

Indiana Project on Retention

Annotated Bibliography

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Academic Advising

Lowe, A., & Toney, M. (2000) Academic advising: Views of the givers and takers. *Journal of Student College Retention*, 2, 93-108.

Students' satisfaction with the academic advising available for them as students enrolled in a university teacher certification program was the purpose of this study. The researchers attempted to ascertain if the type of advisor, the frequency of contact with an advisor, and student standing, differentiated between undergraduate and graduate, were significant predictors of student satisfaction with their advising experience. These variables were analyzed in relation to retention rates. The participants for this study were randomly selected from a total of 600 students enrolled in a school of education, a college of arts and sciences, and a university adult college for returning students. 200 undergraduate and graduate students were surveyed as were some volunteer advisers. The findings from their survey appears to be consistent with the literature regarding the import of advisement to the academic success of some students and the role it can play in assisting students to engage with their institution and ultimately persist. The changing needs of students augur the provision of an advisement service reflective of their multi-faceted requirements. Student standing was found to vary the importance and prominence of advising responsibilities. The results also indicated that the advising services provided by the differing colleges varied greatly and were further diversified between student groups, impacting students' satisfaction with the advising process, the institution and perhaps even their wish to persist. The authors offer some generalizable suggestions to improve advising services based upon their study.

Academic Difficulty

Lucas, M., & Hunt, P. (2002) Career exploration of academically dismissed students: A developmental view. *Journal of Student College Retention*, 4, 319-331.

This study attempts to investigate the identity, self-esteem, and career development of 164 college students, at different stages in their collegiate standing, who have been academically dismissed. They anticipated that these students, their counselors and advisors would benefit from research that investigates personal growth and career development issues in relation with their academic difficulties. The instruments for the study were derived from Marcia's (1966) ego exploration and commitment studies, Rosenberg's (1965) Self-Esteem Scale, and a Career Exploration Survey. The authors also included two open-ended questions in their instrument to illicit personal responses

from the students. From their findings, the authors make several suggestions regarding the support of students, for example, the usefulness of peer advisors and possible involvement of family, or those in the home environment used for support in the decision making process. They do admit that their study is limited by the non-existence of data regarding gender socialization and racial identity development. Also, an influence which may have eschewed the data is its retrospective retrieval. A longitudinal study, suggested by the authors, may be useful in observing students' developmental processes and could help develop targeted programs.

Trombley, C. (2000). Evaluating students on probation and determining intervention strategies: A comparison of probation and good standing students. *Journal of College Student Retention*, 2, 239-251.

During the 1998 academic year this study surveyed probation and good standing students at Los Angeles Southwest College to find out how the two groups differed on self reported measures. The college was comprised of: 78 percent Black, 20 percent Hispanic, 1 percent Asian, and 1 percent White students. A 22 item questionnaire was developed to assess risk factors associated with academic probation. Questionnaires were handed out at a beginning of semester probation group counseling session, 187 questionnaires were completed for an 88 percent response rate. A sample of students in good academic standing was also obtained from randomly selected general education requirement courses, a total of 138 students completed the questionnaire, with a 100 percent response rate. Findings from a chi- square analysis indicated the following: (1) high school GPA was significantly lower for academic probation students compared to students in good standing. Mean high school GPA for probation students was 2.76 compared to good standing students with a high school GPA of 3.07., (2) a significantly greater number of students on academic probation worked full time compared to students in good standing who generally worked part time, and (3) probation students reported having children living with them more often than students in good standing. Probation students indicated reasons for being on probation as the following: 42 percent cited personal problems, 21 percent cited problems that were job or financial related, 11 percent cited that classes were too difficult, 7 percent suggested a lack of motivation, and 2 percent said they had no interest in school. Personal problems cited included a death in the family, lack of child care, or some other type of family problem. Recommendations for future studies included distinguishing between students with different income levels and also distinguishing between first generation college students and students that have had family members attend or graduate from college.

Admissions

Bennett, D., Wesley, H., & Dana-Wesley, M. (1999). Planning for imminent change in college admissions: Research on alternative admission criteria. *Journal of College Student Retention, 1*, 83-92.

In response to what the authors perceived as an imminent change in the way students were reviewed for admission into an institution of American higher education, this study proffers an alternative admission model for university officials seeking a new, viable option. They consider it to be a means of avoiding controversy, yet still to be a fair predictor of future academic success. They identified variables that correlate with overall college GPA to develop a reliable alternative to traditional methods of admissions review, which were defined as high school GPA and standardized test scores. Their study was conducted at a comprehensive southern university of 12,497 students with 1,843 students in the freshman class. From 258 subjects the authors found that students who report their high school GPAs, (overall and/or from a core of classes), provide their rank in class, and any identification they have with a District Performance Indicator (DPI) or similar predictor, could be considered for admission with the same degree of confidence as that supplied by overall high school GPA and SAT/ACT scores without the controversy over the use of standardized test scores. The authors acknowledged that their use of the DPI may be construed as antithetical to the study as it is compiled from test scores. They argue that more than test scores contribute to the criteria, and that they recognize inequity does exist between various districts in different states.

St.John, E.P., Hu, S. Simmons, A.B., and Musoba, G.D. (2001). Aptitude vs. merit: What matters in persistence. *The Review of Higher Education, 24*,131-152.

In a response to the current legislative climate concerning affirmative action and the enrollment of minorities in institutions of higher education, the authors have offered a new way of approaching admissions and looking at persistence that might improve the diversity of the student body. Due to the challenge against the practice of racial preference, as epitomized by the Michigan case (*Gratz and Hamacher v. Bollinger et al.*), the authors posit that the alternative use of a merit-aware index, when compared to SAT scores, would expand the eligible pool of diverse students for admission. The purpose of their study is to construct a merit-aware index that could be used in persistence analysis. They used a random sample of full-time freshmen enrolled in the public system of higher education in Indiana, 1997-98. This sample was extracted from the total number of Indiana students enrolled in the state institutions of higher education. Using logistic regression statistics the authors found that the merit-aware index is as effective as SAT scores at predicting students' persistence at college within their first year. The article explains that the use of the merit-aware index in admissions decisions might increase the opportunity for those high-achieving students at low-achieving schools.

Schommer, M., & Walker, K. (1997). Epistemological beliefs and valuing school: Considerations for college admissions and retention. *Research in Higher Education, 38*, 173-186.

This study examines high school students' beliefs about learning and the nature of knowledge and attempts to see if there is a relationship between these beliefs and their attitudes towards college. The researchers claim this is important to admission administrators as success in college can be predicted by students' attitude towards school whilst at high school. An epistemological questionnaire which had been developed in earlier research was administered to students in their freshman, sophomore, junior and senior year of high school. Open ended questions were developed especially for this study concerning the future of a fictional student. 'Billy' is a below average student whose mother finished high school and his father completed eighth grade, the family have limited financial resources, and his parents believe he should work at the factory they work in when he graduates. He does not know anyone going to college or anyone that has been. The participants answered questions regarding whether or not they thought he should go to college. The questionnaire and open-ended questions were completed by over 1000 students at a predominantly white Midwestern high school which pools students from wealthy and low income areas. A random sample of students ($N = 158$) was chosen due to the time needed to analyze the open-ended questions, stratified random sampling also enabled the researchers to compare gifted students with those of average or below average abilities. Researchers found that the less students believed in fixed ability, the more likely they were to encourage Billy to go to college, like school themselves, see a relationship between what they learned in school and their everyday life, spend more time studying during their high school years, and anticipate needing to spend even more time studying at college. The researchers suggest that admissions offices might utilize the body of evidence regarding the impact of students' beliefs upon their attitudes and success to assess their beliefs during the application process. Students showing beliefs which might limit their success could then be given individual guidance, or the epistemological instruction could be included as part of introductory first year courses as this would help evolve students' conception of learning and may therefore impact the retention of students.

African Americans

Furr, S.R., & Elling, T.W. (2002). African-American students in a predominantly White university: Factors associated with retention. *College Student Journal, 36*, 188-199.

In this study, 183 African-American freshmen completed a campus climate survey during their first semester on campus. The authors focused their research on the early identification of any factors that may increase the success of African-American students at predominantly White schools. The sample of 183 students was 74% female and 89% lived in residence halls on campus. The Freshman Climate Survey was utilized for this study. Results indicate that 82% of those students returned for the third semester

and 76.2% for the fourth semester. African-American students who were not retained were significantly more likely to report that the availability of financial aid was a major factor in their decision to attend this university. Additionally, students who did not return after three semesters were more likely to report that they worked to pay for tuition, fees, and books. Those who were retained to the third year reported that they were more likely to work for spending money instead of tuition money. This study offers some interesting findings that other campuses may want to explore. The sample in this study was not random, which may limit the study. Financial aid seems to have played a major role for the students in this study.

Gloria, A.M., Robinson Kurpius, S.E., Hamilton, K., & Willson, M.S. (1999). African American students' persistence at a predominantly White university: Influences of social support, university comfort, and self-beliefs. *Journal of College Student Development, 40*, 257-268.

In an effort to better understand factors influencing the persistence of African American students at predominantly white institutions, the authors undertook a study of 98 African American undergraduates at a large, predominantly White Southwestern state university. The participants were recruited from their general studies requirement classes where all students were given a survey packet and asked to return it. The return rate indicated that the sample represents about 10% of the African American undergraduates on the campus. The constructs of social support, university comfort, and self-beliefs were found to significantly predict persistence. The authors note that the study is limited by the self-reporting of its participants, as it did not assess actual behaviors.

Good, J., Halpin, G., & Halpin, G. (2002). Retaining black students in engineering: Do minority programs have a longitudinal impact? *Journal of College Student Retention, 3*, 351-364.

This study investigated if an effect on academic achievement occurred throughout the samples' sophomore year of study for students enrolled in the Minority Engineering Program (MEP). In addition, the researchers wanted to examine if the participants were more likely to remain with the College of Engineering as a result of being involved in the program. The sample consisted of 58 African-American students in a pre-engineering program at a large university. GPA was collected for two groups (34 volunteer participants and 24 in comparison group) throughout their sophomore years. In addition, 12 of these students (6 from each group) were interviewed about their freshmen year experience. Findings suggest no clear impact of the MEP on academic outcomes (quarter grades). Participating in the MEP program did affect retention, however. Over 75% of the program participants remained in the College of Engineering and less than 50% of the nonparticipants remained. This study does begin to address minority student issues in engineering programs. It would be interesting to take this study further to evaluate which components of the MEP program work well. Many African-American students may feel

even more isolated in science programs. It is clear that much more research in this area is warranted.

Guifrida, D. A. (2003). African American student organizations as agents of social integration. *Journal of Student College Development*, 44, 304-317.

This qualitative study examines the effect of participation in African American student organizations on the integration of 88 undergraduate students at a predominantly white institution (PWI). Data was collected through a series of focus groups ranging from 2-6 people in total for sessions of 1.5 to 2.5 hours in length. The author notes that the type of organizations discussed by the students included Greek societies, student government, honors programs, and religious and political groups. The students responses indicated that building relationships with faculty were easier with an affiliation to a group as it gave them a way in, that the organizations provided them with a means of giving to others in the African American community, that students from predominantly black backgrounds found comfort in the companionship of people like themselves, and other students found that they were exposed to cultural aspects of their black heritage and found new connections. Some students from predominantly white backgrounds described how they felt forced to choose between social integration with the white or black students, therefore interacting with black students was the hardest part of their transition to college. For the students from predominantly black backgrounds this study does support previous research indicating that African American organizations helps their integration into college life and aids the building of relationships with faculty both of which have been proved to be important to the continuing success of students. The author does suggest that research be applied to the effect of organizations upon students' academic integration.

Howard-Hamilton, M.F. (1997). Theory to practice: Applying developmental theories relevant to African American men. *New Directions for Student Services*, 80, 17-30.

As African American men can wrestle with psychosocial issues of great complexity due to their possible experiences Howard-Hamilton notes that traditional theories of student development may not be relevant or inclusive of their needs. Her chapter presents theories which are inclusive of the needs of African American men, and outlines two Afrocentric models. The author notes that traditional student development theories do not reflect "the sociocultural perspectives and realities of a multicultural society" (p.18). She describes the possible use of four theories to aid interventions towards the development of African American men attending our institutions, with applications for practice, (1) Cross's Nigrescence Theory (1991, 1995), (2) Robinson and Howard Hamilton's Africentric Resistance Model (1994), (3) Erikson's Identity Development Model (1980), and (4) Bandura's Social Learning Model (1977). The first two were specifically designed to chart the process of resocialization where an Africentric model was used. The latter two are models which can be adapted for research

on the development of African American students. Mentoring and engagement in the models are advocated for aiding African American men in developing all the necessary tools to negotiate challenging circumstances.

Kobrak, P. (1992). Black student retention in predominantly white regional universities: The politics of faculty involvement. *Journal of Negro Education, 61*, 509-530

This article is a response to the demoralizing loss of Black students in American institutions of higher education reported in the late 80s, and examines who exerts influence on Black student retention in higher education, who does not, and why. Kobrak notes that the majority of disadvantaged Black students are attending large, predominantly White, public institutions where sympathetic White faculty need to be actively engaged in retention efforts, not only for the students but also to shoulder some of the responsibility under which their Black colleagues labor. He notes that these institutions are hampered in their retention efforts for Black students by the limited contact between faculty and students. He postulates that the organizational structure of the university and the role of the faculty within that structure provide incentives which are at odds with the desire to expend energy and time with non-research activities, such as mentoring, and in fact may be construed as detrimental to professional mobility and status. Kobrak discusses various ways in which committed White faculty might be engaged in retention efforts, and chooses to focus on the STAR program at Western Michigan University as an example of a successful program, although he does attempt to respond to some of the criticisms of the program too. He also advocates the utilization of Black and White Emeriti professors in retention efforts. He concludes that the resolution of this within universities is essentially an organizational and political challenge, which should involve the whole of the institution not just a beleaguered few.

Lee, W.Y. (1999). Striving toward effective retention: The effect of race on mentoring African American students. *Peabody Journal of Education, 74*(2), 27-44.

The researcher examined mentoring relationships and their effect on retention for African American students. African American students often require considerably more time to complete a degree. These students often experience a culture shock, especially when enrolled at a predominantly White university. In addition, institutional culture may also play a role in early departure for African American students. This study consisted of 120 students in the University Transition Program (UTP) at North Carolina State University. This program's goal is to help academically unprepared students transition into the university. The author utilized focus groups to explore three areas: (1) students' perspectives on their adjustment to NCSU, (2) students' perspective on the value of having a faculty mentor, and (3) students' perspective on the importance of having a same-race mentor. Findings indicate that adjustment to college was more difficult for this group of students. However, they were quite optimistic about their future at NCSU. Students indicated that they would like to have a faculty mentor because they believed it would be a tremendous help with their academic and professional development. Lastly, the students in this study indicated that having an African American mentor was less

important than having a mentor in their career field. Surprisingly, some students in this study indicated that they did not consistently have positive interactions with African American faculty members. This study provides some interesting findings as they relate to mentoring programs for African American students.

