Supporting conditionally-admitted students: A case study of assessing persistence in a learning community

April Heaney[1] and Rick Fisher[2]

Abstract: Using Astin's I-E-O model as a framework, this article explores the effects of a variety of factors on first-year persistence for conditionally-admitted students participating in a learning community at a public land-grant university. Since the learning community began in 2002, program administrators have collected survey, interview, and academic success indicators for participating students. In 2007, the program received grant funds to more carefully investigate factors that promote and inhibit persistence among students. For students matriculating in 2007, this study collected survey and entry characteristic data to probe predictive factors for persistence after the first year. These data allow us to better identify and understand dominant influences on student persistence as well as plan more informed interventions for students most at risk for departure. Key factors at our university that affected persistence of at-risk students included social integration, academic conscientiousness (most notably the use of self-regulatory learning strategies), and select pre-college characteristics including motivation and college preparatory curriculum. This article serves as a case study; after describing our local context, we present the inputs and environmental factors most predictive of persistence. We close by discussing the implications of this research for universities and colleges seeking to improve support for at-risk students.

Keywords: learning community, at-risk students, first-year persistence, self-regulatory learning

The issue of student retention, as Braxton and Mundy (2001) have pointed out, is an ill-structured problem that defies a single solution. There is no magic bullet—especially for individuals who enter college with at-risk characteristics—to ensure that students will continue on the collegiate path. In fact, as the number of students enrolling in colleges and universities grows (25% over the past twenty years), the number of underprepared and/or economically disadvantaged students has also increased, a trend that heightens the need for our society to bridge gains in access with college completion (Engstrom, 2008). Improving persistence among at-risk students positively impacts diversity in higher education and increases career and economic opportunities for traditionally marginalized individuals, important features in improving what Rawls (1999) terms fair equality of opportunity in education.

Following a national trend towards learning communities as a way to promote collaborative, social constructivist learning environments (see Tinto, 1998; Bruffee, 1984; Ishitani, 2008), our university implemented a learning community in 2002 to bolster academic and social support for conditionally-admitted, first-year students who do not meet the

---

[1] Learning Resource Networks, University of Wyoming, Dept. 3334, 1000 E. University Ave., Laramie, WY 82071 (aprilh@uwyo.edu). Please contact with questions or to request a copy of the survey instrument.
[2] English Dept., University of Wyoming, Dept. 3353, 1000 E. University Ave., Laramie, WY 82071

university's GPA and ACT admissions requirements. Approximately 150 conditionally-admitted students are enrolled in the learning community each fall. Participating students are further divided into smaller cohorts of around 38 students. A meta-study of learning communities by Zhao and Kuh (2004), based on National Survey of Student Engagement (NSSE) data from 365 four-year institutions, has provided significant evidence that learning communities are associated with a variety of positive outcomes. Those outcomes include higher levels of academic effort, academic integration, and active and collaborative learning; more frequent interaction with faculty members; and more positive attitudes about the quality of academic advising and campus support. For at-risk students particularly, small but compelling evidence suggests that learning communities increase student engagement and persistence and represent the most meaningful avenue toward access for underprepared students (Engstrom, 2008).

Since 2002, our learning community has collected academic success data for its participants in part for internal assessment and program improvement purposes, but also to make an effective case to the university's administration for the program's continuation beyond its initial three-year pilot phase. In the years 2002 – 2006, we saw a substantial increase in academic success for students participating in the learning community. During this five year period, learning community participants earned an average first-semester GPA of 2.14, compared to an average of 1.79 for the comparison group of conditionally-admitted students who entered the university during the four years before the program was institutionalized. Learning community students earned an average first semester academic probation rate of 40%, a full 20% lower than the comparison group. In addition, fall-to-fall retention increased by about 5% among participants in the learning community. While our learning community does not include a residential component, our students' academic success and responses to program satisfaction surveys are consistent with a national study of living-learning programs that found at-risk students who enroll in living-learning communities generally experience a more successful academic and social transition to college (Inkelas et al., 2007).

The current study is based on research beginning in 2007 aimed at more intentionally exploring factors that influence persistence among students in the learning community. In general, our research has privileged "policy" and "institutional research" perspectives (Bean, 2005). For this study, we selected Astin's I-E-O model as the primary framework for our study, believing it would provide a useful way of understanding our data—especially the environmental factors which may affect students' likelihood of persisting. Many studies of learning communities and support programs for "at-risk" students investigate only the broad impact of the program on participants' first-year success indicators such as GPA and first-year persistence. In this study we wanted to improve our ability to identify and intervene earlier with students most at risk—some who may not show signs of increased risk until well into the first year. Our research questions include:

- Which entry characteristics as well as academic, social, and environmental elements (based on Astin's model) are most predictive of persistence among conditionally-admitted students participating in the learning community?

