

A COMPARISON OF STUDENT RETENTION AND FIRST YEAR PROGRAMS AMONG LIBERAL ARTS COLLEGES IN THE MOUNTAIN SOUTH

Dr. Jeff S. Howard

Associate Dean of Students
East Tennessee State University
Johnson City, Tennessee

Dr. Bethany H. Flora

Assistant Professor
East Tennessee State University
Johnson City, Tennessee

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 are (Astin, 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 freshmen year. Professionals working with new students became more intentional about sharing best practices and strengthening the national conversation on the topic of structured orientation programs and the academic ex-

perience 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:

- 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 Service Learning and the retention rates of institutions that do not have Service Learning?
- RQ8: 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?
- 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?

SIGNIFICANCE OF THE STUDY

Performance funding mechanisms have been implemented to hold institutions more accountable and advance a focus on student outcomes thereby producing a more entrepreneurial spirit within higher education through increasing effectiveness and efficiency (Dougherty, Natow, Bork, Jones & Vega, 2013). By gaining insights into which first year programs are most effective, institutions may adjust existing programmatic efforts to positively influence student success and retention.

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 and examined one aspect of 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, 1990). 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, Bebergal (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 persistors and departing students accumulated greater student loan debt than persistors.

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, if the student would have a work study position, and the student's level of satisfaction with their experience at the school.

The comparison of varying student attributes over a period of time has been beneficial for institutional administrators who wish to establish a model to predict student success. A longitudinal study conducted at a Northeast Tennessee community college established several factors the institution could use to predict the successful fall-to-fall semester retention of first time freshmen (French, 2007). The factors leading to retention were: semester grade point average; remedial course enrollment; credit hours completed; applying for admission more than 61 days in advance of the first day of classes. The factors leading to attrition, or the unsuccessful retention of students, were: receiving only Pell grants; applied science degree candidate; and GED completion.

O'Rear (2004) determined what influences academic achievement specific to the success of new students at 43 Baptist colleges in the United States. This unique study

concentrated on the retention efforts of many institutions working to improve their rates, instead of looking at individual institutions. These landmark studies demonstrate a continued and concerted effort to understand the factors that lead to student persistence and retention in effort to predict, or determine earlier on, the factors that lead to student success.

Stuart (2010) stated that colleges are increasingly using early detection mechanisms to target students with academic weaknesses and limited financial means. These pre-college programs, also called bridge programs, are geared toward providing students with additional support and resources to undergird success and reduce risk factors.

Bridge Programs

Bridge programs grew out of the idea of strengthening the support and resources available for freshman. Ackermann (1990) touted the benefits of such a program for students of underrepresented populations and from low-income families. Summer Bridge Programs (SBPs) have been one retention effort aimed at positively influencing the academic preparation and skills of entering freshmen prior to the first day of classes. Usually residential in nature, SBPs may target new students based on various categories (race or ethnicity, socio-economic status, test scores, GPA, etc.). Students may participate in seminars and preparatory classes, complete learning support requirements, or work towards the completion of for credit courses. Students will complete their first foray into college life in a unique, resource-rich environment of challenge and support designed to facilitate student success by for a positive start.

Strayhorn (2011) examined the impact of a SBP's on one cohort of students in four specific areas: academic self-efficacy, sense of belonging, academic skills, and social skills. Results indicated that the SBP had the most significant impact in the academic realm with cohort members achieving a GPA that averaged 30 percent higher than peers who did not participate in the program.

Pre-Term Orientation

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 impractical ideas about what their academic, personal, and social life would be like while at college (Krallman, 1997). In general, the orientation experience helped students better gauge and adjust to more reasonable expectations.

Academic advisors and their relationship with first year students play an important role in orientation programs and in student success (Swanson, 2006). Research at one small faith-based liberal arts college demonstrated that having extra time with a professional staff member trained on academic advising and learning about the student's strengths on a personal basis resulted in a higher rate of persistence amongst those students. A study of African American freshmen (Brown, 2008) examined participation in a minority orientation program on the social adjustment and retention rates of the students at the predominantly white university. Students participating in the program were compared with students who did not. Participants were found to be more socially adjusted and to have successfully completed more credit hours than their counterparts who were not participating in 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 difference between classroom and online academics, promoting awareness of campus resources and access, 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. Barefoot and 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 entirely voluntary with no repercussions for not participating. 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. Students' participation in such a program was greatly influenced by the fact the course was not for credit and was voluntary.