Person, D.R., & Christensen, M.C. (1996). Understanding Black student culture and Black student retention. *NASPA Journal*, 34, 47-55.

The authors of this article discuss the role that Black student culture plays in the recruitment and retention of Black students at a predominantly White liberal arts and engineering school. This study attempted to evaluate if a Black student culture existed on campus. If a culture exists, the authors were interested in examining behaviors and interactions of the students. The sample consisted of 43 students, each of which completed a survey. Results indicate a distinct Black student culture on campus. The participants believed that the campus should provide support services such as tutoring, counseling, and summer bridge programs. Most of the students in this study (83%) reported spending most of their free time with other Black students. Overall, students reported being satisfied with their academic experience but dissatisfied with their experiences socially. The authors discuss implications for practice for student affairs professionals.

Rowser, J.F. (1997). Do African American students' perceptions of their needs have implications for retention? *Journal of Black Studies*, 27, 718-726.

Efforts to improve the retention and success of African American students, and in fact all students, are based on others perceptions of their needs. This paper seeks to identify what the entering African American freshmen believe their needs to be as they start their college career. During Freshmen Orientation at a Midwestern university a survey was administered to appraise the students' perceptions of their academic preparation for higher education, their expected GPA, year of graduation, their personal and social preparedness for adapting to college life, and areas where they might need help to succeed. 1,107 students participated in the survey, of these 35 were male African Americans, and 82, female African Americans. The sample for this study was 25 African American males and 64 African American females. Rowser found that the students had unrealistically high expectations for their first year at college, for example, even though less than 70% of the students had entered the university with a high school GPA of 3.0 or above, more than 90% of the students expected to have a college GPA of 3.0 or better. Although being very positive and optimistic in their answers, outcomes which do not fulfill these students' expectations could result in frustration and possible departure. Another finding which begs need for further research was apparent gender differences in perceived needs, which Rowser suggests should perhaps have greater significance in retention efforts.

Schwartz, R.A., & Washington, C.M. (2002). Predicting academic performance and retention among African American freshmen men. *NASPA Journal*, 39, 355-370.

This study sample consisted of 229 African American freshmen at a historically Black, private liberal arts college. They were surveyed about their adaptation to college utilizing cognitive and noncognitive measures. The measures included high school grades, high school rank, SAT scores, and the Noncognitive Questionnaire Revisited (NCQ-R). Fifteen (15) independent variables and three (3) dependent variables were examined in this study. Findings indicate that high school rank and grades were significant in predicting academic success. High school rank and social adjustment were significant in predicting retention for this sample of students. In predicting academic achievement, attachment to the institution was also significant. The authors note that the generalizability of these findings may be limited due to the small and homogeneous sample of students. A broader study of these factors at other HBCUs would be helpful in future research.

Alaska Native Students

Reyes, M.E. (2000). What does it take? Successful Alaska native students at the university of Alaska Fairbanks. *Journal of College Student Retention*, 2, 141-159.

This is a qualitative study involving successful students in the upper and graduate levels at the University of Alaska Fairbanks. All of the participants are Alaska Natives. The researcher attempts to provide information that might aid higher education administrators in the recruitment and retention of Alaska Native students. Two focus groups during spring 1999, divided by gender, explored the facets of their life and experience that had contributed to their success or impeded them and their achievement in higher education. Students identified five contributing attributes: (1) their own hard-work, (2) financial support from Native Corporations, (3) family support, (4) employment, and (5) the opportunity to take developmental courses on campus. Barriers were recognized as being (1) poor academic preparation, (2) financial difficulties, (3), insufficient childcare, (4) lack of affordable housing, and (5) having difficulty speaking up in class. Discrimination and bias were reported by the students and they offered suggestions and advice for potential Alaska Native students on how to succeed.

Asian American Students

Gloria, A.M., & Ho, T.A. (2003). Environmental, social, and psychological experiences of Asian American undergraduates: Examining issues of academic persistence. *Journal of Counseling & Development*, 81, 93-105.

Most research and institutional data involving Asian Americans does not differentiate between different ethnic groups, making it difficult to assess disparity between the stereotype of Asian American success and the reality for the ethnic groups. This study surveys a total of 160 Asian Americans – 55 Chinese, 13 Filipino, 27 Japanese, 32 Korean, 15 Pacific Islander, and 18 Vietnamese. Elucidating the educational

experiences of the students from the prospective of a psychological, social and environmental framework was the focus of this study. Previous research has suggested that their social support, beliefs, and ease within the university environment play a big part in the success of the different Asian American ethnic groups. Students were recruited at two large, southwestern universities, and 160 completed surveys that focused on three main areas of questions: (1) comfort in the university environment, (2) social support, and (3) self-beliefs. The researchers found significant relationships among the three sets, and found that they affected persistence, particularly social support. The results also identified significance difference between ethnic groups which highlights the need for more research of Asian Americans which is ethnic specific.

Athletes

Hollis, L.P. (2001). Service ace? Which academic services and resources truly benefit student athletes. *Journal of College Student Retention*, 3, 265-284.

In this study, Hollis examines the role that academic services play in the life of the student-athlete. Hollis argues that student-athletes often make the choice to focus more on “play books than textbooks” given the competitive nature of intercollegiate athletics. Hollis utilizes Mithaug’s Equal Opportunity Theory as the theoretical framework which justifies the use of student-athlete support services programs. She argues that athletes often receive academic advising to keep them eligible to play rather than to earn viable degrees. This study begins to examine if institutions are meeting their responsibility to provide equal educational opportunity for their student athletes. Hollis argues that little, if any, empirical research exists that examines this issue. She designed her own instrument that was then distributed to 146 heads of student-athlete support services programs at Division-I schools. The final sample consisted of 91 schools. Hollis examined graduation rates, services, staff, space, budget, and administrative support variables. Findings of this study indicate that schools who admit underprepared student-athletes are providing more academic support services. This study also revealed that summer school before the first year is a service that provides the most academic success for student-athletes. According to Hollis, extra resources alone do not have a positive impact on graduation rates. Finally, Hollis argues that the major impediment to graduating for a student-athlete is their poor academic preparation.

Career Choice/Counseling

Blinne, W.R., & Johnston, J.A.(1998). Assessing the relationships between vocational identity, academic achievement, and persistence in college. *Journal of College Student Development*, 39, 569-576.

This article presents an interesting study and perspective on the persistence of college students. Blinne and Johnston examined the relationship between students’ self-reported sense of clarity about their career direction and their persistence in college. The

sample consisted of 1,972 entering first-year students who completed the My Vocational Situation (MVS) scale. Approximately 1,000 new students did not participate in the study. In addition to the MVS, the researchers used the university advisory code that predicts a students' level of academic achievement. Each student completed the survey and their enrollment status was checked three years following the completion of the survey. The persistence rate for the entire group was 70.5 %. The authors reported that those students with higher scores on the MVS were not more likely to persist, which did not support the main hypothesis. As with previous research, there appeared to be a strong connection between academic achievement and student persistence. This article does provide an interesting perspective in the study of student persistence

Murray, J.L. & Hall, P.M. (2001). The student activities interest questionnaire: Relating Holland's vocational theory to student involvement. *Journal of College Student Retention*. Vol. 2, 355-365.

A description of the construction and validation of *The Student Activities Interest Questionnaire* (SAIQ) is the purpose of this article. As social integration is an empirically verified contributor to the persistence of students, this questionnaire was developed, in correspondence with Holland's 'hexagonal model of occupational preference', to aid students in identifying opportunities on campus which reflect their own interests. The participants were lower division undergraduates at a predominantly residential, private, rural, northeastern campus. All 206 of the participants lived in a coeducational residence hall where the questionnaire was distributed to them by residential assistants. Although encouraged by this initial validation of their instrument, the authors admit that more research is needed and that they anticipate making some revisions.

Perry, S.R., Cabrera, A.F., & Vogt, W.P. (1999). Career maturity and college student persistence. *Journal of College Student Retention*, 1, 41-58.

These authors examined the role of career maturity on the persistence of traditional-aged college freshmen. The sample consisted of 307 students from the incoming class of 1992. They utilized Holland's *My Vocational Situation* scale to measure career maturity. In addition, the authors examined persistence (return for sophomore year), intent to persist (1 question), academic and social integration, contact with faculty outside of classroom, goal commitment, institutional commitment and academic performance (GPA). The authors found that career maturity was positively associated with many variables that are important to persistence (GPA, academic integration, faculty contact). In addition, career maturity also helped to explain the variance in the intent to persist. The authors argue that Tinto's and others' presumption that goal commitment adequately captures the career maturity is not supported in this current study. This is an area that needs further research according to these authors.

Peterson, S.L., & Delmas, R.C. (2001). Effects of career decision-making self-efficacy and degree utility on student persistence: A path analytic study. *Journal of College Student Retention*, 3, 285-299.

Peterson and Delmas attempted to determine if there was support for any causal relationship between the career decision-making self-efficacy and the persistence of college students. In addition, they wanted to evaluate the use of a path model to map the effect of career decision-making on persistence. The sample for this study consisted of 418 under-prepared students who were enrolled in a developmental education program. Two instruments were administered to each student, The Career Decision-Making Self-Efficacy Scale (CDMSE) and a revision of the Institutional Integration Scale (IIS). Students were randomly selected and placed into two groups. The authors utilized path model analyses to determine any effects of career decision-making self-efficacy on persistence. Results suggest that Degree Utility plays an important role in helping to determine the persistence of nontraditional, under-prepared college students. Second, the model indicates that CDMSE contributes to the academic and social integration of these same students, but does not make a direct effect on persistence. The authors also found that academic integration and intention have significant influences on student persistence, and this is consistent with previous research.

Community Colleges

Burgess, L.A., & Samuels, C. (1999). Impact of full-time versus part-time instructor status on college student retention and academic performance in sequential courses. *Community College Journal of Research & Practice*, 23, 487-498.

These authors completed a study examining the use of full-time and part-time faculty members of a community college system and the effects of part-time instructors on the academic achievement of students. They examined four different sequences in which a student can take sequential courses: (1) both courses taught by full-time faculty, (2) both courses taught by part-time faculty, (3) first course taught by full-time and second taught by part-time, and (4) first course taught by part-time faculty and second by full-time faculty. Courses examined in this study were developmental math (Algebra-Intermediate Algebra), regular Algebra/functions sequence, and freshman English. Results for all groups studied indicate that those students who had the first course with a part-time instructor and the second with a full-time instructor are less likely to complete the course as compared to any of the other three possible teaching combinations. Furthermore, students taking the first course from a part-time teacher followed by a full-time teacher in the second course were less likely to pass the second course with a "C" than any other teaching combination. The results from this study provide a good starting point for higher education to have a discussion about the use of part-time faculty. Often these faculty members are overworked and underpaid, making it less likely that these faculty members can be fully effective.

Clements, E. (2000). Creating a campus climate in which diversity is truly valued. *New Directions for Community Colleges*, 112, 63- 72.

This chapter describes the aligned initiatives undertaken by Middlesex Community College in the recruitment and retention of its extremely diverse student body. They set about a multilayered collaborative change throughout the college which would effect staff, faculty and students, and ultimately would alter the campus climate to one which was welcoming to and nurturing of their diverse students. Seven key elements formed the core of their approach: (1) Orientation was adjusted to reflect the commitment to valuing a diverse student body, (2) an easy access free ESL program was started, (3) student services finances were refocused to focus on programs that addressed diversity issues, (4) international student fellowships were created to allow students the opportunity to experience different cultures outside of their state and country, (5) rather than having different clubs for differing ethnic groups the “International Club” was created, (6) the Freshman Seminar curriculum was reinvigorated towards the new aims of the college, and (7) a student theater troupe which improvises on topics relating to diversity was started. Assessment showed that the experiences of students at college improved, their future success and aspirations were impacted, and the things they learnt at college was significantly, positively and lastingly transformed by this new focus of valuing difference in others.

Hagedorn, L.S., Maxwell, W., & Hampton, P. (2001). Correlates of retention for African-American males in community colleges. *Journal of College Student Retention* 3,243-261.

Due to the considerable social inequities facing African-Americans males and unequal opportunities they are presented with, higher education is often cited as the means of redressing the balance. Yet the effects of such inequities – poverty and lowered educational expectations for example– make this difficult to achieve. Community colleges are often the entry point for predominant numbers of African-Americans seeking a higher education whilst balancing employment and families. However, the authors comment that persistence among community college students is not high, especially the persistence of African-American males. This study aims to explore predictors of retention among African-American males at an urban community college, and further examine if these factors are consistent indicators of success throughout each semester enrolled. The authors analyze data from three cohorts of men, numbering 202, over three semesters. Factors that predicted success for this group included their high school grades, the number of courses they were taking, their age, high goals, and early identification of a major.

Mutter, P. (1992). Tinto’s theory of departure and community college student persistence. *Journal of College Student Development*, 33, 310-317.

Mutter utilizes Tinto’s theory of student departure to study persisting and non-persisting students at a large community college in the Midwest. A random sample of 872

persisting students and 577 non-persisting students was generated from institutional data and a total of 766 students responded, 521 persisting, 245 non-persisting. Respondents of this questionnaire survey did receive an incentive for their participation. Social integration was not found to be as influential in this study as academic integration. A relationship was found between students who interacted with faculty and staff regarding school. Black persisting students were shown to have more interaction with college personnel, while White non-persisters reported higher interaction in comparison to their White persisting peers. Institutional fit and career aspirations were also shown to effect persistence. The author suggests that in light of her findings community colleges should endeavor to help students become more engaged with life on campus, promote and make effective career advising available at all times, and find ways of fostering students' families and friends to encourage their educative aspirations.

Peters, R. D. (2000). Predicting the end of term status of community college general psychology students. *Journal of College Student Retention*, 2, 109-114.

The construction and validation of a statistical model that could predict the success or failure of students in a general psychology course at a Western community college was the purpose of this study. There have been several studies concerning success and failure focused on students at four year institutions but extremely few have attempted to center on students at two-year community colleges. As Peters outlines, individual models for these institutions are necessary due to the many dissimilarities between the student populations at these types of institutions. 935 general psychology students were used in the formulation of the model. The researcher's exploratory analysis of 28 predictor variables found that the most reliable indicators of student success or failure were their age, high school grade point average, and composite ACT score. After confirming the model, the overall predictability was 74 percent. The model failed to identify 13-14 percent of failing students but a modification of the prediction rule dropped this to 7 percent. Peters discussed the importance of this type of data for community colleges not only as a means to reduce attrition through anticipatory remedial classes for students determined by the model but also as consistent with the commitment of such institutions towards quality of education and their service to the student.

