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A Comparison of Student Retention and First Year Programs Among Liberal Arts Colleges in the Mountain South

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INTRODUCTION

Institutional administrators in higher education struggle with student attrition and work to develop programs and support mechanisms to boost retention (Derby & Smith, 2004; Jacobs & Archie, 2008; Tinto, 1993). Half of all students who do not persist in college drop out by the end of the first year and do not return (Tinto, 2002). This has led to increased efforts by colleges and universities to develop, refine, and sustain first year student programs and services (McPherson, 2007). The most important factors in increasing student retention are interaction with other members of the campus community, including faculty, staff, and peers, as well as successful student integration into the social and academic fabric of the campus (Asstin, 1993; Tinto, 2002).

First year students, like all students at a university, comprise a diverse mixture of personal traits, backgrounds, experiences, and assorted learning styles. Each of these unique student characteristics can either enhance or inhibit successful integration to the campus community (Choy, 2001; Pascarella & Terenzini, 1983). Thus, academic and social integration are the most important factors in predicting successful incorporation with the institution and persistence from the first year to the second (Cabrera, Nora, & Castaneda, 1993; Ishitani, 2003).

Institutions have developed and refined comprehensive support programs aimed at encouraging and supporting academic and social excellence to assist students in this navigation (Nava, 2010). These programs are commonly referred to as first year programs.

Historically, first year programs coalesced around the common theme of college adjustment in the freshman year, including special seminar courses (Brown, 1981).

BACKGROUND OF THE STUDY

First year programs are defined as institutional efforts aimed at successfully integrating new students into the academic and social fabric of an institution, as well as, efforts aimed at reducing attrition through positive and plentiful interaction (Astin, 1993; Tinto, 2002). Institutions are not required to offer first year programs, yet many find them to be important to student success and retention. The ultimate goal of first year programs is to promote and enhance student success.

STATEMENT OF THE PROBLEM

The purpose of this study is to evaluate the impact of various first year programs on student retention. The study will examine the following first year programs: Summer Bridge Programs, Pre-Term Orientation; Outdoor Adventure Orientation, Targeted Seminars; Learning Communities; Early Warning/Early Alert Systems; Service Learning; Undergraduate Research; and Assessment. The presence or absence of these first year programs were compared to the retention rate of first year students at several liberal arts colleges in the Mountain South, a region in the southern Appalachian Mountains of the United States.

RESEARCH QUESTIONS

Nine first year program components and the retention rates for first year students at six liberal arts colleges in the Mountain South were the variables examined in the study. Retention rates were determined using fall-to-fall enrollment information. The study addressed the following research questions:
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RQ1: Is there a significant difference in the retention rates of institutions that have Summer Bridge Programs and the retention rates of institutions that do not have Summer Bridge Programs?

RQ2: Is there a significant difference in retention rates of institutions that have Pre-Term Orientation and the retention rates of institutions that do not have Pre-Term Orientation?

RQ3: Is there a significant difference in retention rates of institutions that have Outdoor Adventure Orientation and the retention rates of institutions that do not have Outdoor Adventure Orientation?

RQ4: Is there a significant difference in retention rates of institutions that have Targeted Seminars and the retention rates of institutions that do not have Targeted Seminars?

RQ5: Is there a significant difference in retention rates of institutions that have Learning Communities and the retention rates of institutions that do not have Learning Communities?

RQ6: Is there a significant difference in retention rates of institutions that have Early Warning/Early Alert Systems and the retention rates of institutions that do not have Early Warning/Early Alert Systems?

RQ7: Is there a significant difference in retention rates of institutions that have Undergraduate Research and the retention rates of institutions that do not have Undergraduate Research?

RQ8: Is there a significant difference in retention rates of institutions that have Summer Bridge Programs and the retention rates of institutions that do not have Summer Bridge Programs?

RQ9: Is there a significant difference in retention rates of institutions that have Assessment of the First Year Program and the retention rates of institutions that do not have Assessment of the First Year Program?

REVIEW OF THE LITERATURE

The examination of first year programs and components is a relatively young field of study in the higher education literature with the inaugural national survey on the first year seminar conducted in 1991 (Fidler & Fidler, 1991). Fidler (1989) was an early researcher at the forefront of the field of student retention efforts. He examined orientation and the first year experience, called targeted seminars, enhanced learning and promoted student retention. Research indicated that participation in a freshman seminar course was linked to an increase in student retention to the sophomore year (Fidler, 1998). These findings were applicable to a school by school comparison and in a closer examination of a seminar course offered at a large land grant institution (Fidler & Shanley, 1993).

A little over a decade later, Beeghly (2003) examined demographic and academic factors at a mid-size, public, four-year institution in southeast Florida, including the type of orientation program the student attended, that might be used as predictors of first year retention. Little concrete data was determined to be linked to persistent students, yet two major factors were linked to those who left the institution: students were enrolled in a lower number of credit hours than persisters and departing students accumulated greater student loan debt than persisters.

Fulcomer (2003) examined a cohort of students at a small, private college to determine predictors that affect retention of first and second year students. Major findings of the study included the importance of utilizing student information such as number of schools the student applied to, whether the student would be playing varsity athletics, and continually reviewing and assessing the program.