- To what extent do self-regulatory learning behaviors impact participating students' persistence at the university?

- What are the key areas for intervention in a learning community model, and how might instructors and administrators most effectively implement approaches?

I. Background and local context.

Each year, conditionally-admitted students are enrolled in the learning community based primarily on high school GPA scores (below 2.75 for non-residents and 2.5 for residents). In some cases ACT scores and high school prerequisite courses also play a role in conditional admission. Conditionally-admitted students are considered "at-risk" because of long-term institutional data showing higher academic failure and departure rates for students entering with low GPA and/or ACT scores. Students admitted conditionally at our university follow national trends in comprising higher numbers of male, minority, and first generation students than regularly-admitted students, as well as lower average family income ($10,000 less average annual income). In fall 2007, 64% percent of students entering the learning community were male and 18% percent minorities—a significant ratio in light of the fact that males comprise 47% of the general entering population and minorities 9%. Students admitted with conditions are also more likely to be basic writers and readers, evidenced in part by English ACT scores that average between 1 and 3 points below those of regularly admitted students.

Multiple studies indicate that provisionally-admitted students feel less confident in their ability to succeed in academic settings and need additional help in developing habits of mind and behavior conducive to college success (see Kinzie et al., 2008). While first-generation students are often identified as "at-risk" for college failure or departure, for example, those who enter under provisional status for low high-school GPA or ACT scores experience these risks to an even greater degree. The learning community model is particularly effective for a program serving academically at-risk students; Bruch et al. (2004) argue that "learning communities can provide historically marginalized students with a sense of belonging and space such that they can be truly engaged and active contributors in the learning community" (p. 18). Additionally, numerous studies (Berger & Milem, 1999; Braxton, Milem, & Sullivan, 2000; Milem & Berger, 1997) indicate the importance of peer groups and social integration in predicting persistence. By creating small cohort groups based around academic courses, our learning community seeks to promote social integration.

The Washington Center for Improving the Quality of Undergraduate Education defines learning communities broadly as "classes that are linked or clustered during an academic term, often around an interdisciplinary theme, and enroll a common cohort of students" (n.d., para. 1). Instituted as a public service consortium of The Evergreen State College, the Center's mission is to assess and support a variety of undergraduate initiatives including learning communities. Since the early 1990s, the center has collected comprehensive research and assessment from learning communities around the country. Our learning community fits the Washington Center's description of a cluster-model learning community, in which two or more classes are linked thematically or by content. In a cluster learning community, students attend classes together and faculty plan the program collaboratively.

Our program intentionally includes four general education courses that foreground skills commonly underdeveloped in at-risk students: reading, writing, speaking, and test and study skills integral to large lecture courses. Because the learning community connects multiple sections of first-year writing, U.S. government, public speaking, and critical reading and research courses, instructors meet in the summer and throughout the year to plan thematic, textual, and

assignment-based connections. Moreover, students are guaranteed enrollment in four general education courses that are in highest demand—a feature that in itself helps students gain a step-up during the first year. The learning community's writing and reading courses are smaller than regular sections of these courses (18 students vs. 23 for regular courses). The reduction in class size is not a feature common to all learning communities at our university but helps satisfy our desire to increase one-on-one time between students and instructor through out-of-class conferencing and workshop time during class. In addition, with smaller classes, instructors can more easily integrate discussion and student-led policymaking within classes.

Because the government course is a lecture course enrolling 250 students per section, participating students have an opportunity to take a large exam-based lecture course with additional study and test-taking help. This course also includes weekly supplemental instruction sessions led by undergraduate students and the instructor. Sessions focus on skills that can be transferred to any lecture course involving note-taking, multiple-choice and short-answer exams, and research-based writing.

Peer mentors, selected from past students in the learning community, play a crucial role in building community and developing a support network for participating students. Peer mentors help to lead the student seminar in August, a one-day meeting for students and instructors to build community and begin creating policies for the courses. Peer mentors also attend the composition course throughout the semester and assist students both inside and outside of class.

The program director and current faculty work to recruit instructors into the learning community who show commitment to student success and build close relationships with students. Astin (1993) found that student perception that faculty are oriented toward students (rather than primarily towards research) "produces more substantial positive direct effects on student outcomes than almost any other environmental variable" (p. 342). This factor positively influences, among other outcomes, attainment of a bachelor's degree, decision to re-enroll at the same college, and self-reported growth in writing skills, critical thinking abilities, analytical and problem-solving skills, and preparation for graduate school. While past feedback from students in the learning community has confirmed that students value the strong peer and faculty ties during their first year, program administrators sought in this study to investigate more explicitly how students' experiences, attitudes, and backgrounds impact their persistence.