Stromei, L.K. (2000). Increasing retention and success through mentoring. In S.R. A Aragon, (Ed.) *New Directions for Community Colleges*, no. 112, pp.55-62. San Francisco, Jossey-Bass.

The author of this piece discusses the community college and its likelihood to more often encounter the student at risk. Mentoring programs are increasingly being utilized to help these students. The author argues that mentoring should combine both learning and doing so that students are better able to transition from school to work. These types of mentoring programs, according to Stromei, can enhance the retention of minority students, who are already underrepresented in higher education. Stromei discusses the AMIGOS formal mentoring model. Mentors and mentees are matched

using assessment instruments. They then take part in a problem-based activity so that the student is able to observe, imitate, and practice. Lastly, the pair began the socialization process that helps build the necessary rapport to make the relationship work for both the mentor and the mentee. This is an interesting mentoring model that may warrant some formal assessment of outcomes.

Stovall, M. (2000). Using success courses for promoting persistence and completion. *New Directions for Community Colleges, 112, 45-54.*

Due to the diverse nature of the student body, the integration of students at a community college is challenging. In an attempt to ease the students' transition and prepare them for success community colleges have implemented programs to provide this function, usually known as student success courses or the freshman seminar. Such courses improve the students' experience and their academic outcomes – for example, first semester performance of participants is higher than non-participations and for minority students research shows that participants' performance is positively impacted more than white students. This chapter outlines a model of a student success course at a community college. The description of its design and implementation considers the following issues: the goals of the course, organization and delivery, course content, campus support, recruitment and training of instructors, the recruitment of students, and assessment. An important thing to remember is that the students at community college and enrolling in this course will typically be students whose previous academic success will have been limited; therefore the development of positive attitudes towards learning and confidence in their own abilities is imperative.

Wild, L., & Ebbers, L. (2002). Rethinking student retention in community colleges. *Community College Journal of Research and Practice, 26, 503-519.*

The established definition and measurement of retention within higher education is at odds with the purpose and practice of community colleges. The authors remind readers that the models that have reinforced these definitions, benchmarks and means of measurement are based on traditional students at residential university settings. Students at community colleges are often not traditional and their goals do not match that of their peers at other types of institutional setting, therefore combating retention at community colleges requires initiatives that have been specifically designed in response to their needs and population. Wild and Ebbers outline the means of moving towards an understanding of community college retention through consideration of three main issues (1) definitions of student retention, (2) theoretical models, and (3) current research. The implication of these three issues within the context of community colleges is the crux of their writing. They offer some suggestions to institutions that might aid their retention endeavors after the development of appropriate, institutionally specific indicators of student retention. Cohort groups, learning communities, tutoring, and supplemental instruction are some of their suggestions. The authors also provide recommendations for practice that leaders and practitioners may find of use.

Zamani, E.M. (2000). Sources and information regarding effective retention strategies for students of color. *New Directions for Community Colleges*, 112, 95-104.

Literature from the ERIC database is reported in this chapter. Zamani recounts research dealing with factors that are related to the retention of minority students, such as personal, demographic, cultural, and institutional characteristics, and then relates this to specific research within community colleges. These colleges show that students of color are not going to, persisting, or succeeding at community college in the numbers that white students and Asian Americans are. In an attempt to combat this situation Zamani relates the strategies and programs specifically designed to foster success in students of color, for example, Student Support Services, and programs devised to aid students' socialization and mould institutional climate. The implications for institutions are many – learning environments which are inclusive to all must be facilitated, and financial resources must support the rhetoric of diversity to make it a reality.

Commuter Students

Johnson, J.L. (1997). Commuter college students: What factors determine who will persist and who will drop out? *College Student Journal*, 31, 323-333.

This study investigated what factors play a role in student persistence at an institution that serves mostly commuter students. This was a longitudinal study that followed the sample for six (6) years. The sample consisted of 171 undergraduate students. In addition to being tracked over a six-year period, they also completed a number of surveys during this study. The sample was divided into two groups; the retained group and the dropout group. Findings indicate that those students who had closer contact with faculty were the successful (retained) ones. Additionally, students who reported being more connected to the university were retained. In regards to gender, females tended to leave the university more than males. This study is important because it addresses a student population that is often overlooked on campuses.

Tharp, J. (1998). Predicting persistence of urban commuter campus students utilizing student background characteristics from enrollment data. *Community College Journal of Research and Practice*, Vol. 22, pp. 279-294.

This article provided a summary of the results of a longitudinal retention study in which variables from the student database were used to predict student dropout rates. The study was conducted at a four-year, urban commuter campus and was designed to determine if differences in student background characteristics could distinguish differences in persistence rates between associate and bachelor degree-seeking students. The results of this study showed that those students enrolled in two-year degree programs had higher persistence rates than those students seeking a bachelor's degree. There were two particular variables that were significantly better in their ability to predict dropout; first semester hours and first semester GPA. These types of variables, according to the

author, may be the best way to predict dropout rates for those nontraditional students at urban commuter campuses.

Counseling Centers

Turner, A.L., & Berry, T.R. (2000). Counseling center contributions to student retention and graduation: A longitudinal assessment. *Journal of College Student Development, 41*, 627-636.

This study investigated the impact of campus counseling on academic progress and retention. The authors utilized self-report and objective measures from records of counseling center clients. The study was conducted at a mid-size, Western, land grant university. The study examined records of 2,365 clients during a 6-year period. This group of students was compared with the remainder of the student body for this study. Sixty-five percent of the clients were female, although no impacts in regards to gender were examined. Findings indicate that those students using counseling services showed a higher retention rate to the Fall semester compared to the student body control group (70.9 % vs. 58.6%). Findings also indicate that 70% of counseling center clients reported problems with academics. This study is strengthened by the use of a longitudinal assessment. However, created control groups and single campus findings limit this study, according to the authors.

Wilson, S.B., Mason, T.W., & Ewing, M.J.M. (1997). Evaluating the impact of receiving university-based counseling services on student retention. *Journal of Counseling Psychology, 44*, 316-320.

The authors of this study were interested in evaluating the impact that using counseling services had on student retention. They examined those students who presented counselors with personal concerns. The study took place between January, 1993 and January, 1994. Students who had either graduated or were still enrolled were classified as retained. The sample consisted of 562 students (65% female, 82% White). Results indicate that those students attending more counseling sessions were more likely to be retained. For example, those students who requested but did not receive counseling were retained at 65% compared with 75% for students who had received 1-7 counseling sessions. Overall, counseled students had a retention rate that was 14% higher than those students not receiving counseling. This study may be limited by concerns regarding the methodology employed. However, it does provide some useful starting points for more research in this area.

Disability

Hodges, J.S. & Keller, M.J. (1999). Perceived influences on social integration by students with physical disabilities. *Journal of College Student Development, 40*, 678-686.

In this qualitative study, the researchers attempted to identify how their social involvement on a university campus was perceived by undergraduate students with

physical disabilities. The number of students with physical disabilities embarking on a journey in higher education continues to rise, but very little research has been done to assess college impact. The study is based on the semi-structured interviews of undergraduate students. The researchers found that the students had a low expectation for social involvement and that accessing social opportunities was inconvenient. Four major barriers to involvement were identified by the students: (1) perceived lack of acceptance by peers, (2) transportation, (3) scheduling of extra-curricular events, and (4) the need for assistive care. However, social integration was occurring through identification within sub-groups.

Diversity

Echols, C.V., Hwang Y.S., and Nobles, C. (2002). Campus diversity: Implementing the town hall approach for racial and cultural understanding at a predominantly white university. *NASPA Journal*, 40, 169-186.

Southeastern Louisiana University (SLU) is a predominantly white institution in New Orleans with a history of non-admittance and segregation towards African-American students. The article describes students' reluctance and discomfort to discuss issues of diversity, their subconscious inclination to seek out companions like themselves, and the importance of encouraging development in their attitudes towards race and culture as being important to their lives. SLU was an institution involved in former President Clinton's initiative on race. The article explains that he realized that the potential of America rested in reconciling, resolving and building from its racial diversity and initiated a series of Town Hall meetings at a selection of institutions. In this paper the authors examine the beliefs, attitudes and knowledge of the students participating in a town hall meeting relating to their responses concerning racial and cultural diversity. They identified four major themes from their dialogue which they label as: (1) perceptions about race, (2) stereotypical beliefs about cross-cultural interaction, (3) an uncomfortable climate on campus, and (4) the effects of prejudicial teaching by parents. They also discuss means of improving cross-cultural interaction in campus communities which includes further involvement by institutions to develop a curriculum which assists student in their exposure, learning and understanding of race and culture.

Villalpando, O. (2002). The impact of diversity and multiculturalism on all students: Findings from a national study. *NASPA Journal*, 40, 124-144.

Research on the impact of diversity and multicultural initiatives at institutions of higher education has reported that it is of benefit to all students. However, no research has attempted to differentiate these positive outcomes between racial or ethnic groups. The author posits that the experiences and benefits to students of color may differ to that of white students. This study draws on data from the UCLA Higher Education Research Institute's Cooperative Institutional Research Program (CIRP). This database contains information from a national longitudinal survey of 365 institutions. The sample for this study uses responses from a freshman survey in 1985, and a follow-up survey in 1989,

totaling in 15,600 students from 365 four-year colleges and universities. The author finds that regardless of race/ethnicity, after four years at college four aspects of their experience has positively contributed to their overall satisfaction with college. He defines these as (1) attending racial/cultural awareness workshops, (2) socializing with students from different racial/ethnic groups, (3) taking courses with content on ethnic/racial issues, and (4) having diversity initiatives supported by campus policies and practices.

Walters, E. (2001). Institutional commitment to diversity and multiculturalism through institutional transformation: A case study of Olivet College. *Journal of College Student Retention*, 3, 333-350.

In this article Walters describes the means by which Olivet College transformed itself into an institution that actively incorporates diversity and multiculturalism throughout institutional, organizational and educational avenues. The college was founded in 1844 by abolitionists and was apparently the first college in the nation to open its doors to women and people of color by charter. After a racial incident between students in 1992, the college has taken extreme measures to re-embrace its founding precepts. Walters details the means of self-analysis undertaken by the college and the multicultural agenda that was formulated as a consequence of this assessment. Their plan contributed towards a new vision for the college and resulted in a conception of campus-wide responsibility that negated marginalization of diverse and multicultural needs and issues. For example, not only was the curriculum revised and complimentary co-curricular initiatives implemented but the faculty and staff were also exposed to inclusive pedagogies and provided development opportunities to further their understanding of these issues.

This article presents a detailed description of the immense efforts undertaken at Olivet College but is disappointing in the means it utilizes to measure the success of the initiatives. The author relies on the data dealing with the enrollment and retention of African American students in 1995-6 and 1996-7 yet unfortunately this is not compared with data before the transformational efforts started in 1992. The study would have also benefited from input by the students rather than just administrators and faculty. Although detailing the experiences and endeavors of one college, the author does make an attempt to make the procedures developed from assessment at Olivet applicable to all institutions of higher education.

Ethical Climate

Schulte, L.E. (2001). Graduate education faculty and student perceptions of the ethical climate and its importance in the retention of students. *Journal of College Student Retention*, 3, 119-136.

Schulte discusses the importance of climate in the retention of graduate students. She argues that many aspects of the climate are important in determining the climate (quality of faculty-student relationships, sense of community, faculty concern for teaching, evaluation of student work). Schulte developed the Ethical Climate Index

(ECI) and distributed it to graduate students and graduate faculty. The sample included 159 students and 52 faculty members. Her findings indicate that faculty rated faculty to student interactions and relationships significantly higher than the students in 2 departments of Education. Faculty and student perceptions of the ethical climate of this Education school were moderately positive. Both groups also reported that they felt that the ethical climate was important in the retention of students. This study addresses retention using a unique variable.

Schulte, L.E., Thompson, F., Hayes, K., Noble, J., & Jacobs, E. (2001). Undergraduate faculty and student perceptions of the ethical climate and its importance in retention. *College Student Journal*, 35, 562-564.

Schulte used the Ethical Climate Index (ECI) to survey 281 undergraduate students and 37 faculty members within the College of Education. Faculty members in this study rated the faculty to student interactions and relationships much more positive than did the students, which seems to be consistent with the previous work of Schulte (2001) with graduate students. Students and faculty members both perceived the ethical climate to be important to the retention of students in the College of Education. The authors offer some recommendations to improve the ethical climate of undergraduate programs.

Faculty

Braxton, J.M., Bray, N.J., & Berger, J.B. (2000). Faculty teaching skills and their influence on the college student departure process. *Journal of College Student Development*, 41, 215-227.

This research builds on the interactionalist theory of student departure of Tinto. The authors in this study examined the perceptions of faculty teaching skills as a precursor to student persistence. The sample consisted of 696 first-time, first-year students. Each student provided data at three times throughout the first year of college. The study was conducted at a highly selective, private research I institution. The students completed the Student Information Form (SIF), the Early Collegiate Experiences Survey (ECES) and the Freshman Year Survey (FYS). From these instruments, several sets of variables were constructed. Findings indicated that students who perceived the faculty to be well prepared and organized had greater levels of social integration. This had subsequent positive influence on institutional commitment and on intent to reenroll. This study indicates that more attention needs to be given to what happens inside the classroom. Furthermore, institutions need to examine the relationship between in-class and out-of-class experiences. The authors acknowledge that this study is limited due to the use of only a single and highly selective university.

Cokley, K. (2000). Perceived faculty encouragement and its influence on college students. *Journal of College Student Development, 41*, 350-354.

Cokley examines the academic self-concept and the academic motivation of students and explores those factors in relation to interactions with faculty members. As Cokley argues, little research exists that has explored these variables and their possible relationships with faculty-student interactions. Cokley administered the Academic Motivation Scale (AMS) and the Academic Self-Concept Scale (ASCS) to 131 undergraduate students enrolled in psychology courses. The sample was not a random sample. Results from this preliminary study indicate that students who had positive perceptions of faculty encouragement reported higher scores on the self-concept and motivation scales than those students who had negative perceptions. The results of this study are limited and more research is warranted.

Nagda, B.A., Gregerman, S.R., Jonides, J., von Hippel, W., & Lerner, J.S. (1998). Undergraduate student-faculty research partnerships affect student retention. *The Review of Higher Education, 22*, 55-72.

This study examined how student-faculty partnerships impacted student retention. This study reports on the Undergraduate Research Opportunity Program (UROP) at the University of Michigan. The major goal of the program is “to broker intellectual relationships between faculty and first-year and sophomore undergraduates through research partnerships” (p.58). The authors selected 1,280 first-year and sophomore students from a total of 2,873 applicants. The students were assigned to either an experimental or control group. The experimental group was 613 students who participated in UROP and a control group 667 students who did not. Data were utilized from the Office of the Registrar. Findings indicate that students who participated in the program showed lower attrition than those who did not participate. Underrepresented minority students who participated in this program had an attrition rate of 11.4% compared to 23.5% for those who did not participate. In addition, retention rates were higher for sophomore students who participated in this program. While this study offers some interesting results, it does not examine which components of the program may work better than others. This study does offer support for student-faculty partnerships.

