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

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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 have Seminar courses and the retention rates of institutions that do not have Seminar courses?

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 implement ed to hold institutions more accountable and advance a focus on student success 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 add 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. She 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, 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 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; applied for financial aid within 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; 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 academic success over time in order 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 precollege 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 freshmen. Ackerman (1998) toured 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 SSBP 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 of the cohort with academic self-efficacy growing in 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 improved ideas about their academic, personal, and social life would be like while at college (Kullman, 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 student retention amongst those students. A study of African American freshman (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 familiar with the format, discussing the similarities and differences between classroom and online academics, promoting awareness of campus resources, success, 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 and Fulcomer (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 an extension of the campus core curriculum for students participating 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 semi-
near beyond one course and linking a block of classes to-
together creating cohorts of students or learning communi-
ties. 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. Ex-
amination 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 partici-
pate in such linked courses (Dick, 1998).

Learning Communities

As the freshman seminar transitioned to a more holis-
tic 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 semi-
near 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. Kah-
rig (2005) evaluated the residential living communities at Ohio University. The most significant outcomes of the study were significant, positive effects between peer men-
toring and engagement, academic engagement outside the classroom, and the level of student satisfaction in connec-
tion to the retention of first year students.

Uppraft (1995) collected stories of challenges and success-
es related to the advising of first year students. The results indicated a greater awareness of student development rhe-
yor and ideologies on transition. The role of technology was con-
tinuing to grow and was used as an opportu-
nity 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 link-
ing 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 engage-
ment, expanding tutoring services and other academic re-
sources, anecdotal 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. An-
other study, conducted by the University of Kentucky, 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, stu-
dent life, student health, the counseling center, and other university constituencies in a unified response targeted to a particular student’s needs. This communication be-
tween 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 deter-
mine 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 con-
cept of service and leadership. The idea is built on the notion that everyone has a 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 ser-
vice learning component with the first year seminar but some research has shown the strength of each area was not ne-
cessarily 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 satis-
faction was noted when the two were merged. No significant differences between the two student popu-
lations were reported.

Some institutions incorporate service learning compo-
ents 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 reinforce the student’s sense of belonging or connec-
tion to the institution, a by-product of which is increased persistence (Hutchinson, 2010).

Undergraduate Research

An increase in student success and retention rates indi-
cates that colleges and universities have worked hard to engage students in the learning process, increase the num-
ber of students participating in undergraduate research, and have broadened traditional first year experience pro-
grams to encompass an array of programmatic aspects (Spanier, 2009). Through participation in research op-
portunities 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 profes-
ssional understanding (Neymout, 2004). Various models for successful research have included partnering under-
graduates with faculty members or graduate student men-
tors. One such program at the University of Kentucky partnered second year undergraduates with graduate students. These partnerships have produced an increase in the amount of research, the number of re-
sults published, 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. Conventionally admitted students at one university conducted research alongside a faculty mentor. The program was tied to a liv-
ing and learning community so that participants lived and worked with peers involved in research projects as well. Students involved in the program showed a 100 percent improvement in subjects such as research methods and improved socialization, as well as higher rates of persistence (Hutchinson, 2010).

Service learning programs raise the profile of the department or major and aid in retention (Randall, 2011). Assessment

Establishing guidelines for assessing the first year expe-
rience is important (Gardner, J.N., 1986, 1990). Assess-
ment should not only examine the seminar or other in-
dividual component, but should examine the role of the faculty member as both a facilitator and mentor (Gardner, J.N., 1981). The first year, 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 pro-
gram. 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. An overwhelming number of the seniors were ef-
fective in retaining students through to the spring semes-
ter but less effective in yielding an increase in retention rates that served to fill the gap (Adams, 2008). The study 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, faculty and staff, as well as extending the seminar into a fresh-
men year long program (Adams, 2008).

Methodology

A quantitative study was conducted to determine connec-
tions between program attributes with fall-to-fall reten-
tion 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 in-
cluded in this study. Non-random sampling is appropri-
ate 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

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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 Excel- lence in Undergraduate Education located in Brevard, North Carolina, (c) located within the southern Appalachia- nian Mountains, (d) located within the Appalachian Regional Commission as the South Central subregion encompass- ing northeasteast Tennessee, southwest Virginia, and western North Carolina (ARC, 2012), (d) with enrollment, reten- tion, and demographic data from fall 2010 to fall 2011 listed on the database of The National Center for Educa- tion Statistics (NCES, 2013), and (e) with identified com- ponents of a first year program.