II. Methods.

A. Conceptual model.

Berger and Lyon (2005) mark the 1970s as the beginning of theoretically-based retention studies. From that period emerged two key theories about retention: Tinto's interactionalist model and Astin's involvement-centered approach. Though Tinto's model, which focuses on students' integration into a school's academic and social systems, has "near-paradigmatic status in the study of the college student departure" (Berger & Braxton, 1998, p. 104), we believe Astin's model of college impact offers a more flexible model with which to investigate and categorize the variety of factors we considered in this study.

Astin's Input-Environment-Outcomes (I-E-O) model includes three major components: Inputs include students' pre-entry characteristics when they enter college; Environment includes all of the factors experienced during the student's time in college; and Outcomes pinpoint the

characteristics of the student after being exposed to the environment. To put it simply, the changes which happen after a student's time at college (outcomes) are affected both by personality and experiences prior to college (inputs) as well as the effect of peers, programs, faculty and other environmental factors (environment) during his or her time at college.

Obviously, as Astin points out, changes that happen during the time period being studied cannot necessarily be attributed directly to the impact of college—factors such as maturation and the environment outside of the college setting also create changes that may magnify, accelerate, or counteract the impacts of the college environment (also see Lounsbury et al., 2004). Thus, retention research ideally attempts to isolate the impact of college from other factors, including pre-entry characteristics as well as extra-collegiate factors, in order to clearly identify those factors which can be attributed to the college environment. However, due in part to our institutional policy perspective, we wanted to explore both the pre-entry characteristics and the college environment factors that seemed to predict student retention.

B. *Participants and procedures.*

This study focuses on the 2007 matriculating class of conditionally-admitted students at our institution over an 18-month period. In addition to collecting pre-entry characteristics from the registrar's office for all 139 participants, faculty administered a survey during class time at the close of fall semester. The survey was also sent electronically to those students who did not attend class on the day the survey was given. The faculty who administered the survey informed students that their responses were anonymous and their participation in the survey was voluntary. The 40-item survey took approximately 20 minutes to complete.

The survey is modeled after the College Persistence Questionnaire (CPQ) designed by Hall Beck and William Davidson. The CPQ is a tool for identifying and planning early intervention for students whose scores indicate they may be at greater risk for departure, and it collects data around six factors: Academic Integration, Social Integration, Supportive Services, Degree Commitment, Institutional Commitment, and Academic Conscientiousness. The survey also included questions assessing students' satisfaction with individual courses and the learning community. Within the academic integration portion, we added two open-ended questions concerning helpful and harmful influences on students' first semester academic success to help us assess students' use of self-regulatory learning strategies to achieve educational goals. In the past ten years, interest in self-regulatory learning (SRL) has heightened as educators investigate how students approach problems, apply strategies, and monitor their performance (Paris & Winograd, 2000). Self regulation is a helpful tool in assessing academic integration because it highlights the "self" and the extent to which students' goals and tactics influence the quality of their learning (Butler & Winne, 1995; Paris & Byrnes, 1989; Pressley, 1995). In addition, some evidence suggests that students who possess poor confidence in their scholastic abilities experience more challenges with self-regulated learning than their more confident peers, a scenario that can further dampen prospects of success for at-risk students (Bartels & Magun-Jackson, 2009).

To analyze the survey results, we used analysis of variance through SAS PROC GLM. This procedure, which uses the method of least squares for general linear models, allowed us to determine the relationship of a wide range of independent variables to the dependent variable of retention. When possible, retention was treated as a (continuous) numerical variable, though in some comparisons it was necessary to code retention as a categorical variable. In results, we

indicate correlations as statistically significant which are significant at the $p <= 0.05$ level. One key limitation of our study is the lack of statistical regression analysis, which would have afforded a clearer look at how factors interplay in students' persistence.

C. Measures.

Inputs: In Astin's model, inputs can include pretests, self-predictions about future outcomes, and personal characteristics. Our study gathered standardized test and entry characteristics data from the registrar's office, including age, gender, residency, citizenship, first generation status, ethnicity, high school GPA, athlete status, ACT score, and financial aid eligibility (including federal Pell grants). Because our university does not collect data on high school class standing, we were not able to include this (highly predictive) characteristic. From the fall 2007 survey, we gathered information about when students made the decision to pursue a college degree, their primary reason for attending college, and the college preparation courses they took in high school such as advanced placement, international baccalaureate, and/or honors courses.

Environment: Astin (1993) refers to environment as "the various programs, policies, faculty, peers, and educational experiences to which a student is exposed" (p. 7) and which play a role in the outcomes under study. Our study focused on three critical environmental influences described by Astin: student orientation of the faculty, academic integration, and social integration.

Student Orientation of the Faculty
Six 5-point Likert scale items in the fall 2007 survey captured students' perceptions of faculty responsiveness to students' needs. Measureable factors included students' perception of faculty concern for student success, willingness and availability in and out of class to provide assistance, and the degree to which faculty "care" for students in the learning community.