Financial Aid

Braunstein, A., McGrath, M., & Pescatrice, D. (2000). Measuring the impact of financial factors on college persistence. *Journal of College Student Retention, 2*, 191-203.

This paper follows an earlier one which studied the enrollment decisions of accepted applicants, specifically the impact that family income and financial aid had upon the decision. This analysis looks at the effect of these financial factors upon the persistence of students at the same institution. The data for this study consists of information of freshmen enrolled at the institution for the 1991-2 and 1993-4 academic years. Using a logistic regression analysis, the variables and methodology of which is explained in detail in the article, the authors found that financial aid did not impact

freshmen persistence significantly at the this institution but that students who were of families with greater incomes did tend to persist. This was surprising as their companion study showed that financial aid was a significant factor in enrollment decisions. They also found that for their group of students in this time period that academic performance had the most significant affect upon decisions to leave, as the students who had performed poorly in their freshmen year tended to drop out before their sophomore year.

Bresciani, M.J. and Carson, L. (2002). A study of undergraduate persistence by unmet need and percentage of gift aid. *NASPA Journal*, 40, 104 – 123.

Using information relating to financial aid and student persistence over five years, the authors examine how unmet financial need and the amount of gift aid is related to undergraduate persistence. The population used for the study was not defined by institutional type, and the authors also did not provide information concerning broad student demographics. However, they found that in their population of students the level of unmet need is more of a predictor of their ability to persist than gift aid. Due to this finding they recommend that institutions attempt to decrease the level of students' unmet need as this may have a positive impact upon student persistence.

Fenske, R.H., Porter, J.D. and DuBrock, C.P. (2000). Tracking financial aid and persistence of women, minority, and needy students in science, engineering, and mathematics. *Research in Higher Education*, 41, 67-94.

This longitudinal research study utilizes data from fall 1989 through 1996-7 to track women, minority and needy students majoring in science, engineering, and mathematics (SEM). The focus of the study was to examine the persistence and financial aid of these groups at a large, public university in a metropolitan area, especially as there has been very little research which combines persistence and financial aid with these groups in the SEM majors. Their work was assisted by the development of a relational database which could track students' academic progress as well as their financial aid. The data of the SEM majors was compared with non-SEM majors for this study. The researchers found that although SEM majors persisted and graduated at higher rates than non-SEM majors, they took longer to graduate. Women, minority, and needy students did receive more aid than other groups. However, in comparison with non-SEM majors aid was more likely to be disseminated on the basis of merit rather than need. The authors state their research implies that improvement is needed in institutional and federal policy and provide suggestions for further research.

Hu, S., & St. John, E.P. (2001). Student persistence in a public higher education system: Understanding racial and ethnic differences. *The Journal of Higher Education*, 72, 265-286.

This article discusses an analysis that was completed with data from the Indiana Commission for Higher Education Student Information System. They compared the effects that financial aid packages had on the persistence of three different racial/ethnic groups. Findings indicate some general patterns that emerged from the study. More

white students in this study were from wealthier families, as one would speculate. Further, a larger percentage of African American students received financial aid and white students received a smaller percentage. There was also a difference in the composition of grades between the ethnic groups. This study also indicates that financial aid in Indiana “was sufficient in achieving equal opportunity to persist for aid recipients and non-aid recipients in each group” (p. 280). The overall persistence rates declined slightly for all three groups in this study. Further, there was a disparity in persistence among racial and ethnic groups in Indiana. However, it does not appear that financial aid was the source of this disparity. The authors discuss implications for public policy in higher education. This article is quite educational for those who are interested in student persistence and how financial aid impacts that persistence.

St. John, E. P., Cabrera, A. F., Nora, A., & Asker, E.H. (2000). Economic influences on persistence reconsidered: How can finance research inform the reconceptualization of persistence models? In J.M. Braxton (Ed.), *Reworking the student departure puzzle* (pp. 29-47). Nashville, TN: Vanderbilt University Press.

The authors look at the development of economic models and examine ways in which the logic of new models can be integrated into research on student persistence. They outline the two common approaches in persistence research: the economic approach and the student-institution fit approach, and also describe the early attempts to integrate the two approaches. These integrative examples include the ‘ability to pay’ model and the ‘college choice-persistence nexus’ model. The authors advocate the inclusion of financial variables into student-institution fit models and discuss the influence of the perceptions of finances on commitment to an institution and on social and academic integration. They also outline the significance of aid and tuition in persistence decisions before offering suggestions for further research which take these considerations into account.

First-Year Students

Barefoot, B.O. (2000). The first-year experience: Are we making it any better? *About Campus*, 4(6), 12-18.

Barefoot offers an overview of the first-year experience. She argues that first-year programs only tend to measure their effectiveness by examining student retention. Much of the research done internally by institutions is never published or disseminated beyond the walls of the campus. Furthermore, she argues that few schools objectively measure the outcomes of their first-year programs. Barefoot discusses the objectives of most first-year programs. They include (1) increasing student-student interaction, (2) increasing faculty-student interaction, especially out of class, (3) increasing student involvement, (4) linking the curriculum and the cocurriculum, (5) increasing academic expectations and levels of academic engagement, and (6) assisting students who have insufficient academic preparation for college. Most first-year programs are “in a continuous battle for status within the academy” (p.17). Furthermore, most of these programs lack broad-based institutional support, including minimal financial support. Barefoot also argues that higher education has a lack of success in forging partnerships

with high schools and middle schools. Lastly, the author discusses the need for more assessment of first-year programs. This article provides a good overview of the goals of first-year programs and also provides a good discussion of challenges that first-year programs face.

Berger, J.B. (1997). Students' sense of community in residence halls, social integration, and first-year persistence. *Journal of College Student Development*, 38, 441-452.

In this study, Berger used concepts from community psychology to complement a revised version of Tinto's model of student departure. He provides a good overview of the community psychology literature and how it can be used to measure the sense of community in residence halls. He collected data as part of a longitudinal study of first-year persistence by soliciting information at three distinct points. Using the Student Information Form (SIF), he collected data in August 1995 at the end of freshman orientation. The second round of data was collected midway through the first semester using the Early Collegiate Experiences Survey (ECES). Finally, the third set of data was collected in March 1996 where Berger administered the Freshman Year Survey (FYS). In total, the study consisted of 718 students and the sample constructed was a longitudinal panel. Berger used 5 independent variables to test the model. Results indicate that levels of family income may be an important part of the student culture and may very well have an impact on how students fit in with their peers on campus. Moreover, White students were more likely to identify with the community in their residence hall than were students of color. Berger also reports that the background characteristics of students play an important role in the persistence process. Finally, the author reports a positive relationship between the students' sense of community in the residence halls and their levels of social integration. He argues that concepts from the field of community psychology can help inform the student persistence process.

Boudreau, C.A., & Kromrey, J.D. (1994). A longitudinal study of the retention and academic performance of participants in freshmen orientation course. *Journal of College Student Development*, 35, 444-480.

The freshman orientation course at the University of South Florida and its relationship to the retention, academic performance, and graduation of the students who enrolled in it is the focus of this longitudinal study. The sample consisted of 1,286 first time college students enrolled at the university for successive Fall semesters between 1987-1990. The total number was divided equally into treatment and comparison groups. The treatment group was determined by the students who enrolled in the course and the researchers attempted to 'match' them with non-participating students to form the comparison group. Students were matched according to high school GPA, SAT scores, gender, race, and major to select students who were as like their participating peers as possible, each participating student being matched with a non-participant. Data was gathered from university records in coded form to preserve the anonymity of the sample. The researchers used Analysis of Variance and Chi-square tests to analyze their data. They found that the retention rates of the orientation class participants were significantly higher for the Fall 1989 and Fall 1990 cohorts, and found positive but statistically

insignificant differences for the two earlier cohorts involved in the study. They also found that there was a significant positive difference in the academic performance of the treatment and comparison groups for the Fall 1989 cohort. Although positing that this freshman orientation course made a difference to the retention of the students enrolled and participating in the study, the researchers do not examine why this is the case. After offering a few possibilities they suggest this be the study of further research as the purpose of their study was to add a longitudinal dimension to the study of orientation courses for freshmen.

Braxton, J.M., Milem, J.F., & Sullivan, A.S. (2000). The influence of active learning on the college student departure process. *The Journal of Higher Education, 71*, 569-590.

The authors of this study utilized a longitudinal design consisting of 718 first-time, first-year students at a highly selective, private research I university. The four types of active learning classroom behaviors examined in this study were class discussion, knowledge level examination questions, group work, and higher order thinking activities. The authors did not assess the faculty attitudes and values regarding active learning. Results show that class discussions and higher order thinking activities are positive influences on social integration. In addition, class discussions also influence subsequent institutional commitment in a positive way. In this study, class discussions also positively influenced student persistence while knowledge level exam questions negatively influenced student persistence. This piece of research is a good exploratory study. More research is needed to develop stronger models of retention in regards to active learning. The authors also discuss some implications for practice. They provide the following as ideas to consider: (1) allow faculty to integrate active learning into classes with larger enrollments, (2) create more first-year seminar classes, (3) more higher level questions should be developed by the faculty, (4) change student course rating instruments to allow the student to report the frequency of active learning activities in the classroom, and (5) develop faculty development workshops that will allow the faculty to incorporate active learning in their classes.

Elkins, S.A., Braxton, J.M., and James, G.W. (2000). Tinto's separation stage and its influence on first-semester college student persistence. *Research in Higher Education, 41*, 251-268.

Centering on Tinto's theory of student departure, particularly the influence of Van Genep's distinct stages of separation, transition, and incorporation, the researchers focus on the concept of separation in this study as expounded by Tinto. They examine how aspects of separation effect the departure decisions of 411 students at a public, four year institution of moderate admissions selectivity. A survey instrument called the First Semester Collegiate Experiences Survey (FSCES) utilized items derived from Tinto's ideas on separation and was administered to the participants. Of this sample, 378 persisted to their second semester at the institution. Consistent with previous research the path analysis results indicated that support has the most influence on the decision to persist/depart, and that racial/ethnic minorities receive less support for college

attendance. This study also found that parent educational level did not influence support for college attendance, although their income did. The researchers conclude that their research indicates that successful negotiation of the stage of separation for first semester students will make it more likely to indicate continuance to their second semester, and that their findings validate Tinto's concept of separation as a construct. Implications for practice are also discussed.

Harrington, C.F., & Lindy, I.E. (1999). The use of reflexive photography in the study of the freshman year experience. *Journal of College Student Retention, 1*, 13-22.

The authors state that the primary purpose of this study was to investigate an alternative means of qualitative research. This interesting article details the methodology of the research which combined the photos taken by the students with a photo elicitation interview with the researchers. A random pool of 750 students was selected from a freshman class of 1949 and then 10 students were selected from that pool. Unfortunately, the researchers do not elucidate how the 10 students were chosen and whether or not this was a random procedure, but they do describe the diverse demographic characteristics of the students, perhaps in an effort to portray how their participants represented a cross-section of their student body. The researchers attempt to illustrate the conscious and unconscious complexity of students' perceptions in regard to their institution and how they are impacted by their individual and multi-faceted expectations and experiences.

Hickman, G.P., Bartholomae, S., & McKenry, P.C. (2000). Influence of parenting styles on the adjustment and academic achievement of traditional college freshmen. *Journal of College Student Development, 41*, 41-54.

The authors of this study used self-report survey data from 101 traditional college freshmen who were enrolled in introductory psychology classes. The researchers utilized the Quick Word Test (QWT) to measure aptitude of the students, the Rosenberg Self-Esteem Inventory, the Parental Authority Questionnaire (PAQ), student GPA, and the Student Adaptation to College Questionnaire (SACQ). The authors explored the relationship between parenting styles and academic achievement and adjustment. In their research, the authors found that authoritative parenting style was positively related to a student's academic adjustment. Self-esteem was a significant predictor of social, personal-emotional, academic, and overall adjustment of these students. Aptitude was a predictor of overall and social adjustment of college freshmen. Interestingly, students from divorced families reported higher levels of adjustment. The authors offer implications for further research and practice.

House, J.D. (2002, June). *An assessment of student characteristics related to successful transition during the first two years of college*. Paper presented at the Annual Forum of the Association of Institutional Research, Toronto, Canada.

House included a sample of 1,849 first-time, full-time students in this study. Students were asked to complete a survey during orientation that examined their high

school experiences and beliefs. Many characteristics were examined including high school courses, reasons for attending college, senior year activities, senior year time use, achievement expectancies, and self-ratings of academic abilities. The dependent variables were GPA after 2 and 4 semesters and persistence for four semesters. Results show that high school courses taken in 5 areas (foreign language, physical science, English, computer science, and math) were significant predictors of GPA after two semesters. Three reasons for attending college (prove to others I could succeed, wanted to get away from home, and make more money) significantly predicted GPA for these students. In addition, senior year time use was a significant predictor of GPA after 2 and 4 semesters.

Kahn, J.H. and Nauta, M.M. (2001). Social-cognitive predictors of first-year college persistence: The importance of proximal assessment. *Research in Higher Education*, 42, 633-652.

Using variables from Social Cognitive Career Theory (SCCT), the researchers attempted to broaden their understanding of factors impacting student persistence with 400 freshman participants at a large, public Midwestern university who were enrolled in the fall semester of 1998. SCCT posits that performance goals, outcome expectations, and self-efficacy are pertinent in the persistence of freshmen to their sophomore year. The researchers performed two hierarchical logistic regression analyses to evaluate whether these three social-cognitive factors contributed to the prediction of freshman-to-sophomore persistence. Kahn and Nauta found that although pre-college assessment of the social-cognitive variables did not add to the prediction of persistence, two of the three factors assessed during the second-semester of the students freshman year did significantly contribute to predictions of persistence to the second-year. The authors suggest some institutional implications and future directions as a result of this type of research.

Mandel, R.G., & Evans, K. (2003). First choice: Creating innovative academic options for first-year students. *About Campus*, 8(1), 23-26.

The authors discuss interventions that have taken place at the State University of New York (SUNY) at Oswego focused on first-year students. Faculty were made aware of retention issues at the university because data showed a large decrease in 1st to 3rd semester retention. John Gardner then visited the campus to highlight the connections between the first-year experience and student retention. To begin addressing these issues, collaborations began to take place on campus between faculty and student affairs professionals. In addition, the campus undertook a reassessment of student advising. SUNY at Oswego then developed a First-Year Advisory Council in 1998 to address the issues of the first-year experience. They developed a set of essential elements that eventually served as criteria for possible first-year programs. The authors offer that key to developing this program was the collaboration between academic and student affairs. In addition, it was key to involve faculty from across the campus to be part of the advisory council. Lastly, it was also important to do assessment and disseminate the results of those assessments campus-wide.