Smith (1992) found that students required to participate in either a required course or in academic tutoring self-re-

ported they found the requirement had a positive impact upon their aptitude for learning and upon course grades.

Tinto (1996) advocated for extending the freshman seminar beyond one course and linking a block of classes together creating cohorts of students or learning communities. Tinto argued this change would have little impact on faculty and could be accomplished with only minor changes in scheduling while the impact on the academic experience of first year students could be significant. Examination of these linked courses indicated that students in a freshman seminar tied to at least one course in an academic discipline were retained at a higher rate and had higher grades compared to students who did not participate in such linked courses (Dick, 1998).

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 concerted 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 learning 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.

Upcraft (1995) collected stories of challenges and successes related to the advising of first year students. The results indicated a greater awareness of student development theory and ideologies on transition. The role of technology was continuing to grow and was seen as untapped opportunity to enhance advising and student contact. The role of mentoring by faculty and in training and recognizing faculty for successes was explored, as was the idea of linking advising to other first year initiatives like the Living Learning Community, and programs targeting specific populations such as adult students.

Early Warning/Early Alert Systems

Successful intervention during the first year of college can have the biggest impact on student grades and retention (Pan, 2008). Along with improving classroom engagement, expanding tutoring services and other academic resources, and providing midterm grade reporting, the early alert systems are increasingly becoming a part of a plan to retain and graduate students (Powell, 2003).

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 intervention 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 the courses for which they had been reported for missing. Students were engaged by the process of being contacted and related they were not aware their attendance was being watched so carefully and were pleasantly surprised by the guidance they received.

Part of the success of early alert warning systems is that they can take a holistic approach to student success and connect faculty, academic counselors, residence life, student life, student health, the counseling center, 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 servant-leaders are first and foremost of service 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 and whose aim is to see those 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 but some research has shown the strength of each are not necessarily multiplied when the two are combined. Stevens (2007) compared students in the same first year seminar course who participated in service learning versus those who did not. What service learning and the first year seminar had individually yielded separately in terms of engagement, retention, academic achievement, and satisfaction was not demonstrated when the two were merged. No significant differences between the two student populations were reported.

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 strengthen the student's sense of belonging or connection to the institution, a by-product of which is increased persistence (Hutchinson, 2010).

Undergraduate Research

An increase in student success and retention rates indicates that colleges and universities have worked hard to engage students in the learning process, increase the number of students participating in undergraduate research, 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).

Students participating in undergraduate research have overwhelmingly indicated it was a positive experience from which they gained personal experience and professional understanding (Seymour, 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 pairs first and second year undergraduate students with graduate students. These partnerships have produced an increase in the amount of research, the number of resulting publications, and served to successfully facilitate a large number of undergraduates into the research 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 program 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 had better 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, 2008).

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 enthu-

siasm 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 recruitment tool for both students and faculty members. 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, especially the seminar, 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., 1980).

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 not just the seminar but if it was linked to other courses, related to any specific major, and what the size of the class was. Analysis indicated the program was effective in retaining students through to the spring semester but less effective in yielding an increase in retention numbers from fall to fall. The results also indicated that linking courses with a major or specific course of study strengthened retention. Recommendations were made to strengthen commitment through a higher level of student engagement with the institution, activities, and faculty and staff, as well as, extending the seminar into a freshman year long program (Adams, 2008).