Academic Integration
The survey contained 14 items related to academic integration. Seven questions helped measure self-regulatory learning strategies based on Pintrich's (2000) categories and criteria for positive SRL strategies: text-based cognitive learning strategies; metacognitive and self-regulatory strategies including planning, monitoring, and regulating behavior based on goals; and resource management strategies (managing and controlling one's time, effort, environment, people, and outside resources). Measures also included 5-point Likert-scale evaluations of the learning community's impact on academic skills and success, identification of the types and frequency of academic support use (Math Lab, Writing Center, Libraries, etc.), perceived connections between courses and post-college endeavors, significance of select challenges to academic success (boredom, absences, time/coursework management), number of visits home, and typical places and times for completing out-of-class schoolwork. In addition to quantitative questions, this portion included an open-ended question asking students to describe the factors that most helped their schoolwork during their first semester. Students' responses were coded for trends in self-regulated learning strategies. While students' responses were not always lengthy or detailed enough to carefully analyze for categories of self-

regulation, most responses did contain language pointing to either self-regulating motivation (intrinsic) or extrinsic/outside forces (naming simply "good teachers" or "friends" as the most helpful influence on their academic success, for example).

Social Integration
Six items measured students' social integration. Students were asked to rate (on a 5-point Likert scale) their connection with campus, overall satisfaction with various aspects of their social life, and integration with the city. Students also identified the most significant places they spent time outside of class, their co-curricular activities and memberships, and the number of their friends who departed in the first year.

D. Outcomes.

In the I-E-O model, outcomes include the students' behaviors or outcomes after exposure to the environmental factors. Change or growth is typically determined by comparing outcome and input characteristics to assess the impact of environmental elements. Our study focused on the sole outcome of institutional persistence, meaning that we coded any student who returned to our institution as "persisting," and any student who did not return to our institution as "departing."

Although we focused on institutional persistence for our study, we acknowledge that controlling for transfer and stop out numbers can provide additional context for studies of first year persistence. Through accessing National College and University Clearinghouse data, for example, we found that only 15% of the students who departed in this at-risk population truly dropped out or stopped out in fall 2008.

However, our decision to focus on institutional persistence was guided by the fact that a large number of the students who departed institutionally showed indicators of struggling academically in the first year. Students in the learning community who departed earned an average first-year GPA of 1.57, vs. an average GPA of 2.62 for persisting students. Among the transfer students, 42% were on academic probation and an additional 5% had withdrawn from the university due to academic difficulties. Understanding that students who are struggling academically may mistakenly see transfer as a way to escape the challenges they encounter in their first year of college, these indicators led us to seek information about factors that impacted the students' first-year experiences, whether or not they transferred to another institution.

III. Results.

A. Input characteristics.

Despite a fairly wide spectrum of GPA scores among conditionally-admitted students in our study (ranging from 2.0-2.75), we found no results indicating that high school GPA or ACT predict retention for the sample. In other words, while conditionally-admitted students are as a group more likely to depart than the regular student body, students with the lowest entering scores in our study did not show signs of increased risk for departure compared to their at-risk peers. In fact, with a few exceptions, most of the entry characteristics data did not reach statistical significance when comparing persisting and departing students in the learning community. Characteristics including age, in-state residency, ethnicity, gender, first-generation status, high school GPA, composite ACT, and financial-aid eligibility did not predict persistence.

However, first generation, ACT score, and undeclared or declared disciplinary major came close to significance. Table 1 reports *p*-values for this set of variables.

Table 1. Impact of entry characteristics on retention.

	p-value
Gender	0.5064
Residency status (in state or out of state)	0.8620
Ethnicity	0.8424
First-Generation status	0.1570
High School GPA	0.9155
Composite ACT score	0.1687
Financial aid eligibility	0.4641
Declared/undeclared major	0.1579

In addition, students' math placement scores, varsity athletic status, and perception of the quality of their high school did not reach statistical significance in predicting departure. However, students' self-identified reasons for attending college did predict departure ($p=0.0106$) As shown in the table below, students who came to college because it seemed like "the next step," because they wanted the social experience, or because they had parental pressure were more likely to depart than those who indicated educational or career goals for their college education.

Table 2. Impact of the factor "reason for coming to college" on retention. ($p=0.0106$)

Reason for coming to college	Probability of persistence (± standard error)
Continue education (25 students)	60.1% (±10%)
Pursue a career goal (54)	55.6% (±6.5%)
For the social experience (3)	33.3% (±23%)
Seemed like the next step (24)	25.0% (±9.8%)
Followed parents' advice (2)	-0.00% (±34%)
Other (6)	87.5% (±17%)

Of the six students who wrote in "other" responses, four indicated "sports" as their main reason for coming to college, one identified "scholarship," and the final wrote simply, "I was ready for college."