The most effective orientation programs are those aimed at increasing retention, based on both student and university needs and interests, delivered in an appropriate format, and able to target specific student populations. Lorenzetti (2002) suggested guidelines for creating an online orientation program for new online students. Recommendations included breaking the information into manageable sections, formatting content as if it is an online course to grow familiarity with the format, discussing the similarities and differences between classroom and online academicians, promoting awareness of campus resources, and continually reviewing and assessing the program.

Targeted Seminars

The freshman seminar began taking on many different characteristics and was adapted to meet the individual needs of the host institution. Fidler (1991) found the most common seminar types to be those centered on the topic of transition issues or more of an orientation to university life model, or topical seminars based on one academic area of study, professional skill building, or study skills development.

Some universities require enrollment in a first year seminar while others simply suggest, recommend, or encourage enrollment. Some seminars are for credit, others are pass/fail, and others are electives. In some cases, students may be required to take such a program as they progress through their education. Some programs are voluntary. Malik (2011) found that students participating in a voluntary first year seminar were more likely to be successfully integrated into the social fabric of the campus. The most effective programs were those that led to student persistence and retention. The most effective programs were those that led to student persistence and retention.

Other aspects of the first year experience that influence a student’s success include those activities that occur prior to enrollment and the first day of classes, namely orientation activities. Pre and post evaluations of first year students participating in orientation activities indicated that the students had more realistic ideas about their academic, personal, and social life would be like while at college (Kraillman, 1997). In general, the orientation experience helped students better gauge and adjust to more reasonable expectations.

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Learning Communities

As the freshman seminar transitioned to a more holistic and encompassing approach to become a freshman program or first year experience, it is easy to understand why one of the first substantial efforts beyond the seminar course began in the area of housing and residence life. Likewise, the jump from residence life programming and outreach activities to more concisely residence hall efforts like the Living Learning Community (LLC) was not a major leap but more of a slight re-alignment. Kahrig (2005) evaluated the residential living communities at Ohio University. The most significant outcomes of the study were significant, positive effects between peer mentoring and engagement, academic engagement outside the classroom, and the level of student satisfaction in connection to the retention of first year students. Uppcraft (1995) collected stories of challenges and success related to the advising of first year students. The results indicated a greater awareness of student development theories and ideologies on transition. The role of technology and the need for technology and faculty for successes was explored, as was the idea of linking courses and other university constituencies in a unified response targeted to a particular student's needs. This communication between offices helps to break down any silos on the campus and increase communication and the sharing of academic performance, absences, extracurricular activities, social or judicial concerns, and financial, personal, family, or health issues impacting the student and their academic performance. By looking at the big picture, the institution can work with the student to look at options and determine a plan to help the student through whatever issue(s) are impacting their life (Wasley, 2007).

Service Learning

After decades of what he saw as the crumbling fragility of higher education, Greenleaf (1977) developed a new concept of service and leadership. The idea is built on the notion that leadership is a two-way street. Leaders can grow and develop by serving and providing opportunities to others and put other people's needs before their own. The servant grows and develops knowledge and skills and inherently becomes a leader. A leader with a servant's heart, who puts the needs of others first at the forefront, can move in the direction of being served become better people also intent on serving others (Greenleaf, 1977).

A growing emphasis in higher education is linking a service learning component with the first year seminar course. The study's focus was on how the aspects of Tinto's theory impacted student participation and persistence in the first year experience seminar course. The study looked at just the seminar but it was linked to other courses, related to any specific major, and what the size of the class was. A qualitative study of purposive sampling was used to select the colleges in which the study was conducted, and a quantitative study of purposive sampling was used to select the colleges included in this study. Non-random sampling is appropriately educational studies that use colleges or programs as the unit of analysis. The sampling frame used for the study was the college database of The National Center for Education Statistics (NCES, 2013). The following criteria

Some institutions incorporate service learning components into their first year seminar, others simply promote opportunities for student involvement, and still others have developed first year student courses centered on the topic of and active participation in service learning. A service learning course tends to integrate the social and academic experience of the student, build self-confidence, and provide the students the opportunity to see those being served become better people and have broadened traditional first year experience programs to encompass an array of programmatic aspects (Spanier, 2009). Through participation in research opportunities during the first year, students are more likely to earn higher grades and be retained. The students are also more likely to confirm their choice of major (Marcus, 2010).

Undergraduate Research

Students participating in undergraduate research have overwhelmingly indicated it was a positive experience from which they gained personal experience and professional understanding (Neymour, 2004). Various models for successful research have included partnering undergraduates with faculty members or graduate student mentors. One such program at the University of Kentucky provided a second year undergraduate experience with graduate students. These partnerships have produced an increase in the amount of research, the number of publications, and served to successfully facilitate a large number of undergraduates into the scientific field (Hutchinson, 2004).

Undergraduate research has also been used as a tool to target various at risk student populations. Conditionally admitted students at one university conducted research alongside a faculty mentor. The study was tied to a living and learning community so that participants lived and worked with peers involved in research projects as well. Students involved with the program showed improvement in both academic records and improved socialization, as well as higher rates of retention. The program's success was predicated on the fact students were able to visualize themselves as scholars and researchers (Ward, 2000).