Patrick, W.J. (2001). Estimating first-year student attrition rates: An application of multilevel modeling using categorical variables. *Research in Higher Education*, 42, 151-170.

In light of the theoretical advances in multilevel statistical modeling this article illustrates how researchers could apply the technique to questions within higher education. This study focuses on the area of student attrition and compares the results of a multilevel statistical model with a traditional logistic regression approach. Patrick focuses on a cohort of 2,679 fulltime first year students at a large urban university in the United Kingdom to examine the concept of “matching” between students and the subjects they study and especially how this relates to their persistence. The study finds difference between student attrition in different subject areas even allowing for academic background and preparation. The researcher suggests that his findings could act as an indication of departmental performance level and the need to improve but offers caveats concerning vocational and disciplinary individuality. The study serves as an example of how one might use multilevel statistical modeling.

Sidle, M.W., & McReynolds, J. (1999). The freshmen year experience: Student retention and success. *NASPA Journal*, 37, 288-300.

This study was conducted ex post facto at a medium sized, regional, predominantly White, public university in the Midwest to investigate the relationship between students’ participation in a freshman year experience course and retention and success. The freshmen were placed into an experimental group (those taking the course) and a control group (those not taking the course but matched by attributes). Student data were used to make analyses. The experimental group (n=431) and the control group (n=431) were matched for this analysis. Students who enrolled in the freshman year course continued to the fall semester of the second year at a higher rate than those not taking the course (63% vs. 56%). In addition, students completing the course earned higher GPAs than those who did not enroll (2.17 vs. 1.99). It seems that taking this freshman year course enhanced the first year experience and success for those freshmen. It is possible that those enrolled were inherently more motivated and, therefore, persisted at a higher rate.

Skahill, M.P. (2002). The role of social support network in college persistence among freshmen students. *Journal of College Student Retention*, 4(1), 39-52.

The researcher in this study examined the role social support networks played in student persistence at an urban technical arts college. The study investigated both residential and commuter students for a 12-week period. A total of 40 students completed the study (25 residential, 15 commuter). Data were collected at three times during the study. Results indicated that the size of social networks did not change for either group of students. Furthermore, residential students in this study were more likely to persist than commuter students and more likely to report feelings of success at attaining social and academic goals. Findings in this study are limited due to the low number of participants, the short duration of the study, and the type of institution.

However, it does highlight the need for more research with commuter students on our campuses.

Ting, S.R., Grant, S., & Pienert, S.L. (2000). The Excellence-Commitment-and-Effective Learning (ExCEL) group: An integrated approach for first-year college students' success. *Journal of College Student Development, 41*, 355-362.

The researchers in this study examined the effectiveness of a study skills program for students who volunteered to participate. The authors integrated this study skills component with a set of noncognitive variables to determine how the intervention would affect scores on the LASSI, GPA, and student retention. Only 17 students completed the study skills program which consisted of 90-minute weekly sessions. These students were compared against a control group to examine differences. The LASSI was administered to each student as was the Noncognitive Questionnaire (NCQ). Results indicate that students in the ExCEL group showed higher GPAs than those students in the control group. Further, the retention rate for the treatment group (89%) was higher than that of the control group (83%). The ExCEL program seemed to strengthen the study skills and GPAs of those students who participated. Caution should be taken in generalizing the results of this study given the small sample size.

Ting, S. R. and Robinson, T.L. (1998). First-year academic success: A prediction combining cognitive and psychosocial variables for Caucasian and African American students. *Journal of College Student Development, 39*, 599-610.

Utilizing the Non-Cognitive Questionnaire and the First Year Student Survey the responses of 2,600 Caucasian and African American freshmen at a Southeastern public research university were employed to predict the students' GPAs, for their first two semesters, and their retention within the institution. Cognitive, psychosocial and demographic variables were drawn on to find means of predicting student success. The data in the study suggested that different types of models are more effective at predicting success among different groups of students. Combining the traditional means of prediction, such as SAT scores and high school GPA, with psychosocial experiences that are based on year in school, race and gender for example are more accurate at reflecting the predicted success of groups of students. The study states that even though there are many similarities between students important differences do exist. Explaining the experiences of African American women and Caucasian men, for example, will more accurately predict success when their experiences are reflected through the application of differing sets of variables for each group.

Tinto, V. (1999). Taking retention seriously: Rethinking the first year of college. *NACADA Journal, 19*, 5-9.

This brief article discusses the importance of student retention and the amount of resources that are invested in programs. Tinto argues that while programs have been successful to some degree, most have had more limited impact than they could have on

the retention of students. First year students are often “isolated learners,” instead of learners who are actively involved in the process. Tinto argues that building learning communities for first-year students will help institutions in their retention efforts. Learning communities have three objectives: (1) shared knowledge, (2) shared learning, and (3) shared responsibility. Tinto discusses the research on learning communities. In addition, Tinto offers some suggestions for improving the first year of college. He argues that shared learning should be the norm on campus, that academic advising should play a major role in the first-year experience, and argues that the first year of college should be viewed as a developmental year for students where they acquire the necessary skills needed to grow throughout their college years.

Zhee, L. (2002). *How the first-year college experience contributes to persistence*. AIR Toronto.

Acknowledging the debates regarding the empirical consistency of Tinto’s model of retention, Zhu uses Tinto’s ‘logic of integration’ as the framework for her study which explores student persistence from three perspectives: (1) pre-entry attributes, (2) first year performance, and (3) institutional experience. Reminding the reader that the students’ academic and social institutional interaction is considered to be the precursor for persistence she outlines her two main research questions: (1) What differentiates students in the graduated and not-graduated groups? and (2) Are these differentiating factors statistically significant contributors to persistence?

The 1995 freshman class at a public four year metropolitan city provided the participants for the study. The researcher used student data from 1995 to 2000 and degree data from 1998 to 2000, defining graduation as occurring in no more than six years.

General

Cambiano, R.L., Denny, G.S., & DeVore, J.B. (2000). College student retention at a Midwestern university. *Journal of College Admission*, 166, 22-29.

Authors of this study used high school GPA, College Testing Score (ACT), gender, and age as variables to study student retention (over a six-year period) for the 1989 cohort at a mid-size, public, doctoral university. The sample included 2,499 students at the university. Regression analysis was utilized to examine the relationships between the variables and student retention. High school GPA was a significant predictor of retention at each semester. ACT scores were also significant predictors for retention each semester. Gender was not a significant predictor except for the 9th semester of study. Students over the age of 20 had a significant dropout rate during the first 3 semesters of study. Additional research is warranted to account for other factors that may have contributed to student retention.

Ishitani, T.T., & DesJardins, S.L. (2002, June). *A longitudinal investigation of dropout from college in the United States*. Paper presented at the Annual Forum of the Association for Institutional Research, Toronto, Canada.

Using a national database from the National Center for Educational Statistics (NCES), these authors attempted to examine retention using event history modeling. This method may be helpful in examining the relationship between the timing of events and the factors that affect those events. The sample in this study consisted of 3,450 students who matriculated between August, 1989 and October, 1989. Explanatory variables used include race, gender, family income, mother's highest level of education, subject's educational aspiration, first-year GPA, aptitude, institutional type and size, academic and social integration, financial aid, and hours of employment. Results indicate that lower income students are more likely to depart from college. Interestingly, being from a low income family was even more detrimental in the second and third years of school. Students with mothers that graduated from college were less likely to leave college. Students with financial aid were less likely to depart, especially in the second and third years of school. This study utilizes a different testing model than most other retention studies that may merit some more attention.

Leppel, K. (2002). Similarities and differences in the college persistence of men and women. *The Review of Higher Education*, 25, 433-450.

Leppel approaches college persistence from an economic perspective in this article. She argues that it is easier to keep a customer than to attract a new one. She provides a good overview of the literature and the conceptual framework that guides this examination of persistence. Leppel states her assumption "that students decide to attend or persist at college by maximizing the present value of the stream of current and future utility, subject to an inter-temporal budget constraint." She also discusses factors that influence persistence including family income, age, race, academic and social integration, academic performance, and financial aid. For this current study, Leppel used a national database that was based on the 1990 survey of Beginning Postsecondary Students (BPS). This survey followed a group of students who began their education in the 1989-1990 academic year. She defined persistence as any student who was enrolled at some time during the 1990-1991 academic year, including those who may have changed institutions. In addition, the data included students from both two-year and four-year colleges. Leppel also examined persistence with many more variables. Findings of this study indicate that women's observed persistence rate was higher than that of men. However, the difference was not statistically significant. Further, being older lowers persistence rates for both men and women (more for men). Having children negatively affected the persistence of men but had a positive impact on the persistence of women. Leppel also found that persistence rates were higher for men and women who were more integrated with the college experience. Leppel discusses some implications of her findings and recommends some policies that may help persistence rates for certain groups of students.

Murtaugh, P.A., Burns, L.D., & Schuster, J. (1999). Predicting the retention of university students. *Research in Higher Education, 40*, 355-371.

The retention rates 8,867 undergraduates at Oregon State University between 1991 and 1996 were analyzed in this study. The authors used survival analysis to complete this study. Findings indicate that attrition increased for students with age and decreased with higher high school GPA and first-quarter GPA. Furthermore, students taking the Freshman Orientation Course were less likely to drop out. Results also indicate that high school GPA is superior in predictive value as compared to SAT scores. In this study, in-state students had lower attrition rates than nonresidents. Implications for policy and practice are discussed. This study provides some sophisticated statistical analyses of student retention.

Okun, M., Benin, M., & Brandt-Williams, A. (1996). Staying in college: Moderators of the relation between intention and institutional departure. *Journal of Higher Education, 67*, 576-596.

This study tested hypotheses regarding moderators of the relation between intention and institutional departure. Hypotheses were developed from literature on student departure, the theory of reasoned action, and conceptual analysis of the factors that contribute to intention to leave. This study investigated the possibility that the magnitude of the relation between intention and enrollment behavior varies with grades, commitment, and encouragement from others. Researchers used random sampling on students enrolled in sections of an Introduction to Psychology course at a community college in Arizona, 803 students returned surveys. Logistic regression was used with the following findings: (1) contrary to their initial hypothesis, poor grades did not moderate the intention-departure relationship, (2) in terms of commitment, the intention-departure relation was higher among students who place a high priority on doing well in college compared to students who only place moderate importance on doing well, (3) encouragement from others to stay exhibited a strong, inverse linear relation with institutional departure for those who intended to transfer.

Pritchard, M.E., & Wilson, G.S. (2003). Using emotional and social factors to predict student success. *Journal of College Student Development, 44*, 18- 28.

These authors of this study attempted to predict academic success by using variables not often used in retention research. Often retention research relies on demographic and academic variables. The study was conducted with 218 undergraduates from a private university. The authors utilized many scales and surveys for this study including the Rosenberg Self-Esteem Scale, the BriefCOPE, and the Profile of Mood States (POMS). They were interested in assessing the students' emotional health (e.g., depression, stress, perfectionism) and their social health (e.g., membership in campus groups, extraversion, alcohol use). They found that both emotional and social health factors related to student performance and attrition. The emotional health of students in this study was significantly related to their GPA. In addition, those students who

indicated their intent on leaving the university reported lower self-esteem than other students in the study. The authors of this study contend that a myriad of factors influence the ways that students adjust to college.

Schutz, P.A., White, V.E., and Lanehart, S.L. (2000). Core goals and their relationship to semester subgoals and academic performance. *Journal of College Student Retention, 2*, 13-28.

With the volunteered cooperation of 39 students at a large Midwestern university enrolled in two sections of an undergraduate psychology course, the researchers investigate how core goals are related to semester subgoals. Schutz, White, and Lanehart identified the participants core goals through a means of triangulation, and then identified semester subgoals related to their core goals. This information was combined with time schedule compiled by all participants for one week in a twenty-four hour day, seven day week frame, and their scores from four exams in the semester in this course. Being able to identify core goals, semester subgoals and how these might relate to performance are important to help institutions of higher education understand the relationship between core goals and subgoals and in their ability to aid students in their development of self-regulated learning skills. Similar to previous research, this study indicates the importance of goal stability on performance, attainment and persistence in higher education. It also suggests that courses which focus on learning and study skills/strategies would also benefit students by helping them take time to identify their core goals and distinguish how daily activities contribute to their fulfillment.

Tross, S.A., Harper, J.P., Osher, L.W., & Kneidinger, L.M. (2000). Not just the usual cast of characteristics: Using personality to predict college performance and retention. *Journal of College Student Development, 41*, 323-334.

The researchers in this study examined the ability of personality characteristics (achievement, conscientiousness, and resiliency), high school GPA, and SAT scores to predict cumulative college GPA and retention. Participants in this study consisted of 844 first-year students at a large, public, suburban school who were enrolled in a psychology course in the first academic quarter. The results show a relationship between conscientiousness and college GPA. In addition, the results show a relationship between conscientiousness and college retention. Limitations of this study include the lack of information in regards to why the 75 students left the university. More specific information is needed to truly test the effects of personality on student retention. This study does offer an interesting line of inquiry that may be helpful if further refined.

Graduate Students

Cabrera, R. (2001). Retention issues in legal education: The roles of undergraduate educators and of academic support in the Law school. *Journal of College Student Retention, 2*, 167-182.

In this article, Cabrera discusses some issues with minorities in graduate schools of law. He provides an overview of law school applications and admissions over the last several years. In his research, he claims that law school applicants are down since 1992-93 and that minority student applications are down over the same period of time. He also offers that many of the minority applicants have lower LSAT scores, which may prohibit those candidates from entering the top law schools. Cabrera argues that more needs to be done at the undergraduate level to prepare those who are interested in attending law school. For example, he argues that undergraduates need more training in writing and other communication skills. Furthermore, he argues that undergraduate programs need to educate pre-law students about test-taking, particularly how to take standardized exams. Cabrera also discusses the development of academic support programs (ASP) for law students. Over the last few years, many ASP have been developed that mirror those available to undergraduate students on campus. In the final section of this paper, Cabrera argues that more cooperation is needed between the law schools and undergraduate programs. In fact, he argues that law schools need to become more involved in the undergraduate education of pre-law students.

Patterson-Stewart, K., Ritchie, M., & Sanders, E. (1997). Interpersonal dynamics of African American persistence in doctoral programs at predominantly White universities. *Journal of College Student Development, 38*, 489-498.

