified model of college student persistence: Exploring the relationship between Astin's theory of involvement and Tinto's theory of student departure. *Journal of College Student Development,* 38, 387–400.

Mortenson, G. C. (1988). "But It's Not in My Job Description": The Varied Roles of College Teachers. *Music Educators Journal, 74*(9), 26-30.

Noel, L., & Levitz, R., & Saluri, D. (Eds.) (1985).*Increasing student retention: New challenges and potential.* San Francisco: Jossey-Bass.

Peischl, T.M. (1995). Benchmarking: A process for improvement. Presented at the International Conference on TQM and Academic Libraries. Washington, D.C.

Pike, G. R., &Kuh, G. D. (2005). First- and Second-Generation College Students: A Comparison of Their Engagement and Intellectual Development. *The Journal of Higher Education, 76*(3), 276-300.

Raisman, N. (2010) *Customer Service Factors and the Cost of Attrition.* Administrator's Bookshelf, Columbus, Ohio.

Raymondo, J. (2003). The Effects of an Abbreviated Freshman Year Seminar Program on Student Retention and Student Academic Performance. *Research for Educational Reform, 8*(2), 46.

Reason, R. (2009). Student Variables that Predict Retention: Recent Research and New Developments. *NASPA Journal (National Association of Student Personnel Administrators, Inc.), 46*(3), 482-501.

Rosenberg, L. J., & Czepiel, J. Z. (1983).A marketing approach for customer retention. *The Journal of Consumer Marketing, 1*, 45-51.

Sauer, P., & O'Donnell, J. (2006).The Impact of New Major Offerings on Student Retention. *Journal of Marketing for Higher Education, 16*(2), 135-155.

Schaller, M.A. (2005). Wandering and Wonderings: Traversing the Uneven Terrain of the Second College Year. *About Campus.* July-August, 17-24.

Schartman, L. and Rhee, B-S.(2000). Proceedings from the 40th meeting of the Association for Institutional Research. *Linking Student Retention Model with Institutional Planning: The Benefits and Limitations of a Student Matrix Model.* Cincinnati, OH.

Schertzer, C., & Schertzer, S. (2004). Student Satisfaction and Retention: A Conceptual Model. *Journal of Marketing for Higher Education, 14*(1), 79-91.

Small Catholic University. (2007-2010). [Data Sets and Website]. Retrieved December 15, 2010.

Supiano, B. (2011). 2 'Swing Deans' at Bates Switch Jobs Annually, for Students' Sake. *The Chronicle for Higher Education*. Retrieved January 18, 2011 from http://chronicle.com/article/%E2%80%A6/125778/

Taylor, R. (2005). Creating a connection: tackling student attrition through curriculum development. *Journal of Further & Higher Education, 29*(4), 367-374.

Tierney, W., Venegas, K., & De La Rosa, M.L. (Eds.) (2006, August). Financial Aid and Access to College: The Public Policy Challenge. American Behavioral Scientist 49(12).

Tinto, V. (1975). Dropout from higher education: A theoretical synthesis of recent research. *Review of Educational Research, 45*(1), 89-125.

Tinto, V. (1987).Proceedings from the Fall Conference of the Maryland College Personnel Association. *The Principles of Effective Retention.* Largo, MD.

Tinto, V. (1993). Leaving college: Rethinking the causes and cures of student attrition (2nded.). Chicago: University of Chicago Press.

U.S. Census Bureau.(2011). [Data sets]. Available at http://factfinder2.census.gov/main.html

U.S. Department of Education. (2001). *Bridging the Gap: Academic Preparation and Postsecondary Success of First-Generation Students*. Washington, D.C.: Warburton, E.C, Bugarin, R., and Nunez, A-M.

Venezia, A., Kirst, M., & A. Antonio (2005).Betraying the College Dream: How Disconnected K-12 and Postsecondary Education Systems Undermine Student Aspirations, Stanford University Bridge Project Policy Brief.

Watson, G., Johnson, G., & Austin, H. (2004).Exploring relatedness to field of study as an indicator of student retention. *Higher Education Research & Development, 23*(1), 57-72.

Whitt, E.J., Kinzie, J., Schuh, J.H. and Kuh, G.D. (2008).Assessing Conditions to Enhance Student Success. *About Campus*. July-August, 9-18.

Terenzini, P. T., & Springer, L. (1996). First-generation college students: Characteristics, experiences, and cognitive development. *Research in Higher Education, 37*(1), 1.

Tierney, W. G., & Jun, A. (2001). A University Helps Prepare Low Income Youths for College: Tracking School Success. *The Journal of Higher Education, 72*(2), 205-225.

Trotter, E., & Roberts, C. (2006).Enhancing the early student experience. *Higher Education Research & Development*, *25*(4), 371-386.

Warburton, E. C., Bugarin, R., & Nunez, A. (2001).*Bridging the gap: Academic preparation and postsecondary success of first-generation students. (NCES Statistical Analysis Report 2001-153).*

Wilcox, P., Winn, S., & Fyvie-Gauld, M. (2005). 'It was nothing to do with the university, it was just the people': the role of social support in the first-year experience of higher education. *Studies in Higher Education*, *30*(6), 707-722.