The role of mentoring seems to play a huge role in the success of undergraduate research programs. The mentoring relationship helps students confirm their interest in a chosen major or career path and can generate enthusiasm in their chosen path. Faculty can achieve these results through research projects alone, but similar results can be achieved by incorporating research initiatives into the classroom (Karukstis, 2007). Undergraduate research also serves to add both a real and perceived value to the student's educational experience. Colleges and universities can utilize research programs as a marketing and recruiting tool for potential students. Research programs raise the profile of the department or major and aid in retention (Randall, 2011).

Assessment

Establishing guidelines for assessing the first year experience is important (Gardner, J.N., 1986, 1990). Assessment should not only examine the seminar or other individual component, but should examine the role of the faculty member as both a facilitator and mentor (Gardner, J.N., 1981). The first year experience offers opportunities for increasing the effectiveness of instruction and of learning but must be evaluated and assessed so that best practices are shared and replicated (Gardner, J.N., 1986).

Tinto's (1993) theory of student withdrawal was used by the University of Northern Colorado to determine the effectiveness of the university's first year experience program. The study's focus was on how the aspects of Tinto's theory impacted student participation and persistence in the first year experience seminar course. The study looked at just the seminar but if it was linked to other courses, related to any specific major, and what the size of the class was. A qualitative study of purposive sampling was used to select the colleges in which the study was conducted, and a quantitative study of purposive sampling was used to select the colleges included in this study. Non-random sampling is appropriately educational studies that use colleges or programs as the unit of analysis. The sampling frame used for the study was the college database of The National Center for Education Statistics (NCES, 2013). The following criteria

Early alert systems can target specific predictors of success such as class attendance. A study conducted at Florida A&M (Hudson, 2005/2006) examined the effectiveness of education based on absenteeism. Slightly more than 48 percent of the students submitted to the early alert system reported for excessive absences during the first six weeks of the semester went on to pass the course. Another 15 percent of the students dropped in the first semester of belonging orientation to the institution, a by-product of which is increased persistence (Hutchinson, 2010).

Early alert systems have the biggest impact on student grades and retention. Students involved with the program had better academic performance and increased communication and the sharing of academic performance, absences, extracurricular activities, social or judicial concerns, and financial, personal, family, or health issues impacting the student and their academic performance. By looking at the big picture, the institution can work with the student to look at options and determine a plan to help the student through whatever issue(s) are impacting their life (Wasley, 2007).

Successful intervention during the first year of college can have a growing effect on student grades and retention (Pan, 2008). Along with improving classroom engagement, expanding tutoring services and other academic resources, assessing and reporting, the early alert systems are increasingly becoming a part of a plan to retain and graduate students (Powell, 2003).
were used to generate the sample. (a) four-year, liberal arts colleges, (b) located within a 250 mile radius of both the National Resource Center for The First-Year Experience and Students in Transition located in Columbus, South Carolina, and the John N. Gardner Institute for Excellence in Undergraduate Education located in Brevard, North Carolina, (c) located within the southern Appalachian Regional Commission as the South Central subregion encompassing northeast Tennessee, southwest Virginia, and eastern North Carolina (ARC, 2012), (d) with enrollment, retention, and demographic data from fall 2010 to fall 2011 listed on the database of The National Center for Education Statistics (NCES, 2013), and (e) with identified components of a first-year program.

Using a geographic cluster sampling strategy, two institutions from each state within the Appalachian Regional Commission’s classification of the South Central subregion and meeting the criteria were selected. Limitations for cluster sampling are naturally occurring variation in characteristics between samples such as political and cultural differences (Ray, 1983). Although the six colleges identified for this study are within three separate regions, regionally the area shares many cultural and social similarities as denoted by the Appalachian Regional Commission in their classification of this area as the South Central subregion (ARC, 2012). The cluster sample area offers both a small-scale version of a larger population while maintaining regional similarities; being simultaneously and internally heterogeneous and externally homogeneous (Zelin & Stubbs, 2005). Advantages to cluster sampling are the ability to reduce confounding through isolation, an increased efficiency in generating the sample, and the ability to target naturally occurring clusters within in the population (Toddle & Yu, 2007). Two colleges each from Tennessee, North Carolina, and Virginia that met the criteria were selected: Emory and Henry College, Mars Hill College, Milligan College, Tusculum College, University of North Carolina Asheville, and the University of North Carolina at Asheville. These six colleges were selected as the research arm of the United States Department of Education, North Carolina, (ARC, 2012), with enrollment, retention, and demographic data from fall 2010 to fall 2011 listed on the database of The National Center for Education Statistics (NCES, 2013), and (e) with identified components of a first-year program.

In addition to the demographic and retention data collected from NCES, an instrument was developed by the researcher to identify the most common aspects of first-year programs based on research and the literature review (see Appendix A). Upon collection the data were transmitted to the Statistical Package for Social Sciences (SPSS), version 15.0.

Data Analysis

The data were analyzed using appropriate statistical techniques for the hypotheses under consideration. The criterion variable was retention, which was defined as continued enrollment for first-year students from entry in their first fall semester through to continued enrollment in the following academic year. A preliminary data analysis to ascertain descriptive statistics was conducted. In order to determine if there was an association between each variable and fall-to-fall retention, independent samples t-tests were conducted.

RESULTS

The purpose of this study was to investigate if any associations existed between the absence or presence of nine components of first-year programs and the retention rate of new students in an effort to provide information to those working with retention and persistence initiatives at institutions of higher education.