Table 3. Relationship of college-education decision timeline to persistence. ($p=0.0015$)

Time at which students decided to pursue college	Probability of persistence
Before high school	54.1% (±6.4%)
During sophomore year	60.0% (±12.9%)
During junior year	28.5% (±13.4%)
During senior year	36.4% (±15.1%)

Additionally, taking an advanced placement or college preparatory course while in high school was a predictor of retention (p=0.0412). Students who reported taking *no* advanced placement courses had a 30% chance of persisting while those who reported having taken *any* college prep course were likely to return at a rate of 68%.

The data on *when* students chose to pursue a college education had too much variation to reach statistical significance. Interestingly, however, the results follow a logical trend: students who did not decide until their junior or senior year to pursue college education were less likely to persist than those students who had decided to pursue a college degree by their sophomore year. Table 3 shows the probability of persistence.

B. Academic and environmental characteristics.

Student Orientation of the Faculty: While students' responses to faculty assessment questions were generally very high, students who returned were statistically more likely (p=0.0483) to strongly agree with the claim that faculty were concerned for student success. (Means on a 5-point scale were 4.446 (±10.6%) and 4.145 (±10.7%), respectively).

Visits Home during Fall Semester: The number of visits home during students' first semester was a significant retention indicator (p=0.018). Students who returned for their second year reported visiting home an average of 2.7 (±0.39) times during their first semester, while departing students left campus to return home at least 4.04 (±0.4) times.

Course Absences: Somewhat surprisingly, the frequency of absences did not appear to be a significant predictor. The primary reason students gave to explain *why* they missed class was also not a predictive factor.

Connection between Coursework and Future Goals: The connection students perceived between their coursework and their future lives or careers proved a significant predictor for retention (p=0.009). On two sides of the continuum, students who saw a strong connection between their courses and future lives were all retained, while students who saw no connection had only a 25% chance of persistence (± 21.9%).

Boredom: Students' experience with boredom in class showed significant bearing on persistence (p=.0001). All students who reported "extreme" boredom in classes departed before their sophomore year, while students who reported that they were seldom bored in class had a 68.8% chance of persistence (± 9%).

Use of Resources: The use of support services in general showed a trend in student persistence. Students who reported using *no* support services had a 31.1% (±11.4%) likelihood of returning, while those who used any service were 55.4% (±5.2%) likely to return. Further, two specific services were more likely to impact persistence: the math lab (p=0.0074) and supplemental instruction in students' lecture- and exam-based government course (p=0.0954).

Adjustment to Coursework Habits: In terms of conscientiousness, there was a relationship between the time of day when students began their homework and their persistence: the later in the day that they reported beginning their homework, the less likely they were to persist

(*p*=0.0724). Students who reported beginning homework by afternoon were 68% (±9.9%) likely to persist, while those who reported waiting until late evening were only 39% (±7.7%) likely to continue on to their second year.

Students' responses to the open-ended survey question asking, "What has helped you the most this semester in your academic work?" revealed some differences in persisting and departing students' likelihood of naming self-regulated learning strategies. Persisting students were more likely to describe help factors related to Pintrich's (2000) positive SRL strategies: text-based cognitive learning strategies, metacognitive strategies including planning, monitoring, and regulating behavior in response to goals, and resource management strategies (e.g. managing time, effort, living environment, and outside resources on campus) . All of these behaviors are positively correlated with academic success in college.

Perhaps most notably, a broad pattern emerged between students who attributed their success to outside influences (teachers, peer mentors, etc.) and students who named *self-initiated* alterations to habits and mindsets about their coursework. For example, 53% of persisting students named self-regulating strategies as most helpful as compared to 43% of students who departed. Also notable is that persisting students' responses averaged 13 words per response, while departed students averaged 9 words. Persisting students tended to give more detail about influences that included greater awareness of their own best work times, developing more intentional work ethic, and strategies for note-taking and studying. The following table illustrates several common responses among both persisting and departed students.

Table 4. Student Responses about "Most Helpful Influences" in their First Semester.

Persisting students	Departed students
"finding quiet places to study and do homework"	"teachers"
"I work good in the middle of the night and having 24-hour labs and work areas are the best advantages"	"good teachers"
"making sure I went to classes, because once you miss one it's easy to keep skipping"	"friends"
"I have started getting a head start on my papers and having people read them to see what they think"	"computer labs"
"planning out time for relaxation"	"my friends and my teachers"
"Not procrastinating and getting things done early and going in for extra help"	"the teachers have helped me the most in my academic work"
"what helped me most this academic year was the motivation not to fail college"	"[Teacher name] is the only reason I'm still here"

C. Students' Social Integration

Students' self-reported overall satisfaction with the social experience during their first semester showed a trend in student persistence ($p=0.0774$). Students who returned for their sophomore year had slightly higher overall satisfaction than departing students (means of 3.362 ±8.6% and 3.143 ±8.8%, respectively).