This study was a qualitative investigation of 8 African Americans who completed doctoral study at predominantly White universities and was designed to explore and describe their experiences. Each participant took part in two interviews which asked them to talk about their graduate school experiences; these interviews were transcribed and then analyzed using a cross-case perspective to find overriding themes. Findings suggest that the frequency and quality of interactions with faculty and peers are important determinants of persistence and are more salient than personal characteristics or undergraduate experiences. Themes across the case studies: several students reported feeling “invisible” and marginalized in their departments, good mentoring relationships were critical to student persistence and success (especially mentoring relationships with African American faculty), most students reported incidents of racism whether they were intentional or not, faculty encouragement played a key role in continued persistence, positive peer relationships were related to psychological well-being and continued persistence. A key finding in the study was the definition of a “supportive” faculty member as one who (1) demonstrated interest in the student as a person, (2) communicated any criticisms of the student’s work in an objective manner, and (3) had cross-cultural competence in interactions with African American students.

Tam, K.Y., & Rousseau, M.K. (2000). Recruiting minority students into special education doctoral programs: A survey of students' knowledge of higher education. *Journal of College Student Retention*, 2, 1-12.

According to these authors, few minority students apply for doctoral programs in the field of special education. To better understand this, the authors disseminated a survey to students in a master's degree teacher training program in special education. In the study, 85 students responded to the survey (84% were minority students). Students reported the following reasons why they would seek a doctoral degree: (1) financial assistance, (2) desire for intellectual change, (3) confidence I could succeed, (4) desire to be a college professor, and (5) desire to learn research skills. It seems that finances and family obligations are the major limitations for those interested in pursuing a doctoral degree. Many of the respondents reported an interest in a master's degree program that would prepare them to pursue a doctoral degree (this program prepares teachers). The authors provide recommendations to increase the number of minority students who choose to pursue doctoral degrees in special education (increase financial aid, mentorship opportunities, affordable health insurance).

Thompson, G. (1999). What the numbers really mean: African-American underrepresentation at the doctoral level. *Journal of College Student Retention*, 1, 23-40.

In this literature review, Thompson explores the representation of African Americans at the doctoral level from 1970 through the mid-1990's. She finds that, although enrollment has increased since the 1980's, the percentage of African American students enrolled in doctoral courses was the same in the mid-1990's as in the 1970's. She illustrates the inequality in earnings between race and gender upon acquisition of a doctorate, which may have an impact on enrollments. She also discusses the lure of the professional degree, even though economic disparity is also found upon graduation in this group. Thompson posits that African American students are steering away from further education, as it does not make a significant difference to their economic mobility when pitted against the socialized racism of America.

Historically Black Colleges and Universities (HBCUs)

Hickson, M.G. (2002). What role does the race of professors have on the retention of students attending historically Black colleges and universities? *Education*, 123 186-189.

This author conducted a study of 250 students attending an HBCU in Texas. She was interested in the number of students that reported having a mentor and how many reported that it was necessary to have an African American professor or mentor. Students in this study reported that it was important to have a mentor (88%) but an overwhelming majority indicated that it was not important that the mentor be of the same race (98%). Students seemed to think it was important that the mentor or professor care about their progress and their education. The author believes it is imperative that HBCUs

hire dedicated faculty, regardless of race and put measures in place to ensure that faculty are proactively engaged in student mentoring.

McDaniel, C., Graham, S.W., Lege, V., & Cassell, R.N. (2001). Student retention in an historically black institution. *College Student Journal*, 35, 143-166.

This study examined the ability of pre-and early matriculation variables to predict the retention of black residential and white commuter students at an historically Black, open admissions university. The authors used Bean & Metzner's (1985) categorical scheme as their initial framework. They examined 25 predictor variables to investigate their ability to predict future retention. The sample consisted of 1949 first-time entering freshmen. Results of this study show that the following predictor variables had the highest correlation with one year retention figures: ACT test score, ACT math sub-score, adequacy of prior education, high school rank and GPA, and the student's view of actual self. Returning students in this study were more likely to receive financial aid and be a white commuter student. Differences between black residential students and white commuter students are discussed here.

Nettles, M.T., Wagener, U., Millett, C.M., & Killenbeck. (1999). Student retention and progression: A special challenge for private historically Black colleges and universities. *New Directions for Student Services*, 108, 51-67.

These authors discuss various programs at historically Black colleges and universities (HBCUs) that were funded by the Pew Charitable Trusts. These programs were designed to increase student retention at HBCUs. The Third Black Colleges Program (TBCP) was designed to assist participating schools in planning and implementing programs that would enhance student retention on their campuses. Ten institutions participated in the program. The TBCP linked their programs to Tinto's model. The article briefly discusses programs at the ten schools. In addition, it describes the database development for the program. After 5 years, the freshmen retention rate had increased for 9 of the schools. This article is a good overview piece to examine.

Institutional Efforts

Anderson, E. (1982). Forces influencing student persistence and achievement. *Journal Of Counseling Psychology*, 32, 94-103.

This author views student persistence and academic success as results of related causal forces and provides a force field analysis in which to analyze and assess academic programs. This force field analysis helps you distinguish between the forces that are integral in promoting persistence in a general way and those that promote academic achievement. This can be an important distinction with resource allocation. The forces that act upon students and the institution vary by type and in their intensity. Furthermore, the intensity/strength of each force will vary from person to person and group to group.

This model can be applied to help in the explanation of attrition and assist institutions in planning support services and strategic changes in the institution.

Berger, J. (2001). Understanding the organizational nature of student persistence: Empirically based recommendations for practice. *Journal of College Student Retention*, 3, 3-21.

This article uses an organizational perspective to provide insights for improving retention on college campuses. Existing organizational studies were reviewed along with recommendations for improving retention practices. The article looks at the models of organizational behavior to consider how each model may effect persistence; the models are: (1) *bureaucratic*—institution as a formal structure with rules, regulations, hierarchies, (2) *collegial* – institution as collaborative, concerned with human resources and equal participation, use of consensus to establish goals, (3) *political* – political behavior in the institution emerges out of competition for resources and varying interest groups, (4) *symbolic* – focuses on institutions stories, myths, legends, ceremonies, traditions, in creating meaning within the organization, (5) *systemic* – sees the institution as an open system that interacts with the broader external environment. Synthesis of the varying organizational studies make suggestions based on the five models of organizational behavior. Most empirical evidence indicates that bureaucratic organizational behavior has negative effects on student persistence, while collegial organizational behavior, symbolic behavior, and systemic organizational behavior seem to have positive effects on student satisfaction and persistence. Limited evidence points out that highly political campus environments can have negative impacts on student persistence, but this may not be a causal relationship. Recommendations included: (1) provide students with clear lines of communication about goals, policies, and values, (2) provide opportunities for students to participate in organizational decision-making, (3) build a campus environment characterized by fairness toward students, (4) create a balance between structure and responsiveness, (5) engage students in political activity on campus, (6) provide advocates for students, (7) build shared meaning through symbols, (8) build on structural and symbolic connections with the external environment, (9) understand the nature of the organizational environment on campus, and (10) assess student perceptions of organizational behavior on campus.

Bers, T., & Nyden, G. (2000). The disappearing student: Students who leave before the census date. *Journal of College Student Retention*, 2(3), 205-217.

This study examined the demographic and educational characteristics of “disappearing” students, those who do not persist at public community colleges but are unique because they register for classes but withdraw before the semester begins or are dropped from the institution for lack of payment. 1,070 students, about 10 percent of the student population, were identified in the fall semester of 1997 as being “disappearing” students at a community college in Illinois. The following characteristics of this student population were considered from the school’s registration information: gender, age, prior education, and educational objective at college. For more in-depth information 48

students were randomly selected for phone interviews, 31 students responded. Findings from the registrar data and phone interviews indicated that a higher percentage of disappearing students were traditional age and minority students. Disappearing students also had fewer credit hours accumulated and were more often transfer students from other institutions. Phone interviews indicated that top reasons for leaving the institution before the semester began were time constraints and financial constraints, or enrolling in the wrong course. The return rate in subsequent semesters, for disappearing students, was 30 percent for those enrolled prior to disappearing, and 20 percent for new students. This study indicated that even though students may “disappear” for a time, a significant portion of this population later enrolls again for classes.

Borland, K.W. (2001). Assessing retention: Six steps and four paradigms. *Journal of College Student Retention*, 3, 365-379.

Borland posits a model assessing retention in this article which could be of use to practitioners and administrators. He alludes to some of the literature on assessment and the assessment of retention programs before introducing a six-step model of assessment for cross-cutting retention programs. The author identifies four paradigms of retention which are reflective of value, purposes and outcomes of programs dependent on perspective and position. He labels these “Learning, Development, Economic, and Student’s Purposes,” which are usually associated with the faculty, student affairs personnel, administrators, and the students, respectively. Borland argues that to effectively assess retention programs these four paradigms must be involved in the process. He briefly suggests how institutions might do this.

Braxton, J.M., & McClendon, S.A. (2001). The fostering of social integration and retention through institutional practice. *Journal of College Student Retention*, 3, 57-71.

This article describes some recommendations for empirically focused institutional practices which will influence the social integration and subsequent institutional commitment of college students. The authors detail practices, policies and programs which can be implemented to improve student retention in eight areas of institutions of higher education. These areas are: student affairs programming, residential life, advising, administrative policies and practices, faculty reward system, faculty development, enrollment management, and student orientation programs.

Academic advisors are given two recommendations, to encourage their advisees to make their selection of courses taking the teaching practices of faculty members into consideration, and to also encourage participation in the social communities of the institution. Administrators are asked to find and utilize effective methods to communicate rules and regulations important to students and then to enforce these fairly. They also advise administrators of residential campuses to require all first and second year students to live on campus, and that non-residential institutions should develop social environments for their commuter and off-campus students. Those involved in enrollment management are urged to accurately portray the characteristics of their institutions to prospective students, to encourage campus visits, and to give some financial aid to all

students who demonstrate need. As the teaching methods of campus faculty have been shown to impact departure decisions, the authors propose that faculty development should focus on cooperative/collaborative learning techniques and active learning. It is suggested that the application of teaching practices that foster student retention should have impact in the faculty reward structure, that the appraisal of teaching practices should be undertaken by students and colleagues, and that all assessment should indicate the extent to which active learning is accomplished in the classroom. Orientation programs and residential life are asked to provide social opportunities for student interaction. Finally, student affairs programming is directed to do workshops on coping with stress, educational and career planning, and on the history and cultures of different racial/ethnic groups.

Although all of the recommendations are based on empirical research the authors acknowledge that the unique culture and climate of institutions should be taken into account with regard to implementation.

Braxton, J.M. & Mundy, M.E. (2001). Powerful institutional levers to reduce college student departure. *Journal of College Student Retention, Vol. 3*, 91-118.

This article collates a comprehensive classification of 47 recommendations to improve student success and retention through an examination of the articles presented for a special issue of the *Journal of College Student Retention* entitled *Research, Theory and Practice*. The authors classify the suggestions according to the three principles of effective retention espoused by Tinto: (1) effective retention programs being committed to the students they serve, (2) the commitment of effective retention programs to all, not some, students, and (3) the commitment of these programs to the development of communities which are socially and academically supportive of all students who are then integrated as capable constituents.

This is an interesting and informative article bringing together lots of important and pertinent suggestions from experts in the field in a comprehensive manner. Implementation of these recommendations is also discussed by the authors according to institutional domains e.g. administration, enrollment management, student affairs.

Heverly, M. (1999). Predicting retention from students' experiences with college processes. *Journal of College Student Retention, 1*, 3-11.

The evolution of retention studies undertaken at a community college located in a Pennsylvanian suburb, with a diverse and non-traditional student body, is described in this article with the aim of showing how this institution's different approach to the study of retention has led to the identification of changes within student services and instruction which could result in the improvement of retention. In response to what they perceived as the limitations of research available due to the general nature of the findings and the difficulty in translating these into specific actions, they devised a study which would operate with this general retention information. Their study gathered data on students' encounters with college processes. Using a random sample of new students on campus they introduced a two phase telephone survey to assess the student satisfaction with key college processes. This information was compared with the retention data generated by

the institution. The combination of research allowed the institution to make changes in several areas and reinforced the necessity for initiatives already in progress. Financial aid, drop/add facilities, college advising and instruction were the areas identified for improvement at this institution.

Higbee, J.L., Dwinell, P.L., Thomas, P.V. (2001) Beyond University 101: Elective courses to enhance retention. *Journal of College Student Retention*, 3, 311-318.

The new model of elective courses designed by the Division of Academic Assistance at the University of Georgia is the subject of this study. The courses were designed in the attempt to address the academic needs of all students at a large public university. The authors, in their description of these courses, wish to offer an alternative method for improving the learning experiences of students. As elective courses, they posit that these courses avoid the stigma often attached to specific developmental courses while still offering students the means to attain the skills they might require to persist in university. Also, as the courses are for all students, those who might wish to improve learning related skills, even if not in academic difficulty, can do so. The authors relate the success of these programs to their continual full enrollment and positive student evaluation. They admit that their findings are limited by their inability to measure the value of the courses except as perceived by the students.

Kuh, G.D. (2001). Organizational culture and student persistence: Prospects and puzzles. *Journal of College Student Retention*, 3, 23-39.

Kuh examines the relationship between campus culture and student persistence in this article. Campus culture can play an important role in helping the student feel like they belong and are valued, thereby increasing their chances to persist to graduation. He offers a definition of organizational culture in this piece. The article discusses five shibboleths about culture and their effects on student persistence. He also discusses implications for practice and retention policies. For example, Kuh argues that campuses should examine the student experience in and outside of the classroom and do it in a comprehensive manner. This article provides a clear understanding of culture and how it may play a role in the persistence of college students. Kuh also provides a good overview of practices and policies that may enable institutions to increase their levels of student persistence.

Landrum, R.E. (2001). The responsibility for retention: Perceptions of students and university personnel. *Journal of College Student Retention*, Vol. 2, 195-212.

Using a new Retention Questionnaire (RQ), the author surveyed 88 university personnel and 142 undergraduate students to assess the attribution of levels of student and personnel responsibility, by both groups, to student retention. The RQ proffered 81 possible influences on retention and participants rated each item, awarding a percent of responsibility for the respective items between students and university. Although the percent of responsibility was rated for both groups, this article only analyses university

responsibility. Interestingly, differences appeared between university and student participants of their groups' respective responsibility for different items. For example, university personnel thought that their responsibility for "a student's ability to analyze and draw conclusions from data" and "rudeness experienced on campus" was higher than students rated university responsibility. The author is encouraged by the reliability of his instrument and its indications of validity.

Lang, M. (2001). Student retention in higher education: Some conceptual and programmatic perspectives. *Journal of College Student Retention*, 3, 217-229.

Lang offers an overview of student retention research and programmatic interventions in this article. The article provides the reader with a review of conceptual perspectives that affect student retention, with a particular focus on minority college students. Much research has focused on two areas which include student characteristics (GPA, age, gender, financial factors) and environmental characteristics (type of school, services, student involvement). Minority student retention, according to Lang, garnered more attention starting in the mid-1980s. Much of the research on minority students since then has focused on the retention of Black students, especially those on predominantly White campuses. Lang also discusses research concerning other minority students such as Hispanic and American Indian students. He does assert that little research has examined these populations of students. Lang then offers an overview of programmatic efforts that campuses have developed. This article provides a good review of related research and a good overview of the types of programs that colleges and universities have developed around student retention. It does not, however, provide much detail for the reader.