Institutional Demographic Overview

Demographics for each of the 6 colleges are listed alphabetically below and include private/public affiliation, accreditation, costs, and enrollment information:

Emory and Henry College

Emory and Henry College is a private, coeducational liberal arts college located in a rural setting in Mars Hill, North Carolina. Founded in 1866 and is regionally accredited by the Cooperative Baptist Fellowship of North Carolina and provides some scholarship through the Baptist State Convention of North Carolina. The college was founded in 1856 and is regionally accredited by the Southern Association of Colleges and Schools Commission on Colleges (SACS COCC). In 2011 there were 1,281 undergraduate students. Federal grants were received by 33% of the student body and federal student loans by 7% to be applied to the average cost of $18,807. In-state students comprise 64% of the student body, out-of-state students make up 34%, and international students 2%. Women comprise 59% of the enrollment and men 41%. Full-time students encompass 92% and part-time students 8% of the student body. Based on self-reports, the college's student body is made up of 2% Asian American/Asian, 4% Hispanic/Latinx, 71% White, 3% unknown, and 2% Non-Resident Alien. The retention rate for first-time, full-time students from fall 2010 to fall 2011 was 66% (NCES, 2013).

Milligan College

Milligan College is a private, coeducational, liberal arts college located in a rural setting in Milligan, Tennessee. The college was founded in 1866 and is regionally accredited by the Southern Association of Colleges and Schools Commission on Colleges (SACS COCC). There are 3,814 undergraduate students. Federal grants were received by 33% of the student body and federal student loans by 40% to be applied to the average cost of $39,131. In-state students comprise 84% of the student body, out-of-state students make up 16% and international students comprise 1%. Women make 56% of the enrollment and men 44%. Full-time students encompass 82% and part-time students 18% of the student body. Based on self-reports, the college's student body is made up of 1% Asian, 3% Black or African American, 4% Hispanic/Latinx, 85% White, 2% Multiracial, and 2% Non-Resident Alien. The retention rate for first-time, full-time students from fall 2010 to fall 2011 was 80% (NCES, 2013.).
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Table 1: Program Presence on Absence by Institution

<table>
<thead>
<tr>
<th>Program</th>
<th>Emory &amp; Henry</th>
<th>Mars Hill</th>
<th>Milligan</th>
<th>Tusculum</th>
<th>UNC Asheville</th>
<th>UVA-Wise</th>
</tr>
</thead>
<tbody>
<tr>
<td>Present</td>
<td>Present</td>
<td>Present</td>
<td>Present</td>
<td>Present</td>
<td>Present</td>
<td>Present</td>
</tr>
<tr>
<td>Absent</td>
<td>Present</td>
<td>Present</td>
<td>Present</td>
<td>Present</td>
<td>Absent</td>
<td>Absent</td>
</tr>
</tbody>
</table>

Table 2: Institutional Enrollment and Retention Analysis

<table>
<thead>
<tr>
<th>School</th>
<th>Enrolled Fall 2010</th>
<th>Received Fall 2011</th>
<th>Retention Rate</th>
<th>Number of Students</th>
<th>Program Participation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emory &amp; Henry</td>
<td>248</td>
<td>100</td>
<td>75%</td>
<td>4</td>
<td>Present</td>
</tr>
<tr>
<td>Mars Hill</td>
<td>273</td>
<td>164</td>
<td>60%</td>
<td>5</td>
<td>Present</td>
</tr>
<tr>
<td>Milligan</td>
<td>176</td>
<td>141</td>
<td>80%</td>
<td>5</td>
<td>Present</td>
</tr>
<tr>
<td>Tusculum</td>
<td>354</td>
<td>208</td>
<td>59%</td>
<td>8</td>
<td>Present</td>
</tr>
<tr>
<td>UNC Asheville</td>
<td>593</td>
<td>473</td>
<td>80%</td>
<td>8</td>
<td>Present</td>
</tr>
<tr>
<td>UVA-Wise</td>
<td>393</td>
<td>249</td>
<td>62%</td>
<td>6</td>
<td>Present</td>
</tr>
</tbody>
</table>

Table 3: Retention Rate Analysis Comparing Summer Bridge Program Presence and Absence

<table>
<thead>
<tr>
<th>Summer Bridge Program</th>
<th>N</th>
<th>Mean Retention</th>
<th>Standard Deviation</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Present</td>
<td>3</td>
<td>70.67%</td>
<td>10.693</td>
<td>59% - 80%</td>
</tr>
<tr>
<td>Absent</td>
<td>3</td>
<td>67.33%</td>
<td>11.815</td>
<td>60% - 80%</td>
</tr>
</tbody>
</table>

Table 4: Pre-Term Orientation Presence

<table>
<thead>
<tr>
<th>Pre-Term Orientation</th>
<th>N</th>
<th>Mean Retention</th>
<th>Standard Deviation</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Present</td>
<td>6</td>
<td>69%</td>
<td>9.879</td>
<td>59% - 80%</td>
</tr>
</tbody>
</table>

Table 5: Retention Rate Analysis Comparing Outdoor Adventure Orientation Presence and Absence

<table>
<thead>
<tr>
<th>Outdoor Adventure Orientation</th>
<th>N</th>
<th>Mean Retention</th>
<th>Standard Deviation</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Present</td>
<td>1</td>
<td>80%</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Absent</td>
<td>5</td>
<td>66.80%</td>
<td>9.257</td>
<td>59% - 80%</td>
</tr>
</tbody>
</table>