Additionally, students who reported missing home "a lot" were very likely to leave (0% ± 24.7% chance of persistence), while students who reported missing home "none" or "some" were much more likely to persist (75% ±21.4% and 85.7% ±11.4% chance of persistence, respectively). Students who strongly felt that the learning community helped them meet new friends showed a trend towards persistence into their second year ($p=0.0762$)

Students' overall perception of their social experience showed a significant logical trend ($p=0.0166$): the more positive students were about their social experience during the first semester, the more likely they were to stay. However, no single measure of specific participation (in sports, Greek organizations, clubs, or other campus organizations) emerged as a significant predictive factor.

When trying to determine whether physical environment had an impact on success, we asked students to indicate locations where they spent a significant amount of time. Students who reported spending time in friends' rooms/apartments showed a trend toward persistence ($p=0.0624$), and students who reported spending time in the student union building were statistically more likely to persist into their second year ($p=0.0318$). Locations that showed no statistical predictive value included the library, churches, coffee shops, athletic facilities, and computer labs.

Finally, students who had higher impressions of the overall helpfulness of the learning community were statistically more likely to remain at our university into their second year ($p=0.0129$).

IV. Discussion.

Several of the most commonly cited entry characteristics did not emerge as significant in our study, including gender, ethnicity, high school GPA, ACT score, financial need (as indicated by Pell grant recipients), and first generation status. Because of the study's limitations in sample size and lack of longitudinal data, as well as the contextual variables of our institution and region, this data may not be generalizeable to other contexts. However, these results related to entry characteristics may help contradict the assumption of many college faculty and administrators that, among at-risk students, male, minority, and particularly low-scoring students will depart at a higher rate than students without these characteristics.

Because many institutions, including our own, periodically consider raising admission standards in an effort to heighten overall first-year GPA and retention, it is important to understand the degree to which entering scores really predict persistence among students admitted with conditions. Our university's admission standards, for example, currently allow students with entering GPAs between 2.0 and 2.75 to enroll and participate in the program (a fairly wide margin). Based on this case study, it appears that raising admissions criteria in GPA, perhaps to 2.5, may not have the intended result of radically changing overall success of the at-risk population. Rather than focusing on entry characteristics, our study revealed that students'

academic and social behavior patterns—as well as their ability to develop meaningful goals for college—proved to be notably more influential than high school scores.

A. Social integration.

Consistent with Tinto's (1975) and Braxton's (2004) research on social integration, persistence among the at-risk students was influenced by students' experiences and level of satisfaction with social integration. Students in our study who used what Braxton (2004) terms "proactive social adjustment" (p. 25) by taking advantage of the learning community environment to make friends persisted at a higher rate. However, it is not clear that students' efforts to join organizations, clubs, or intramural sports on campus resulted in higher persistence. Persisting students reported spending more time in social settings (e.g. friends' rooms or the student union). Students who departed did exhibit social avoidance behaviors by returning home at a significantly higher rate than persisting students (Braxton, 2004).

B. Academic integration and future goals.

In terms of academic integration, students exhibited what Bean (2005) refers to as both "attitudinal" and "behavioral" characteristics that were predictive of retention (p. 218). Perhaps most importantly, students' primary reason to attend college proved influential to their first-year retention. Those students who indicated a reason for college related to career or furthering education were 55 to 60% likely to return vs. 0 to 33% for students who named less focused motivation for college studies. College and career goals fall within Pintrich's (2000) description of mastery goal orientation, a focus on mastery of a task that might stem from either intrinsic or extrinsic rewards. On the flip side, students who indicated lack of personal goals ("college is simply the next step after high school" or "my parents wanted me to come"), or goals with little or no mastery involved ("I wanted the social experience") had a much higher rate of departure.

The connection students perceived between their coursework and future lives was a significant retention predictor. Pintrich (1990) discusses the importance of "task value beliefs" (p. 34) in students' motivation to succeed or set goals toward a particular outcome. That is, students who believe in the "importance of, interest in, and value of" a task (p. 34) will tend to feel higher motivation and exhibit proactive behaviors toward meeting the goal. Students' self-reported boredom in classes followed this pattern as well; the boredom level students experienced in courses strongly predicted their retention.