Using a geographic cluster sampling strategy, two institu- tions from each state within the Appalachian Regional Commission’s classification of the South Central subre- gion and meeting the criterion were selected. Limitations for cluster sampling are naturally occurring variance in characteristics between samples such as political and cul- tural differences (Ray, 1983). Although the six colleges identified for this study are within three separate states, regionally the area shares many cultural and social simi- larities as denoted by the Appalachian Regional Com- mission 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 simultane- ously and internally heterogeneous and externally homo- geneous (Zelin & Stubbs, 2005). Advantages to cluster sampling are naturally occurring variance in the student body including age, sex, race, ancestry, and other demo- graphic information for the six colleges. The longevity of the system under study is the research arm of the United Stated Department of Education, and is regionally accredited by the Appalachian Regional Commission as the South Central subregion encompassing northeast Tennessee, southwest Virginia, and western North Carolina (ARC, 2012), (d) with enrollment, reten- tion, and demographic data from fall 2010 to fall 2011 listed on the database of The National Center for Educa- tion Statistics (NCES, 2013), and (e) with identified com- ponents of a first year program.

RESULTS
The purpose of this study was to investigate if any asso- ciations 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, ac- creditation, 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 Commis- sion on Colleges (SACS/COC). In 2011 there were 939 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 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 99% White, 1% 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 rural setting in Mars Hill, North Car-olina. Although founded by those of the Baptist faith, the college has no religious affiliation, although it does part- ner 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 Commis- sion on Colleges (SACS/COC). 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 $18,800. 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, 7% White, 3% unknown, and 4% of 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 Chris- tian Churches/Churches of Christ and located in Milli- gan College, Tennessee. The college was founded in 1866 and is regionally accredited by the Southern Association of Colleges and Schools Commission on Colleges (SACS/ COC). 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% of the student body 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% Multi- racial, 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 relation- ship with the Presbyterian Church, and is regionally ac- credited by the Southern Association of Colleges and Schools Commission on Colleges (SACS/COC). There are 1,954 undergraduate students. Federal grants were received by 76% 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, 84% White, 1% 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 pub- lic, 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 Associa- tion of Colleges and Schools Commission on Colleges (SACS/COC). 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 aver- age cost of $39,131. In-state students comprise 84% of the student body, out-of-state students make up 16% and in- ternational students comprise 1%. Women comprise 56% of the enrollment and men 44%. Full-time students en- compass 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 Ameri- can, 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).
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 $10,774. In-state students comprise 96% of the student body and 4% out-of-state students make up 3%. Women comprise 56% of the enrollment and men 44%. Full-time students enrol 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%.

Programmatic Variables Analysis

Programmatic variables were researched in order to determine if the retention rates of students varied by institutional programs. 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.

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 -.27941 to 21.275. The difference between means was -.33. Therefore, the null hypothesis was retained. Table 4 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 5.

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 -.27941 to 21.275. The difference between means was -.33. 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) = 1.454, p = .220. The 95% confidence interval for the differences in the means was -.27941 to 21.275. The difference between means was -.33. 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 Targeted Seminars 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 -.27941 to 21.275. The difference between means was -.33. Therefore, the null hypothesis was retained. Table 8 indicates program frequency, associated percentages, standard deviation, and range.

Early Warning/Early Alert was a constant and was present at all 6 institutions with results reported in Table 9.

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 10.

Table 1

<table>
<thead>
<tr>
<th>Program Presence or Absence by Institution</th>
<th>Emory &amp; Henry</th>
<th>Mars Hill</th>
<th>Milligan</th>
<th>Tusculum</th>
<th>UNC Asheville</th>
<th>UVa-Wise</th>
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<tr>
<td>Assessment</td>
<td>Absent</td>
<td>Present</td>
<td>Present</td>
<td>Present</td>
<td>Present</td>
<td>Present</td>
</tr>
</tbody>
</table>