Methodology

A quantitative study was conducted to determine connections between program attributes with fall-to-fall retention rates of first year students at six liberal arts colleges in the Mountain South. A non-random sampling technique of purposive sampling was used to select the colleges included in this study. Non-random sampling is appropriate for 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

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 Columbia, South Carolina, and the John N. Gardner Institute for Excellence in Undergraduate Education located in Brevard, North Carolina, (c) located within the southern Appalachian Mountains identified by the Appalachian Regional Commission as the South Central subregion encompassing northeast Tennessee, southwest Virginia, and western 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 criterion were selected. Limitations for cluster sampling are naturally occurring variance in characteristics between samples such as political and cultural differences (Ray, 1983). Although the six colleges identified for this study are within three separate states, 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 the population (Teddlie & 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 Virginia's College at Wise. Demographic data describing the make-up of the student body including age, gender, and race, as denoted in The National Center for Education Statistics' database were included in the study.

Instrumentation

The data for this study were housed in the database of The National Center for Education Statistics which is a center of the Institute of Education Services (IES, 2012), which is the research arm of the United States Department of Education (DOE, 2012), and collected via instrument from the six colleges. The longevity of the system undergirded validity as the collection of data by NCES is highly

standardized. Utilizing NCES data aids in the reduction of bias as most instances occur during the collection of data (Good & Hardin, 2003).

Data Collection

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 college 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, affiliated with the United Methodist Church and located in rural, Emory, Virginia. The college was founded in 1836 and is regionally accredited by the Southern Association of Colleges and Schools Commission on Colleges (SACSCOC). In 2011 there were 939 undergraduate students. Federal grants were received by 48% of the student body and federal student loans by 73% to be applied to the average cost of \$18,613. In-state students comprise 56% of the student body and out-of-state

students make up 44%. Women comprise 48% of the enrollment and men 52%. Full-time students encompass 96% and part time students 4% of the student body. Based on self-reports, the college's student body is made up of 9% Black or African American, 2% Hispanic/Latino, 82% White, 2% Multiracial, 5% unknown, and 2% Non-Resident Alien. The retention rate for first-time, full-time students from fall 2010 to fall 2011 was 73% (NCES, 2013).

Mars Hill College

Mars Hill College is a private, coeducational, liberal arts college located in a rural setting in Mars Hill, North Carolina. Although founded by those of the Baptist faith, the college has no religious affiliation, although it does partner with 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 (SACSCOC). In 2011 there were 1,281 undergraduate students. Federal grants were received by 53% of the student body and federal student loans by 78% to be applied to the average cost of \$18,807. In-state students comprise 63% of the student body, out-of-state students make up 34%, and international students 3%. Women comprise 50% of the enrollment and men 50%. 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% American Indian or Native Alaskan, 1% Asian, 17% Black or African American, 3% Hispanic/Latino, 71% White, 3% unknown, and 4% Non-resident alien. The retention rate for first-time, full-time students from fall 2010 to fall 2011 was 60% (NCES, 2013).

Milligan College

Milligan College is a private, coeducational, liberal arts college maintaining an active relationship with the Christian Churches/Churches of Christ and located in Milligan College, Tennessee. The college was founded in 1866 and is regionally accredited by the Southern Association of Colleges and Schools Commission on Colleges (SACSCOC). In 2011 there are 984 undergraduate students. Federal grants were received by 34% of the student body and federal student loans by 60% to be applied to the average cost of \$15,840. In-state students comprise 58% of the student body and out-of-state students make up 42%. Women comprise 60% of the enrollment and men 40%. 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 1% Asian, 5% Black or African

American, 3% Hispanic/Latino, 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).

Tusculum College

Tusculum College is a private, coeducational, liberal arts college located in Greeneville, Tennessee. The college was founded in 1794 by Presbyterians, maintains a relationship with the Presbyterian Church, and is regionally accredited by the Southern Association of Colleges and Schools Commission on Colleges (SACSCOC). There are 1,914 undergraduate students. Federal grants were received by 74% of the student body and federal student loans by 88% to be applied to the average cost of \$15,689. In-state students comprise 64% of the student body, out-of-state students make up 34%, and international students 2%. Women comprise 58% of the enrollment and men 42%. Full-time students encompass 96% and part time students 4% of the student body. Based on self-reports, the college's student body is made up of 1% Asian, 13% Black or African American, 2% Hispanic/Latino, 81% White, 2% unknown, and 2% Non-Resident Alien. The retention rate for first-time, full-time students from fall 2010 to fall 2011 was 59% (NCES, 2013).