Because more students who departed made the decision to pursue college late in high school, we speculate that seeing college studies as a goal is a new mindset for some students and may require more time to develop intrinsic and future-focused attitudes consistent with college success. Related to this, students who took a college preparatory or advanced course in high school had a much greater likelihood of persistence (68% vs. 30% for students who had no preparatory curriculum). ACT data in our state indicate that 56% of students in 2008 who took advanced courses "beyond the core" were better prepared for college in skills such as math, reading, and science. It is important to note, however, that many of the students in this population took only one advanced or college preparatory course and were far from achieving what ACT designates as "core" or "beyond core" high school curriculum. Yet, these students still seemed to gain an advantage in retention, a result that may lend support to the notion that

developing college goals during high school is in itself a key predictor for success in college.

C. Self-Regulated Learning (SRL).

Following from students' attitudes toward college, learning behaviors such as the ability to plan activities, monitor and regulate behavior, and manage resources further affected student persistence. Students who planned study times earlier in the day had greater success, as well as those who visited a help center during the first year. Further analysis of student responses to the open-ended question "what has helped you most with your schoolwork this semester?" revealed a higher tendency among persisting students to identify self-regulatory learning strategies when discussing their first year experience. While the 10% gap in SRL indicators between persisting and departing students is not large, persisting students generally used more detail and pointed to some goal or criterion against which they evaluated their level of success. As the term "self regulation" implies, persisting students also had a higher instance of naming personal behaviors as opposed to indicating solely external forces on their success.

V. Implications.

Perhaps most importantly, this study emphasizes the value of gathering context-specific data about conditionally-admitted students to aid in planning both support and targeted interventions. Bean (2005) argues for the proliferation of "localized" research to alleviate attrition. For our context, this study has helped to re-align institutional assumptions about conditionally-admitted students that are driving approaches to "who" should be admitted (typically based on GPA and test scores) and "how" these students might be acculturated to the rigors of college coursework. Localized studies allow administrators and advisors to probe into factors that impact student success and persistence and plan developmentally appropriate strategies.

Besides informing policy decisions, this study reveals several key areas where at-risk students can benefit from targeted instructional approaches. Some research suggests that the first two to six weeks of a student's first semester in college are the most critical in influencing students' persistence (Woosley, 2003; Birnie-Lefcovitch, 2000). Recognizing this timeframe, instructors should integrate early curriculum that addresses self-regulated learning strategies with the purpose of helping students' reflect on their own attitudes and approaches to coursework. The learning community models offers a further benefit in that SRL instruction can occur in multiple courses and help students see how strategies function in different contexts and disciplines. Such strategies need not "replace" more traditional content, but can be integrated in short presentations and readings, guest speakers, and student reflections. In addition, helping students to recognize their behavioral patterns through discussion and reflection assignments— and then develop mastery-based goals for college—can inspire intrinsic motivation (see Paris & Winograd, 2000). Finally, the rise of learning communities, and research about the success of those communities, has attested to the importance of peer groups and social integration in predicting persistence. Our survey and interview data over the past five years suggests that students experience higher social integration as a result of their belonging to a learning community, but this effort may not be sufficient for students who struggle to a greater degree with social adaptation. Teaching students about the correlation between social behaviors and academic persistence may be an important step, as well as using targeted advising by instructors

and peer mentors for students who indicate in an early-semester survey that they are experiencing high levels of homesickness or plan to return home often.

In conclusion, while developing learning communities for at-risk students goes a long way toward bolstering both academic and social success for participants, this study reveals many gaps that program administrators and faculty can address. Helping students gain self-awareness of their "big picture goals," their attitudes toward help services (including relationships with faculty), and their use of time to meet goals are key approaches to lowering attrition in a program or course for conditionally-admitted students. Students may benefit from considering local research on attrition as well as being exposed to course-based activities in order to more successfully adapt to the critical "habit transition" in the first year of college.

Acknowledgements

References

Astin, A. (1993). *What matters in college? Four critical years revisited*. San Francisco: Jossey-Bass.

Astin, A. (1984). Student involvement: A Developmental theory for higher education. *Journal of College Student Development* 40 (5), 518-529.

Bartels, J. M. & Magun-Jackson, S. (2009) Approach–avoidance motivation and metacognitive self-regulation: The role of need for achievement and fear of failure. *Journal of Learning and Individual Differences,* 19(4), 459-463.

Bean, J. (2005). Nine themes of college student retention. In A. Seidman, *College student retention: Formula for student success* (pp. 215-243). Westport, CT: American Council on Education.

Berger, J. B., & Braxton, J. M. (1998). Revising Tinto's interactionalist theory of student departure through theory elaboration: Examining the role of organizational attributes in the persistence process. *Research in Higher Education*, 39(2), 103-119.

Berger, J., & Lyon, S. (2005). Past to present: A historical look at retention. In A. Seidman, *College student retention: Formula for student success* (pp. 1-29). Westport, CT: American Council on Education.

Berger, J. B., & Milem, J. F. (1999). The role of student involvement and perceptions of integration in a causal model of student persistence. *Research in Higher Education, 40*(6), 641-664.