Table 6: Retention Rate Analysis Comparing Learning Communities Presence and Absence

<table>
<thead>
<tr>
<th>Targeted Seminar</th>
<th>N</th>
<th>Mean Retention</th>
<th>Standard Deviation</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Present</td>
<td>4</td>
<td>65.25</td>
<td>9.912</td>
<td>59% - 80%</td>
</tr>
<tr>
<td>Absent</td>
<td>2</td>
<td>76.50</td>
<td>4.950</td>
<td>73% - 80%</td>
</tr>
</tbody>
</table>

Table 7: Early Warning/Early Alert Presence

<table>
<thead>
<tr>
<th>Early Warning/Alert</th>
<th>N</th>
<th>Mean Retention</th>
<th>Standard Deviation</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
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<td>9.879</td>
<td>59% - 80%</td>
</tr>
</tbody>
</table>

University of Virginia’s College at Wise

The University of Virginia’s College at Wise is a public, coeducational, liberal arts college located in a rural setting. The college was founded in 1954 as Clinch Valley College of the University of Virginia and is regionally accredited by the Southern Association of Colleges and Schools Commission on Colleges (SACSCOC). There are 2, 867 undergraduate students. Federal grants were received by 51% of the student body and federal student loans by 56% to be applied to the average cost of $12,774. In-state students comprise 96% of the student body and out-of-state students make up 3%. Women comprise 56% of the enrollment and men 44%. Full-time students encompass 73% and part-time students 27% of the student body. Based on students self-reports, the college’s student body is made up of 1% Asian, 5% Black or African American, 2% Hispanic/Latino, 82% White, 4% unknown, and 1% Non-resident alien. The retention rate for first-time, full-time students from Fall 2008 to Fall 2011 was 62% (NCES, 2013). Results from the collection of data regarding institutional programs are provided in Table 1. Institutional enrollment information is reported in Table 3.

Programmatic Variables Analysis

Programmatic variables were researched in order to determine if the retention rates of students varied by institutional programs based on the absence or presence of 9 first year program initiatives. The demographic variables researched were Summer Bridge Programs, Pre-Term Orientation, Outdoor Adventure Orientation, Academic/Transition Seminars, Learning Communities, Early Warning/Academic Alert Systems, Service Learning, Undergraduate Research, and Assessment.

Table 8: Service Learning Presence

<table>
<thead>
<tr>
<th>Service Learning</th>
<th>N</th>
<th>Mean Retention</th>
<th>Standard Deviation</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Present</td>
<td>6</td>
<td>69%</td>
<td>9.879</td>
<td>59% - 80%</td>
</tr>
</tbody>
</table>

An independent-samples t test was conducted to evaluate the null hypothesis that there is no significant relationship in the retention rates of institutions with Summer Bridge Programs and those without such programs. The test was not significant, t(4) = -.376, p = .726. The 95% confidence interval for the differences in the means was -27.941 to 21.275. The difference between means was -3.33. Therefore, the null hypothesis was retained. Table 3 indicates program frequency, associated percentages, standard deviation, and range.

Pre-Term Orientation was a constant and was present at all 6 institutions. The program frequency, associated percentages, standard deviation, and range are reported in Table 4.

An independent-samples t test was conducted to evaluate the null hypothesis that there is no significant relationship in the retention rates of institutions with Outdoor Adventure Orientation and those without such programs. The test was not significant, t(4) = 1.142, p = .317. The 95% confidence interval for the differences in the means was -10.231 to 32.731. The difference between means was 11.250. Therefore, the null hypothesis was retained. Table 6 indicates program frequency, associated percentages, standard deviation, and range.

An independent-samples t test was conducted to evaluate the null hypothesis that there is no significant relationship in the retention rates of institutions with Targeted Seminars and those without such programs. The test was not significant, t(4) = 1.454, p = .220. The 95% confidence interval for the differences in the means was -13.200 to 14.956. The difference between means was -1.302. Therefore, the null hypothesis was retained. Table 7 indicates program frequency, associated percentages, standard deviation, and range.

An independent-samples t test was conducted to evaluate the null hypothesis that there is no significant relationship in the retention rates of institutions with Learning Communities and those without such programs. The test was not significant, t(4) = 1.142, p = .317. The 95% confidence interval for the differences in the means was -17.172 to 41.172. The difference between means was 12.800. Therefore, the null hypothesis was retained. Table 8 indicates program frequency, associated percentages, standard deviation, and range.

An independent-samples t test was conducted to evaluate the null hypothesis that there is no significant relationship in the retention rates of institutions with Early Warning/Early Alert Systems and those without such programs. The test was not significant, t(4) = 1.142, p = .317. The 95% confidence interval for the differences in the means was -41.356 to 14.956. The difference between means was -13.200. Therefore, the null hypothesis was retained. Table 9 indicates program frequency, associated percentages, standard deviation, and range.