Sieveking, N., & Perfetto, G. (2001). A student-centered individual-level university retention program where attrition is low. *Journal of College Student Retention*, 3, 341-353.

This article described a student-centered retention program developed under the university's Psychological and Counseling Center at Vanderbilt University in Nashville, Tennessee. The university is a highly selective, urban, research institution with a 6-year graduation rate of 86 percent. The average freshmen class size is 1450. The retention program is termed "individual-level" because of its focus on service to the student rather than the organization as a whole. The authors argue that the real causes of attrition are often more complex than what statistics suggest. Clinical experience in working with students who are considering leaving the university suggest that students face anxiety, sense of failure or lack of "fitting in" but may derive pseudo reasons for leaving as a defense mechanism. Rather than focusing on understanding why students leave, the authors suggest helping students find reasons to stay in school, and especially helping students find ways to successfully integrate. The PCC at Vanderbilt focused on retaining students who might otherwise leave by offering personal therapy, an advisory panel of undergraduate students, attrition intervention during the freshman year, and personality testing for those undecided about career path. Findings from their clinical experiences

indicate that retention rates increase as the number of therapy sessions increase. Students seen 8 or more times have a 75 percent chance of staying in school compared to those students only seen once who have a 30 percent chance of staying in school. The advisory panel of undergraduates also served a positive role, as they provided qualitative insights leading to organizational improvements. Attrition intervention involved sending out letters to each freshman student after the first 6 weeks of classes and asking them to respond if they were thinking of leaving the university and also asked if the student would like to talk to someone about their decision to leave. 63 percent of students who participated in the first three years of this project decided to return to school their sophomore year. The authors suggest that it is critical to ask students “are you content that you are here?” and “Do you plan to stay?” These questions often lead to creating improved retention services and programs.

Smith, C.A. (2001). The relationship between institutional enrollment performance and enrollment management effectiveness factors. *Journal of College Student Retention, Vol. 2, 367-377.*

IN an attempt to determine which factors of enrollment management effectiveness are most related to enrollment performance at institutions, a mail survey was sent to 500 enrollment managers at two- year and four- year undergraduate institutions. 261 of the surveys were completed and returned to the researcher. The survey consisted of questions regarding institutional characteristics, recruitment, retention, the achievement of enrollment goals, and the ‘perceived effectiveness’ of enrollment management factors. These 12 major factors were informed by the work of Dolence who developed the following indicators of enrollment management effectiveness: (1) assessment, (2) comprehensiveness, (3) definitions and classifications, (4) documentation, (5) evaluation, (6) key performance indicators, (7) leadership, (8) participation and integration, (9) resources, (10) strategies, (11) systems, and (12) timing. The author was interested in how important enrollment managers perceived these factors to be related to their enrollment performance. Smith makes recommendations based on the information garnered from the surveys specific to institutional type.

Smith, R. (2003). Changing institutional culture for first-year students and those who teach them. *About Change 8 (1), 3- 8.*

This paper relates the changes that a state institution made in an effort to improve the retention of students and augment their experience. The impetus for this initiative was both fiscal and ethical, and the author claims that the changes implemented in the name of retention have in fact altered the culture of the institution itself. Smith describes four of the many enterprises revised or put into practice by a cross-campus committee. Orientation was shortened, and supplemented by video designed by students to be watched before arrival on campus to introduce the new class to an academic community. This video was also reinforced by a website that revolved around four areas important to new students (1) getting started, (2) getting involved, (3) getting support, and (4) getting around. The Mathematics curriculum was overhauled without losing the difficulty of the

courses. As the pace of the primary math course was perceived by the department to be problematic for some students a section with a two semester version of the course was devised. Specialized tutorials and a highly popular interactive call-in television show geared to the pace of the course were both available at times when students were found to be studying ie. late at night/early in the morning! Faculty were also introduced to a two week seminar targeted on reevaluating gateway courses in an effort to improve student success without decreasing the level of study. More research is needed on the individual success of the initiatives but the blend of programs has beneficially changed or formed the attitudes and approaches of students, faculty and staff.

Wang, H, & Grimes, J.W. (2000). A systematic approach to assessing retention programs: Identifying critical points for meaningful interventions and validating outcomes assessment. *Journal of College Student Retention*, 2, 59-68.

The authors of this article discuss a system of an ongoing practice to assess student retention programs. It is absolutely crucial, these authors argue, that schools need to systematically assess programs if they hope them to be successful. They identify three major components of research: (1) determining dropout predictors, (2) identifying critical points, and (3) validating outcomes assessment of retention endeavors. They describe an ongoing, systematic assessment program at Missouri Western State College (approx. 5,000 students).

Woodard, Jr., D.B., Mallory, S.L., & De Luca, A.M. (2001). Retention and institutional effort: A self-study framework. *NASPA Journal*, 39, 53-83.

This article describes a framework for practitioners to follow when evaluating student retention. They provide an overview of previous retention research and their experiences developing the National Graduation Rate Study. They began by replicating Astin's work on the relationship between student background characteristics and graduation rates. They examined a sample of Land Grant, Research I, and AAU universities. They constructed retention self-study framework to chart their study. They identified four areas of influence consisting of student characteristics, institution-wide characteristics, academic good practices, and student services good practices. They then provide many suggestions on how to use the framework may be applied. Lastly, the authors provide some "lessons learned" for those doing retention research. This article provides a good perspective concerning retention research. It provides a framework that can be adapted to many different types of institutions.

Instructional Delivery

Owens, K.A. & Volkwein, J.F. (2001, Fall). *The impact of instructional delivery on learning outcomes and intent to persist*. Presented at regional N.E.A.I.R. conference.

The effect of educational participation on prison inmates is a ripe area for study. Impacted by the varying belief in the rehabilitative nature of incarceration, funding and politics, educational programs have gradually decreased. The boom in the prison population and the increased societal need for education augments the continuance and improvement of educational programs within correctional institutions. This study surveys inmates involved in educational programs at 9 institutions in the state of Maryland, out of the 279 enrolled in courses, 274 inmates completed the survey which took 20 minutes to complete. 111 students in traditional courses and 163 in distance education courses took the survey. Based on the literature regarding traditional theories, student-institution fit models, and self efficacy, the researchers assume that educational outcomes and intent to persist result from a combination of various factors – demographic background, length of prison sentence, instructional methods, and the inmates learning context. This research focuses on the impact of the instructional method. Survey items include, demographic information, the instructional method experienced by the inmates, either enrollment in distance education courses or traditional classroom courses, the effectiveness of faculty, peer interaction, the learning environment, educational outcomes, and their intent to persist. Owens and Volkwein found that there should be more opportunities for interaction between faculty and peers, that participation in programs should not be limited by length of sentence, more opportunities should be available for female inmates, and that although preferred by inmates due its predictability, video instruction should perhaps not be relied on for this population. They call upon the need for further research, especially in the area of the connections between education and recidivism, and emphasis the need to ‘maximize student learning’.

Instructors

Clements, E. (2000). Creating a campus climate in which diversity is truly valued. *New Directions for Community Colleges*, 112, 63- 72.

This chapter describes the aligned initiatives undertaken by Middlesex Community College in the recruitment and retention of its extremely diverse student body. They set about a multilayered collaborative change throughout the college which would effect staff, faculty and students, and ultimately would alter the campus climate to one which was welcoming to and nurturing of their diverse students. Seven key elements formed the core of their approach: (1) Orientation was adjusted to reflect the commitment to valuing a diverse student body, (2) an easy access free ESL program was started, (3) student services finances were refocused to focus on programs that addressed diversity issues, (4) international student fellowships were created to allow students the opportunity to experience different cultures outside of their state and country, (5) rather

than having different clubs for differing ethnic groups the “International Club” was created, (6) the Freshman Seminar curriculum was reinvigorated towards the new aims of the college, and (7) a student theater troupe which improvises on topics relating to diversity was started. Assessment showed that the experiences of students at college improved, their future success and aspirations were impacted, and the things they learnt at college was significantly, positively and lastingly transformed by this new focus of valuing difference in others.

Integration (Academic & Social)

Astin, A. (1996). Involvement in learning revisited: Lessons we have learned. *Journal of College Student Development*, 37, 123-134.

This essay is a review of some of the research on student involvement, as well as providing comments on its relevance to student affairs professionals. Astin reiterates that longitudinal studies support the importance of student involvement as a means to enhance students’ cognitive and affective development. The three most important forms of involvement are academic, faculty, and student peer group involvement, Astin suggests that the strongest source of influence on student development is the student peer group. The institutional climate also has a powerful effect on student involvement and outcomes depending on whether the faculty has a *research orientation* or *student orientation*; one is likely to find a more student oriented faculty at private four year colleges and a research oriented faculty at public universities. Research orientation is negatively correlated with teaching and being oriented towards students. Along the same lines, greater priority is given to supporting student affairs for student development initiatives at smaller, private institutions. On a final note, Astin suggests that assessment of student outcomes is critical for any type of educational reform, which requires an agreement of what student outcomes should be. Most importantly, Astin states that the greatest prerequisite for reaching institutional goals is for the institution to understand its strengths, weaknesses, limitations and potentials.

Beil, C., Reisen, C.A., Zea, M.C., & Caplan, R.C. (1999). A longitudinal study of the effects of academic and social integration and commitment on retention. *NASPA Journal*, 37, 376-85.

This study predicted retention after six semesters for 512 first-year, full-time residential students at a predominantly white, private, research university. The sample consisted of 60% females and 40% males. A majority (76%) of the sample was white. Students completed a self-report scale during introductory English classes. Students were classified as retained or not depending on their enrollment status six semesters (3 academic years) after the initial data collection. Analysis of the data indicated that 74% of the original sample was still enrolled after six semesters. In addition, results indicated that both academic and social integration were related with commitment to persist. The results of this study appear to support the Tinto (1993) model of student departure. One limitation of this study, according to the authors, was the failure to separate commitment

to the university from commitment to finishing a degree. The generalizability of this study may also be limited due to the type of institution examined. However, this study does offer some interesting findings regarding academic and social integration.

Bray, N., Braxton, J. & Sullivan, A. (1999). The influence of stress-related coping strategies on college student departure decisions. *The Journal of College Student Development, 40*, 645-657.

This study focuses on Tinto's (1975) theory of student departure and social integration with consideration for how students deal with stress and the subsequent impacts of this stress on social integration, institutional commitment, and intent to reenroll. Five strategies for dealing with stress were used as the framework for considering students coping strategies: active coping, positive reinterpretation and growth, acceptance, denial, and behavioral disengagement. This study was a longitudinal design of first-year, full-time students. Three different surveys were administered to all students in a freshman class at a highly selective research institution with a total response from 718 students. Path analysis using least squares multiple regression was used and results suggested that social integration was directly impacted by stress coping strategies. *Active coping* mechanisms influenced social integration in a negative direction, *positive reinterpretation and growth* had a positive influence on integration, *acceptance* had no significant direct effect on integration, and *denial* was negatively significant indicating that using denial as a coping strategy resulted in a lower level of integration. The surprise finding of this study was that *active coping* had a negative influence on integration, which may suggest that students that use active coping mechanisms may be proactive in their attempts to deal with stress by limiting their social life and peer relationships, especially if they believe that this can add to their stress levels. It may also indicate that when students are facing problems they feel they cannot share with others, they withdraw and distance themselves from the social environment. Implications of this study indicate a need for orientation programs to address stress management issues with incoming freshmen.

Coffman, D.L., & Gilligan, T.D. (2002). Social support, stress, and self-efficacy: Effects on students' satisfaction. *Journal of College Student Retention, 4*, 53-66.

Coffman and Gilligan investigated the relationship between these variables among 94 first-year college students. They utilized the Satisfaction With Life Scale (SWLS), the Interpersonal Support Evaluation List (ISEL), the Perceived Stress Scale (PSS) and the College Self-Efficacy Inventory (CSEI) in this study. In addition, they collected background data from the participants. Results indicate a significant negative correlation between perceived stress and life satisfaction. They also found a significant positive correlation between perceived social support and life satisfaction. Implications of these findings may be useful to advisors, faculty members, and counselors. For example, counselors may assist students in establishing social support networks such as first-year programs that allow for social opportunities for students. Future research should be conducted so that causal relationships between these variables could be investigated. In addition, it would be desirable to include a larger sample of students in future research.

Helland, P.A., Stallings, H.J., & Braxton, J.M. (2001). The fulfillment of expectations for college and student departure decisions. *Journal of College Student Retention*, 3, 381-396.

This study researches the expectations of students and how this effects social integration. This is important as the authors identify integration, in accordance with previous researchers, as being prominent to the continued, fulfilled persistence of students. The subjects for this study were 718 first-time, full-time, traditionally aged students at a private research I university which is highly selective. The sample used is a convenience sample based on the compliance of the first year students to answer three surveys throughout their first year and indicating their willingness for their responses to be used in further research. The sample for this study comprised nearly half of the entering class (46.4%). Path analysis of the data from the three surveys urges two implications for practice – that institutions should accurately reflect the climate of their campus rather than what they want it to be, and that prospective students should be encouraged to visit campuses. Both of these practices, explain the authors, would allow prospective students to develop a realistic set of expectations, the fulfillment of which should lead to greater social integration, institutional commitment, and intent to re-enroll.

Hoffman, J.L. (2002). The impact of student co-curricular involvement on student success: Racial and religious differences. *Journal of College Student Development*, 43, 712-739.

This study was conducted at a private, Lutheran university in Southern California. The researcher was interested in investigating involvement patterns to determine what differences, if any, existed for racial and religious cohorts. The sample consisted of 188 full-time students (of 764). Data collection included the ACT Student Opinion Survey, developmental transcripts, and university files. Findings from this study indicated that race was not a significant predictor of leadership involvement. In addition, the author's findings indicate that there is a stronger positive relationship for students of color between involvement and measures of academic achievement and retention. Living in residence halls was the strongest predictor of departure for students of color in this study. Living in residence halls may subject students of color to more intolerance according to the author. The author also found that high school grades are stronger predictors and standardized test scores weaker predictors of academic achievement for both racial and religious minority students. The author notes the limitations of using a single institution and that these results may be limited in their generalizability to other like institutions or other populations. This study does, however, put forth some interesting findings concerning racial and religious minority students.

Nora, A. (2001). The depiction of significant others in Tinto's "Rites of Passage": A reconceptualization of the influence of family and community in the persistence process. *Journal of College Student Retention*, 3, 41-56.