University of North Carolina at Asheville

The University of North Carolina at Asheville is a public, coeducational, liberal arts college located in an urban setting in Asheville, North Carolina. Founded in 1927 as the Buncombe County Junior College, it joined the University of North Carolina system in 1969. The college is regionally accredited by the Southern Association of Colleges and Schools Commission on Colleges (SACSCOC). There are 3,814 undergraduate students. Federal grants were received by 33% of the student body and federal student loans by 45% to be applied to the average cost of \$9,131. In-state students comprise 84% of the student body, out-of-state students make up 16% and international students comprise 1%. Women comprise 56% of the enrollment and men 44%. Full-time students encompass 82% and part time students 18% of the student body. Based on students self-reports, the college's student body is made up of 1% Asian, 3% Black or African American, 4% Hispanic/Latino, 85% White, 2% multiracial, 3% unknown, and 1% Non-Resident Alien. The retention rate for first-time, full-time students from fall 2010 to fall 2011 was 80% (NCES, 2013).

Program	Emory & Henry	Mars Hill	Milligan	Tusculum	UNC Asheville	UVa-Wise
Summer Bridge Program	Present	Absent	Absent	Present	Present	Absent
Pre Term Orientation	Present	Present	Present	Present	Present	Present
Outdoor Adventure Orientation	Absent	Absent	Absent	Absent	Present	Absent
Targeted Seminar	Absent	Present	Absent	Present	Present	Present
Learning Communities	Absent	Absent	Absent	Present	Absent	Absent
Early Warning/Early Alert	Present	Present	Present	Present	Present	Present
Service Learning	Present	Present	Present	Present	Present	Present
Under-graduate Research	Absent	Absent	Present	Present	Present	Present
Assessment	Absent	Present	Present	Present	Present	Present

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, 067 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 \$10,774. 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, 9% 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 2010 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 institutions 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.

School	Enrolled Fall 2010	Retained Fall 2011	Retention Rate	Number of Programs Offered
Emory & Henry	248	180	73%	4
Mars Hill	273	164	60%	5
Milligan	176	141	80%	5
Tusculum	354	208	59%	8
UNC Asheville	593	473	80%	8
UVa-Wise	399	249	62%	6

Summer Bridge Program	N	Mean Retention	Standard Deviation	Range
Present	3	70.67%	10.693	59% - 80%
Absent	3	67.33%	11.015	60% - 80%

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, $t(4) = -1.302, p = .263$. 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 5 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 -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 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 12.00. Therefore, the null hypothesis was retained. Table 7 indicates program frequency, associated percentages, standard deviation, and range.

Early Warning/Early Alert Systems was a constant and was present at all 6 institutions with results reported in Table 8.

Service Learning was a constant and was present at all 6 institutions. The program frequency, associated percentages, standard deviation, and range are reported in Table 9.

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 Undergraduate Research and those without such programs. The test was not significant, $t(4) = -4.00, p = .710$. The 95% confidence

Pre-Term Orientation	N	Mean Retention	Standard Deviation	Range
Present	6	69%	9.879	59% - 0%

Outdoor Adventure Orientation	N	Mean Retention	Standard Deviation	Range
Present	1	80%	-	-
Absent	5	66.80%	9.257	59%-80%

Targeted Seminar	N	Mean Retention	Standard Deviation	Range
Present	4	65.25	9.912	59% - 80%
Absent	2	76.50	4.950	73% - 80%

Learning Communities	N	Mean Retention	Standard Deviation	Range
Present	1	59%	-	-
Absent	5	71%	9.592	60%-80%

Early Warning/Alert	N	Mean Retention	Standard Deviation	Range
Present	6	69%	9.879	59%-80%

Service Learning	N	Mean Retention	Standard Deviation	Range
Present	6	69%	9.879	59%-80%

interval for the differences in the means was -29.793 to 22.293. The difference between means was -3.750. Therefore, the null hypothesis was retained. Table 10 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 Assessment of First Year Programs and those without such programs. The test was not significant, $t(4) = .405$, $p = .706$. 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.