Table 9: Programmatic Variable Analysis

<table>
<thead>
<tr>
<th>Program</th>
<th>N</th>
<th>Mean Retention</th>
<th>Standard Deviation</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Present</td>
<td>6</td>
<td>69%</td>
<td>9.879</td>
<td>59% - 80%</td>
</tr>
</tbody>
</table>

Table 10: Programmatic Variable Analysis

<table>
<thead>
<tr>
<th>Program</th>
<th>N</th>
<th>Mean Retention</th>
<th>Standard Deviation</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Present</td>
<td>6</td>
<td>69%</td>
<td>9.879</td>
<td>59% - 80%</td>
</tr>
</tbody>
</table>
interval for the differences in the means was -29.793 to 22.293. The difference between means was 3.758. Therefore, the null hypothesis was retained. Table 10 indicates program frequency, associated percentages, standard deviation, and range.

**Table 10**

<table>
<thead>
<tr>
<th>Undergraduate Research</th>
<th>N</th>
<th>Mean Retention</th>
<th>Standard Deviation</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Present</td>
<td>4</td>
<td>70.25%</td>
<td>11.325</td>
<td>59%-80%</td>
</tr>
<tr>
<td>Absent</td>
<td>2</td>
<td>66.5%</td>
<td>9.192</td>
<td>60%-73%</td>
</tr>
</tbody>
</table>

An independent-samples t-test was conducted to evaluate the null hypothesis that there is no significant relationship in the retention rates of institutions with Assessment of First Year Programs and those without such programs. The test was not significant, f(6) = .408, p = .786. The 95% confidence interval for the differences in the means was -28.126 to 37.726. The difference between means was 4.800. Therefore, the null hypothesis was retained. Table 11 indicates program frequency, associated percentages, standard deviation, and range.

**Table 11**

<table>
<thead>
<tr>
<th>Assessment</th>
<th>N</th>
<th>Mean Retention</th>
<th>Standard Deviation</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Present</td>
<td>5</td>
<td>68.20%</td>
<td>10.826</td>
<td>59%-80%</td>
</tr>
<tr>
<td>Absent</td>
<td>1</td>
<td>73%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**DISCUSSION**

The presence of Summer Bridge Programs at three institutions tends to support research (Stuart, 2010) that colleges are using a variety of earlier and earlier intervention programs. Summer Bridge Programs allow institutions to target at risk students in an attempt to impact their academic success as early as possible in hopes of a positive impact on retention. Ackermann (1990) found that participants in Summer Bridge Programs were retained at a higher rate and were more successful academically. Likewise, Strayhorn (2011) found Summer Bridge Programs had a significant impact on academic grade point average. Professional literature in this area has established a positive association between participating in a Summer Bridge Program and academic performance. Less clear is if Summer Bridge Programs are impactful on first year student retention.

All six institutions in the study indicated that Pre-Term Orientation was present as part of their first year program initiatives. Table 4 reveals that for the six schools 59% with a range of 59% to 80%. The presence of the program at all six schools speaks to the presumptive importance of the program in assisting in the transition of students to college (Disbo, 1995) and facilitating their incorporation into the social fabric of the campus community (Robinson, 1996). The presence of Pre-Term Orientation at all six schools was also indicative of the twenty five plus years in which higher education has had to respond programmatically to combat the issues addressed by the 1989 report from The Carnegie Foundation for the Advancement of Teaching and the American Council on Education (Boyter, 1998). A major impact of Pre-Term Orientation on new students stems from the influence it has on shaping their own personal campus experience (Hodum, 2007) and the student’s ability to apply realistic expectations (Kraall, 1997). Pre-Term Orientation allows extra time for student and staff interaction and the development of personal relationships resulting in increased retention (Swanson, 2006) and the successful completion of more credit hours (Brown, 2008). No matter the format, online or on-ground, or the length of the program, the ultimate aim of Pre-Term Orientation is to increase retention (Lorenzetti, 2002) through the formation of individual connections between student and college personnel. Scaglioni (2003) found that Pre-Term Orientation increased the sense of connection to the institution resulting in increased retention. Lehning (2008) found that orientation participants were retained at a higher rate and had higher grade point averages than non-participants. The literature to date is conclusive that orientation programs have a positive impact. The areas of impact, however, vary by institution and include increased grade point average, retention, and/or number of credit hours successfully completed. Given the variance in impacts, additional research is warranted in this area.

The retention rate for the one school with an Outdoor Adventure Orientation was 80% while the mean retention rate for the five schools without the program was 66.88% with a range of 59% to 80%. The institution with the program had a retention rate 13.25% higher than the retention average of those five schools without the program. An independent-samples t-test indicated that there was a significant association between the retention of students at schools with or without the program. The experiential, hands on learning that occurs in Outdoor Adventure Orientation programs helps participants develop a strong sense of connection to their peers and to the institution (Wolfe, 2011). The small cohort nature of the programs offers great flexibility in addressing the personal interests and needs of each student. The outdoor adventure component appeals to those with a natural affinity for the great outdoors but may not be an enticement to those with other interests. Brown (1998) found that students who elected to participate in an Outdoor Adventure Orientation were retained at a higher rate. The continued growth in the number of programs and participants indicates that institutions are seeing value in outdoor adventure programs (Outdoors, 2013). The exact nature of the program’s value is unclear and future research is necessary.