Bernie-Lefcovitch, S. (2000). Student perceptions of the transition from high school to university: Implications for preventative programming. *Journal of the First Year Experience and Students in Transition*, 12(2), p. 61-88.

Braxton, J. M. (2003). Student success. In S. Komives & D. Woodard (Eds.), *Student services: A handbook for the profession* (pp. 317-335). Hoboken: Jossey-Bass.

Braxton, J. M., Hirschy A. S., & McClendon, S. A. (2004). *Understanding and reducing college student departure*. Hoboken: Wiley.

Braxton, J. M., & Hirschy, A. (2005). Theoretical developments in the study of college student departure. *College student retention: Formula for student success* (pp.61-88). Westport, CT: American Council on Education.

Braxton, J. M., Milem, J. F., & Sullivan, A. S. (2000). The influence of active learning on the college student departure process: Toward a revision of Tinto's theory. *The Journal of Higher Education*, 71, 569–590.

Braxton, J. M., & Mundy, M. (2001-2002). Powerful institutional levers to reduce college student departure. *Journal of College Student Retention* , 91-118.

Bruffee, K. (1984) Collaborative learning and the "Conversation of Mankind." *College English 46* (7), 635-652.

Bruch, P.L., Jehangir, R.R., Jacobs, W.R, & Ghere, D.L. (2004). Enabling access: Toward multicultural development curricula. *Journal of Developmental Education*, 27, 12-41.

Butler, D. L., & Winne, P. H. (1995). Feedback and self-regulated learning: A theoretical synthesis. *Review of Educational Research 65,* 245-281.

Engstrom, C. M. (2008). Curricular learning communities and unprepared students: How faculty can provide a foundation for success. *New Directions for Teaching and Learning 2008* (115), 5-19.

Horn, L. J., and Chen, X. (1998). *Toward resiliency: At-risk students who make it to college.* Report No. PLLI 98-8056. Washington, DC: U.S. Department of Education, Office of Educational Research and Improvement.

Inkelas, K. K., Zaneeta, E., Vogt, K. E., and Brown, L. J. (2007). Living-learning programs and first-generation college students' academic and social transition to college. *Research in Higher Education* 48 (4) 403-434.

Ishitani, T. (2008). How to explore timing of intervention for students at risk of departure. *New Directions for Institutional Research 137*, 105-122.

Kinzie, J., Gonyea, R., Shoup, R., & Kuh, G. D. (2008). Promoting persistence and success of underrepresented students: Lessons for teaching and learning. *New Directions for Teaching and Learning 115*, 21-38.

Lounsbury, J. W., Saudargas, R. A., & Gibson, L. W. (2004). An investigation of personality traits in relation to intention to withdraw from college. *Journal of College Student Development 45* (5), 517-534.

Milem, J. F., & Berger, J. B. (1997). A modified model of college student persistence: Exploring the relationship between Astin's theory of involvement and Tinto's theory of student departure. *Journal of College Student Development, 38*(4), 387-400.

Paris, S. G., & Winograd, P. (2000). The role of self-regulated learning in contextual teaching: Principles and practices for teacher preparation. Commissioned paper for the U.S. Department of Education.

Paris, S. G., & Byrnes, J. P. (1989). The constructivist approach to self-regulation and learning in the classroom. In B. Zimmerman & D. Schunk (Eds.), *Self-regulated learning and academic achievement: Theory, research, and practice* (pp. 169-200). New York: Springer-Verlag.

Pintrich, P. (2000). Multiple goals, multiple pathways: The role of goal orientation and achievement. *Journal of Educational Psychology 92* (3).

Pintrich, P. (1999). The role of motivation in promoting and sustaining self-regulated learning. *International Journal of Educational Research, 31* (6), 459-470.

Pintrich, P., & De Groot, E. (1990). Motivational and self-regulated learning components of classroom academic performance. *Journal of Educational Psychology 82* (1), 33-40.

Pressley, M. (1995). More about the development of self-regulation: Complex, long-term, and thoroughly social. *Educational Psychologist, 30,* 207-212.

Rawls, J. (1999). *A Theory of Justice.* Cambridge: Belknap.

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

Tinto, V. (1998) Colleges as Communities: Taking Research on Student Persistence Seriously. *The Review of Higher Education,* 21(2), 167-177.

Washington Center for Improving the Quality of Undergraduate Education. (n.d.) Learning communities: National learning commons FAQs. Retrieved from http://www.evergreen.edu/washcenter/lcfaq.htm.

Woosley, S. (2003) How important are the first few weeks of college? The long-term effects of initial college experiences. *College Student Journal, 37*(2), 201-207.

Zhao, C. & Kuh, G. (2004). Adding value: Learning communities and student engagement. *Research in Higher Education, 45*(2), 115-138.