DISCUSSION

The presence of Summer Bridge Programs at three institutions tends to support research (Stuart, 2010) that colleges are increasingly using 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. The mean retention rate for the six schools was 69% 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 (Disbro, 1995) and facilitating their incorporation into the social fabric of the campus community (Robinson, 1996). The presence of Pre-Term Orientation at all six institutions is 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 (Boyer, 1990). A major impact of Pre-Term Orientation on new students stems from the influence it has on a student's feelings about their own personal campus experience (Hodum, 2007) and the student's ability to apply realistic expectations (Krall-

Undergraduate Research	N	Mean Retention	Standard Deviation	Range
Present	4	70.25%	11.325	59%-80%
Absent	2	66.5%	9.192	60%-73%

Assessment	N	Mean Retention	Standard Deviation	Range
Present	5	68.20%	10.826	59%-80%
Absent	1	73%	-	-

man, 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. Scagnoli (2001) 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 complete. 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 66.80% with a range of 59% to 80%. The institution with the program had a retention rate 13.2% higher than the retention average of those five schools without 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. The presence of an Outdoor Adventure Orientation program at only one school coincides with 2012 figures which show only 185 such programs reported by schools in the United States (Outdoor, 2013). The low percentage of schools offering

Outdoor Adventure Orientation programs could be a result of the expenses related to special equipment, staff training, and the assumption of additional institutional risk and liability related to conducting such programs with small program size, an overnight component, and related travel (Bell, Holmes, Marion & Williams, 2010). 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 see value in Outdoor Adventure Orientation programs (Outdoor, 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 that program's presence in and of itself does not result in 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 (Jessup-Anger, 2011; Hunter & Linder, 2005). Course content can vary greatly from institution to institution as well as between instructors within the same college (Harroun, 2005). Malik (2011) found that student success in targeted seminars was directly impacted by whether the course was for credit and required or was purely a voluntary elective. Required courses produced higher grades (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 inconclusive nature of which variables have an association with retention, further research is necessary.

The one school with Learning Communities reported the lowest retention rate of all six institutions. An independent-samples t test indicated that there was no 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 (Mahoney & Schamber, 2011). All six institutions are small, liberal arts colleges while the research to date has focused on larger universities where the niche of a Learning Community may be much more impactful on building community, peer connections, achievement, and retention (Kahrig, 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 (Upcraft, 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 in a Learning Community 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 residential Living Learning Communities or themed to an issue or interest rather than an academic course. The number of institutions reporting no linked Learning Communities may be indicative that other types of communities are being explored or that limited resources or other factors have prohibited their formation. The research to date remains inconclusive and additional research is recommended on the topic and variations.

As indicated by its presence at all six schools, more and more institutions see Early Warning/Early Alert Systems as another tool in the college's retention plan (Powell, 2003). Early Warning/Early Alert Systems may target 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 offered through 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 programs and increased retention. Peer mentoring is a direct form of Service Learning (Hamid, 2001) that may be incorporated into a first year program or seminar. While both Service Learning and a seminar may generate positive results aimed at student retention, combining such programs does not multiply the positive

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, 2004). 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 68.20% 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 assessment 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 college concerning resource allocation, best practices, benchmarking, and first year program attributes all as they 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 (Krallman, 1997). Research on Early Warning/Early Alert Systems indicated that early intervention can provide the most influential bearing 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.

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APPENDIX A INSTITUTIONAL REPORTING INSTRUMENT		
2010-2011		Programs Defined
Present	Absent	
		<p>Summer Bridge Programs</p> <p>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).</p>
		<p>Pre-Term Orientation</p> <p>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).</p>
		<p>Outdoor Adventure Orientation</p> <p>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 & Williams, 2010).</p>
		<p>Academic/Transition Seminars</p> <p>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 & Linder, 2005).</p>
		<p>Learning Communities</p> <p>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 & Schamber, 2011).</p>
		<p>Early Warning/Academic Alert Systems</p> <p>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).</p>
		<p>Service Learning</p> <p>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).</p>
		<p>Undergraduate Research</p> <p>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)."</p>
		<p>Assessment (of new student/first year programs)</p> <p>"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)."</p>