A review of the literature and the presence of Targeted Seminars at a majority of the schools indicated the prevalence of such programs nationwide. However, the two institutions without such a program averaged a retention rate 11.25% higher than those with the program indicated this. The presence of Targeted Seminars in and of itself is indicative of an automatic increase in the retention of students. Perhaps the inconsistencies in course content and topics that are covered influences the impact on the course has upon retention (Smith, 1992). Targeted Seminar courses linked to other courses and specifically tied to academic disciplines also increased student retention and yielded higher grades (Tinto, 1996). Institutional goals for hosting a Targeted Seminar course can vary greatly including developing connections and relationships between faculty, staff, and students, and undergirding academic success and persistence through skills building (Barefoot and Fidler, 1991). Given the range of variables associated with Targeted Seminars and the incoherent nature of which variables have an association with retention, further research is warranted in this area.

The one school with Learning Communities reported the lowest retention rate of all six institutions. An independent-samples t-test indicated that there was a significant association between the retention of students at schools with or without the program. Conversely, a review of the literature indicated that the presence of Learning Communities promoted academic and social excellence (McBane & Learning program, 2011). All increased tests are small, liberal arts colleges while the research to date has focused on larger universities where the niche of a Learning Community may be more congruent with a small seminar, peer connections, achievement, and retention (Kahriog, 2005). Strengthening faculty and student relationships and mentoring through Learning Communities is an effort to increase academic engagement in and out of the classroom and thereby retention (Ulcrapt, 1995). Engstrom (2008) noted a vicarious byproduct for some students participating in a community was a feeling of disruption due to the overwhelmingly, high degree of social interaction resulting in students not feeling the Learning Communities affected their retention. Pike (2011) found that students with Learning Communities had higher grades but cited the student’s personal interest in the topic and election to participate in the program as a significant indicator of success. Learning Communities are not limited to those linked with academic courses. They may be essential to Learning Communities or themed to an issue or interest rather than an academic course. The number of institutions reporting no linked Learning Communities are too few to indicate their prevalence or who may be exploring or that limited resources or other factors have prohibited their formation. The research to date remains inconclusive and additional research is recommend on the topic and variations.

As indicated by its presence at all six schools, more and more institutions are seeing Early Warning/Early Alert Systems as another tool in the college’s retention plan (Powell, 2003). Early warning systems such as those in place at the institutions in this study provide specific characteristics of concern such as class absences (Hudson, 2005/2006) or may take a more rounded, holistic approach by bringing together all aspects of a student’s career, from faculty, academic advisor, club advisor, financial aid, student health, student life, and residence hall staff (Wasley, 2007). Because of the limited research in this area additional research is recommended.

The review of the literature indicates that direct and applied experiences such as those found in Service Learning affords students the opportunity to put theory into practice and increase learning and skills development (Sheffield, 2005). Less clear is a direct linkage between Service Learning and retention. Mentoring is a direct form of Service Learning (Hamid, 2001) that may be incorporated into a first year program as a way of introducing a seminars and/or service learning. While increased tests are small, mentoring may generate positive results aimed at student retention, combining such programs does not multiply the positive effect.
effect and may in fact diminish both. Stevens (2007) examined this conflict and found those in a seminar course who participated in Service Learning and those who did not saw no significant differences in retention. The present study supports the no significant difference finding. Perhaps the positive sense of connection and community which Service Learning seems to produce does not translate into increased institutional retention but varies depending on where and how the Service Learning piece is incorporated be that in a first year seminar, as another course component, or in a stand-alone course all to itself. The findings are unclear and more research in this area is needed.

Schools with an Undergraduate Research program averaged a retention rate 3.75% higher than those without Undergraduate Research. An independent-samples t test indicated that there was no significant association between the retention of students at schools with or without the program. A review of the literature indicated that Undergraduate Research opportunities during the first year increased student success and retention (Spanier, 2009) as well as yielded higher grades and helped solidify the student’s choice of major (Marcus, 2010). Residual benefits included being able to translate theory and in class learning to practical applications while gaining personal and professional insight into the field of study (Seymour, 1996). Likewise, the university may see residual benefits through increased enrollment and research and the resulting notoriety and raised profile through conferences presentations and journals (Hutchinson, 2004). The higher retention rate established by the study and the preponderance of the literature associated only positive benefits for Undergraduate Research, however further research is recommended to expand the body of available information.

Five of the liberal arts colleges reported the presence of Assessment with a mean retention rate of 68.28% and a range of 59% to 80%. One institution without the program had a retention rate of 73%. The one institution without Assessment therefore indicated a retention rate that was 4.8% higher than the average of those reporting they had the program. An independent-samples t test indicated that there was no significant association between the retention of students at schools with or without the program. Program assistance and continuous improvement is an important part of the institutional accreditation process (SACSCOC, 2013). Assessment provides accountability and documents learning outcomes (CAS, 2013). Instituting a protocol for assessing first year student program attributes is important (Gardner, J.N., 1986, 1990) so that results may be shared and successes replicated (Gardner, J.N., 1980). Assessment results are critical in the decision making process when deciding where to put human and fiscal resources. Assessment is an essential component of first year programs and warrants additional research on programs and attributes.