Table 2

<table>
<thead>
<tr>
<th>School</th>
<th>Enrolled Fall 2010</th>
<th>Reenrolled Fall 2011</th>
<th>Retention Rate</th>
<th>Number of Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emory &amp; Henry</td>
<td>248</td>
<td>180</td>
<td>75%</td>
<td>4</td>
</tr>
<tr>
<td>Mars Hill</td>
<td>273</td>
<td>164</td>
<td>60%</td>
<td>5</td>
</tr>
<tr>
<td>Milligan</td>
<td>176</td>
<td>141</td>
<td>80%</td>
<td>5</td>
</tr>
<tr>
<td>Tusculum</td>
<td>354</td>
<td>208</td>
<td>59%</td>
<td>8</td>
</tr>
<tr>
<td>UNC Asheville</td>
<td>593</td>
<td>373</td>
<td>80%</td>
<td>8</td>
</tr>
<tr>
<td>UVa-Wise</td>
<td>399</td>
<td>249</td>
<td>62%</td>
<td>6</td>
</tr>
</tbody>
</table>

Table 3

<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>11.015</td>
<td>60% - 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 -.27941 to 21.275. The difference between means was -.33. Therefore, the null hypothesis was retained. Table 4 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 5.

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 -.27941 to 21.275. The difference between means was -.33. 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 -.27941 to 21.275. The difference between means was -.33. 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 Targeted Seminars 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 -.27941 to 21.275. The difference between means was -.33. Therefore, the null hypothesis was retained. Table 8 indicates program frequency, associated percentages, standard deviation, and range.

Early Warning/Early Alert was a constant and was present at all 6 institutions with results reported in Table 9.

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 10.

Table 4

<table>
<thead>
<tr>
<th>Pre-Term Orientation Presence</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

<table>
<thead>
<tr>
<th>Outdoor Adventure Orientation Presence</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>89%</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

<table>
<thead>
<tr>
<th>Learning Communities Presence and Absence</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>59%</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Absent</td>
<td>5</td>
<td>71%</td>
<td>9.592</td>
<td>60% - 80%</td>
</tr>
</tbody>
</table>

Table 7

<table>
<thead>
<tr>
<th>Targeted Seminar Presence and Absence</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>
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Table 8

<table>
<thead>
<tr>
<th>Early Warning/Early Alert Presence</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 9

<table>
<thead>
<tr>
<th>Service Learning Presence</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>
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 average 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 (Disko, 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 also indicates that included in 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, 1998). A major impact of Pre-Term Orientation on new students stems from the influence it has upon their own personal campus experience (Hudmon, 2007) and the student’s ability to apply realistic expectations (Kral, 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, on-line or on-ground, or the length of the program, the ultimate aim of Pre-Term Orientation is to increase retention (Lorentzetti, 2002) through the formation of individual connections between student and college personnel. Scagnoli (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% with the mean retention rate for the five schools with the program was 66.88% 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. Conversely, a review of the literature indicated that the presence of Learning Communities promoted academic and social excellence (Macon & Lingen, 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 more pronounced. However, 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 interest in such programs is strong. According to the Coordinating Council on Outdoor Education 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 the presence of a Targeted Seminar course in and of itself did 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 student retention (Jessup-Anger, 2011; Hunter & Linder, 2005). Targeted Seminar course content can vary greatly from institution to institution as well as between instructors within the same course. 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 inconstant 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 (Macon & Lingen, 2011). All 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 more pronounced. However, the small cohort nature of these programs may generate positive 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 may have thought they had more freedom in their Learning Communities 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 with academic courses. They may be essential Living Learning Communities or themed to an issue or interest rather than an academic course. The number of institutions reporting no linked Learning Community programs may be indicative that the research is not 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 are useful in investigating 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.
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 project averaged a retention rate of 3.7% 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) and to develop more realistic expectations for their collegiate experience (Krauln, 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.

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.

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 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 (Krauln, 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.

REFERENCES


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.


<table>
<thead>
<tr>
<th>Program Type</th>
<th>Present</th>
<th>Absent</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Summer Bridge Programs</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>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>
<td></td>
</tr>
<tr>
<td><strong>Pre-Term Orientation</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>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>
<td></td>
</tr>
<tr>
<td><strong>Outdoor Adventure Orientation</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>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>
<td></td>
</tr>
<tr>
<td><strong>Academic/Transition Seminars</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>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>
<td></td>
</tr>
<tr>
<td><strong>Learning Communities</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>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>
<td></td>
</tr>
<tr>
<td><strong>Early Warning/Academic Alert Systems</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>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>
<td></td>
</tr>
<tr>
<td><strong>Service Learning</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>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>
<td></td>
</tr>
<tr>
<td><strong>Undergraduate Research</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>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).&quot;</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Assessment (of new student/first year programs)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>“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>
<td></td>
</tr>
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</table>