Implications for Practice
The findings of this study can help guide the decision making process at the six liberal arts colleges concerning resource allocation, best practices, benchmarking, and first year program attributes as they all relate to retention. The implications of the study were that the most common programs are Pre-Term Orientation, Early Warning/Early Alert Systems, and Service Learning programs which were each in place at all six institutions and produced a range of retention rates from 59% to 80%. This finding should be reviewed in conjunction with research indicating that Pre-Term Orientation assists with student integration to the academic and social fabric of the campus (Robinson, 1996) and to develop more realistic expectations for their collegiate experience (Kaulman, 1997). Research on Early Warning/Early Alert Systems indicated that early intervention can provide the most influential hearing on first year students’ grades and retention (Pan, 2008). Likewise, Service Learning created a sense of community caring and support (Hamid, 2001) and social and academic integration (Hutchinson, 2010) yet may not yield a direct association with retention (Stevens, 2007). The findings indicate that colleges operate many different first year programs, each impacting the individual student in a different manner. All of the programs yield positive benefits which may influence student success but may not directly translate into student retention.

CONCLUSION
The focus of this study was six liberal arts colleges in the mountain south area including northeast Tennessee, southwest Virginia, and western North Carolina. The results should not be generalized to a broader population of higher education institutions. Others are encouraged to initiate similar studies aimed at a greater number of liberal arts colleges, at liberal arts colleges in another geographic area, or at other colleges and universities on a larger scale. Studies targeting a larger population of liberal arts colleges may assist in generalizing the results to all liberal arts institutions. No matter the type, scale, or target of the study, further research is merited to advance the study of first year program attributes and associated student retention.

Recommendations for additional research are listed below:
1. Research first year program attributes and the association between the total number of programs and retention rates.
2. Expand the current research model to determine how long each program attribute was present at each institution and the association to retention rates over time.
3. Research individual student participation and combination variations among first year program attributes and the association to retention rates.
4. Develop an expanded model for program attributes taking into account variations within each defined area.

REFERENCES
A Comparison of Student Retention and First Year Programs Among Liberal Arts Colleges in the Mountain South


Lorenzetti, J.P. (2002). Well begun is half done: Is orientation a key to retention? Distance Education Report, 23 (2), 1-4.


A Comparison of Student Retention and First Year Programs Among Liberal Arts Colleges in the Mountain South


Tinto, V. (2002, April 15). Taking student retention seriously: Rethinking the first year of college. A speech presented at the annual meeting of the American Association of Collegiate Registrars and Admissions Officers: Minneapolis, MN.


**Programs Defined**

<table>
<thead>
<tr>
<th>Present</th>
<th>Absent</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Summer Bridge Programs</strong>&lt;br&gt;Programs providing an important head start to college by offering an opportunity for new students to become comfortable within the new environment through intensive academic instruction typically lasting four to five weeks and usually encompassing remediation as needed, low cost, a residential option, and peer mentoring resulting in increased confidence and performance (Adams, 2011).</td>
<td></td>
</tr>
<tr>
<td><strong>Pre-Term Orientation</strong>&lt;br&gt;A program geared at helping new students, and sometimes their parents and family members, adjust to college life through interaction with faculty, staff, and students during programming, activities, tours, and advising (Disbro, 1995).</td>
<td></td>
</tr>
<tr>
<td><strong>Outdoor Adventure Orientation</strong>&lt;br&gt;A type of college orientation program that brings together small groups, typically 15 or less, first-year students and uses adventure experiences happening out of doors in a wilderness setting with at least one overnight component (Bell, Holmes, Marion &amp; Williams, 2010).</td>
<td></td>
</tr>
<tr>
<td><strong>Academic/Transition Seminars</strong>&lt;br&gt;An academic course that aims to enhance the academic and social integration of first-year students by bringing together a variety of new student specific topics, essential skills for college success, and selected processes (Jessup-Anger, 2011; Hunter &amp; Linder, 2005).</td>
<td></td>
</tr>
<tr>
<td><strong>Learning Communities</strong>&lt;br&gt;Learning communities integrate course content/curriculum by linking one or more academic courses with a student cohort in order to promote learning and foster personal development in a supportive environment enhanced by peer interaction (Mahoney &amp; Schamber, 2011).</td>
<td></td>
</tr>
<tr>
<td><strong>Early Warning/Academic Alert Systems</strong>&lt;br&gt;A flagging system to alert a student and the faculty/academic advisor(s) on scholastic performance or classroom issues, early enough in the timeframe of the class so that appropriate referrals can be made to intervene and assist the student as needed (Lorenzetti, 2009).</td>
<td></td>
</tr>
<tr>
<td><strong>Service Learning</strong>&lt;br&gt;A service-learning opportunity allows students to apply classroom skills and learning to a community problem in a hands on manner resulting in increased knowledge, deeper understanding, and skill refinement through the solving of the problem and through interaction with a diverse group of stakeholders (Sheffield, 2005).</td>
<td></td>
</tr>
<tr>
<td><strong>Undergraduate Research</strong>&lt;br&gt;Defined as an investigation by an undergraduate that makes an original intellectual or creative contribution to a discipline. Regardless of the nature of individual undergraduate research programs, such research gives students an insight into the scientific enterprise that is unrivaled by any other part of the curriculum. It is important that undergraduate research is fun and engaging and that it endows students with commitment and proprietorship of their own projects (Halstead, 1997, pg. 1390).”</td>
<td></td>
</tr>
<tr>
<td><strong>Assessment (of new student/first year programs)</strong>&lt;br&gt;“Programs and services must have a clearly articulated assessment plan to document achievement of stated goals and learning outcomes, demonstrate accountability, provide evidence of improvement, and describe resulting changes in programs and services (CAS, 2013).”</td>
<td></td>
</tr>
</tbody>
</table>