This article provides a discussion of the interrelations between Tinto's three stages or "rites of passage" in his Student Integration Model (1993) and the Student Adjustment Model (Nora, 1987) which focuses on the significance of support and encouragement from significant others. Results of several years of research on student persistence show that support and encouragement from significant others in students' lives is important in adjustment to the academic and social environment of the university. Five major conclusions have been drawn from prior studies: (1) encouragement and support can ease a student's transition from high school to college in all phases of the student's college life, (2) varied sources of encouragement and support should come from faculty, staff, parents, and peers (3) academic and social experiences in college are influenced by the degree and support of others, (4) student commitment to attaining a degree is not only related to integration into the university, but also to support and encouragement from others, (5) a student's decision to remain enrolled in college is impacted by support from others.

International Students

Rajapaksa, S., & Dundes, L. (2002). It's a long way home: International student adjustment to living in the United States. *Journal of College Student Retention*, 4, 15-28.

The authors begin to address an important issue in higher education. In this study they compared the adjustment of 182 international students to a comparison group of American students. The international students completed a two-page survey at 12 different colleges and universities. The American students completed a survey in Introductory Sociology courses at a single institution. The international students in this study reported being generally content and most (71%) reported no feelings of loneliness. These reports were lower for international students as compared to American students. In addition, this study confirmed the importance of social networks in the adjustment of international students.

Latino Students/Hispanic Students

Anaya, G., & Cole, D.G. (2001). Latina/o student achievement: Exploring the influence of student-faculty interactions on college grades. *Journal of College Student Development*, 42, 3-14.

Anaya and Cole argue that little research has been conducted about the development of minority students, and especially Latina/o students. To that end, these authors examined the interactions between Latina/o students and members of the faculty. They utilized data from the 1997 CSEQ that included 836 undergraduate Latina/o

students who were attending Research and Doctoral institutions (30 schools). The dependent variable in this study was academic achievement as measured by grades (GPA). Independent variables included background information, college experience variables (student motivation, student-faculty interactions), and college environment variables (major, residence). 36% of students in this study interacted briefly with instructors after class. Very few students reported frequent interpersonal contact with professors (19.7%). Results also indicate that discussing course work (paper, project), working with a professor on research, and discussing career plans may more likely contribute to academic performance. The authors suggest that more strategies to foster student-faculty interactions need to be developed.

Hernandez, J.C. (2000). Understanding the retention of Latino college students. *Journal of College Student Development, 41*, 575-587.

Hernandez conducted a qualitative study with 10 Latino college students at a large, public university. The sample was equally divided among men and women. Latino enrollment at this institution was 4.9% in 1997. Maximum variation sampling was used to identify participants for this study. The author employed a three-phase interviewing process as the primary method of data collection. Data analysis provided 11 major categories or themes. Participants in this study all indicated that they had arrived with some level of positive outlook. Family also played a major role in the lives of these Latino students, as family support was crucial to the retention of these students. Further, the study indicated that students who have a relationship with a faculty or staff member may be more likely to persist. This current study also supports the importance of cocurricular involvement for Latino students. Many meaningful opportunities for involvement occurred off campus for Latino students in this study. This study begins to explore how the experiences of Latino students and the environmental factors contribute to their persistence.

Kraemer, B.A. (1997). The academic and social integration of Hispanic students into college. *The Review of Higher Education, 20*, 163-179.

This article examines whether the conventional operational definitions of academic and social integration are appropriate to use when studying the experiences of Hispanics at two-year colleges. As most measures are based on the research of traditional students, Kraemer attempts to empirically elucidate the indicators of academic and social integration for an older population of Hispanic students at two-year institutions. Her sample consists of 217 Hispanic graduates at a two-year college most of whom were female. The author found that the three factors that contribute to the students' successful academic and social integration were (1) formal faculty student interaction, (2) informal faculty-student interaction, and (3) study behavior. The paper also includes some brief implications for practitioners.

Lichtenstein, M. (2002, June). *The role of financial aid in Hispanic first-time freshman persistence*. Paper presented at the Annual Forum of the Association for Institutional Research, Toronto, Canada.

Lichtenstein utilized data from university enrollment and financial aid databases to conduct this study. The framework for this study is based on the work of Tinto. She used path analysis to examine the relationships between the many variables and subsequent outcomes. Variables examined in this current study include the following: family SES (mother's education, father's education, income), pre-college academic ability (ACT, h.s. GPA), college integration (dorm residence, college grades), financial aid (loans, grants, work-study, prestige scholarships, other scholarships), and persistence (completing 1-8 semesters). The sample included 874 students in New Mexico who attended the university full time. Results of this analysis show that the greatest predictors of Hispanic persistence are those that increase integrations into college. Academic achievement in the early semesters of school is the strongest predictor. The second most powerful predictor is the number of semesters the student resides in campus housing. For Hispanic students, the third strongest predictor of persistence is receiving a work-study award.

Pidcock, B.W., Fischer, J.L., & Munsch, J. (2001). Family, personality, and social risk factors impacting the retention rates of first-year Hispanic and Anglo college students. *Adolescence*, 36, 803-818.

The authors completed a study with a sample of 78 students (39 Anglo, 36 Hispanic, and 3 "others"). They administered several different questionnaires to each student including the General Family Functioning (GFF) scale, the Children of Alcoholics Screening Test (CAST), the Family Addiction and Recovery Scale (FARS), the Short Version of the Tridimensional Personality Questionnaire (STPQ), The Mentoring Scale, the short form of the Michigan Alcoholism Screening Test (SMAST), and the Eating Disorder Inventory (EDI). Participants in this study were paid for their time. Retention was determined using university records after 1 year. The results of this study indicated that Hispanics appeared to have a higher risk of problem behaviors in family and social experiences. Hispanic students in this study showed fewer problem behaviors in the first semester of college as compared to Anglo students. Retention data showed that female Hispanic students left school at the highest rate. Hispanic males were retained at the second highest rate.

Torres, V. (2003). Mi casa is not exactly like your house: A window into the experience of Latino students. *About Campus*, May-June.

Outlining the findings from her various studies on the relationships Latino students have with higher education, Torres claims that attempts to understand their decisions to persist at college are dependent on three variables she has identified. The first of these is "identity development and cultural orientation", the second, "the effect of college environments", and lastly, "generational status and parental expectations".

Towards an understanding of the biculturalism that effects and influences choices for Latino students, Torres developed and validated a model to be a lens on how Latino students deal with the dual demands of their Latino culture and Anglo culture. It illustrates how students orient themselves within and between the two cultures.

Although little specific information is known on how the college environment effects Latino students' decisions concerning departure the author details the problems students find balancing their ethnicity in what might be a more predominantly white environment, and how where they come from influences the choices they make within a college environment.

Parental expectations and the generational status of the students and their families play a huge part in a students' adjustment and experience in college, and ultimately their persistence. Latino students are faced with additional choices and have internal and external barriers to their success.

Torres provides five basic guidelines to help Latinos in college as they undergo their own personal development, trying to understand themselves as Latinos within the majority culture. (1) Accept that Latinos do value education, (2) Realize that policies based on retention research may not be sensitive to culture, (3) Find many ways of letting diverse students know about educational and social support services, (4) Try to understand culturally sensitive issues, and (5) Create environments that are supportive

Walker, D.A., & Schultz, A.M. (2001). Reaching for diversity: Recruiting and retaining Mexican-American students. *Journal of College Student Retention*, 2, 313-325.

The authors of this article discuss the growing Hispanic population and the growing number of Hispanics enrolling in higher education. Walker and Schultz discuss some possible reasons why these students often do not persist. They include academic stress (being unprepared academically), social stress (lacking a sense of community) and financial stress. The authors briefly discuss retention programs at various institutions as they relate to students of color. Cultural values play an important role for Hispanic students. The authors discuss cultural issues such as customs, family, the need for social relationships, personal space, and power distance issues. The authors further discuss how higher education can integrate these values when recruiting and retaining these students. Some possible practices include mentoring programs, learning community involvement, and out of class support and activities.

Ybarra, R. (2000). Latino students and Anglo-mainstream instructors: A study of classroom communication. *Journal of College Student Retention*, 2, 161-171.

Ybarra used ethnographic techniques to observe and analyze communication patterns of two Latina students. Given that Latinos are the fastest growing segment of the population in the United States, it is important to understand why Latinos are not entering and finishing college. According to the author, Latino students may face many language barriers in the typical college classroom, leading them to the decision to drop out of college. Ybarra argues that mainstream instructors often "appeal for cultural conformity" in their students, thereby leading to tensions between Latino students and their

instructors. Often, Latino students do not understand why they have so much difficulty with their writing and thus end up just trying to “get through” the courses. This study provides some interesting arguments that warrant the attention of instructors and student affairs professionals. Ybarra only discussed these issues with two participants, therefore leaving some very important issues to be studied further.

Learning Communities

Baker, S., & Pomerantz, N. (2000). Impact of learning communities on retention at a metropolitan university. *Journal of College Student Retention*, 2, 115-126.

The authors investigated the relationship between participation in a ‘Learning Communities’ (LC) program and student retention. This study was conducted with freshmen students who attend a primarily commuter metropolitan university. The LC program utilized at this institution linked together three courses. Students were divided into three groups consisting of the LC group, the control group, and all first-time freshmen. Three different types of assessment (surveys, focus groups, control group) were utilized for this study. Results indicated that students participating in the LC program were more successful than control group students on all of the six criteria defined as contributing towards success: fall GPA, fall to spring retention, number of fall credit hours earned, number on probation, number on Honors and Dean’s Lists, and total number of courses dropped. For example, those enrolled in Learning Communities had higher GPAs (2.61) than those in the control group (2.34). Some interesting thoughts are also offered by students via focus groups. This study is noteworthy because of the commuter student focus. These students often feel less in touch with campus and therefore are more likely to leave school. Programs such as Learning Communities may offer the connection these students need to be successful.

Golde, C.M. & Pribbenow, D.A. (2000). Understanding faculty involvement in residential learning communities. *Journal of College Student Development* 41, 27-40.

In an exploration of the experiences and motivations of faculty involved with residential learning communities, the researchers interviewed 15 faculty members at the University of Wisconsin-Madison who were involved in such programs. This qualitative study reports findings on the initial and on-going involvement of faculty, and insights into the nature of roles and relationships within the university. Faculty identified enhanced relationships with students, the opportunity to work with faculty from outside of their department, and novelty of the experimental nature of the new communities as benefits. The researchers state that their findings have implications for student affairs and academic affairs collaboration, and that faculty involvement in such programs not only benefits the students but faculty as well.

Johnson, J.L. (2000). Learning communities and special efforts in the retention of university students: What works, what doesn't, and is the return worth the investment? *Journal of College Student Retention*, 2, 219-238.

This paper focuses on the retention initiatives at the University of Southern Maine (USM). Choosing four of the programs implemented as a reaction to concerns over the retention of their students, Johnson evaluates whether or not the programs are worth their administrative costs after two years of implementation. She describes the four programs which are (1) the conditional contract student program, (2) Project 100: Early alert/early intervention, (3) the First Year Alternative Experience (FYAE) program, and (4) the Russell Scholars Program. Evaluations were unique to the programs but revolved around common evaluative goals – effectiveness, student achievement, retention rates, student satisfaction, and cost effectiveness. The researcher found that even after just a couple of years two of the programs were highly effective at retaining students and significantly improving the quality of their experience. Both of these were their learning communities, 3 and 4 above, the one of which catered for students that were considered most at risk when entering the institution. Johnson warns readers that these results should not be used to validate or dismiss programs on other campuses, she opines that each program has to be evaluated within its own institutional context of student and culture.

Pike, G.R. (1999). The effects of residential learning communities and traditional residential living arrangements on educational gains during the first year of college. *Journal of College Student Development*, 40, 269-284.

Pike administered the CSEQ to 626 first-year students living in residence halls. The model that Pike used for this study drew from the work of Chickering (1975) and contained four elements: (a) background characteristics, (b) college experiences that promote differentiation, (c) college experiences that enhance integration, and (d) gains in learning and intellectual development. He describes these elements in depth in the article. The three types of residential learning communities examined by Pike included a collaborative project between student affairs and faculty, theme-related floors in residence halls, and Freshman Interest Groups (FIGs). Results indicate that students living in Residential Learning Communities (RLCs) reported significantly higher levels of involvement, interaction, and in integrations as compared to those students living in traditional residence halls. Those students participating in RLCs also reported making greater gains in general education than those students in traditional residence halls. In addition, living in RLCs had a positive impact on the day-to-day behavioral aspects of college experiences for students. Although these results represent a snapshot in time and only one institution, they do add to the literature concerning students' participation in RLCs.

Pike, G.R., Schroeder, C.C., & Berry, T.R. (1997). Enhancing the educational impact of residence halls: The relationship between residential learning communities and first-year college experiences and persistence. *Journal of College Student Development*, 38, 609-621.

The authors of this study analyzed data from 2,678 first-year students living in residence halls on campus. They discuss the role that residence halls play in the academic achievement and commitment of first-year students. Previous research has shown that residence halls can be powerful in helping students become engaged in college. The authors provide a review of Freshman Interest Groups (FIGs) in this article. For purposes of this study, the authors compared those students living in traditional residence halls (n=2,453) to those students in FIGs (n=225). Variables in this study include Support From Significant Others, faculty-student interactions, gender, ethnicity, and entering ability. Results indicate that FIGs had a positive impact on faculty-student interactions and significant positive impacts on social integration and institutional commitment. For these students, entering ability was the primary influence for academic achievement. In terms of student persistence, academic achievement and institutional commitment had direct effects on persistence. Findings of this study also show that residential learning communities did not directly improve the persistence rates for students. However, the authors argue that the RLCs may have indirectly enhanced student persistence. Lastly, participation in FIGs did not directly improve the academic achievement of those students who participated.

Schroeder, C.C., & Hurst, J.C. (1996). Designing learning environments that integrate curricular and cocurricular experiences. *Journal of College Student Development*, 37, 174-181.

Schroeder and Hurst discuss different models for designing effective learning environments in higher education. They argue that student affairs professionals must have a central focus on designing “purposeful and powerful learning environments” that help students integrate in and out-of-class experiences. They posit that certain core conditions must be present for the optimal learning environment. These include involvement, challenge, support, structure, feedback, application, and integration. The authors argue that learning environments that are characterized by these seven principles will provide students with more opportunity to integrate their experiences on campus. They go on to discuss three examples of interventions that can be undertaken at either the macrolevel or microlevel. Microlevel interventions may include residential learning communities or Freshman Interest Groups (FIGs). These two authors also discuss the important role that faculty members must play in discussing and designing meaningful projects that really matter in undergraduate education.

Tinto, V. (2000). Linking learning and leaving: Exploring the role of the college classroom in student departure. In J.M. Braxton (Ed.), *Reworking the student departure puzzle* (pp. 81-94). Nashville, TN: Vanderbilt University Press.

Research and discussion on the role of the classroom which is arguably the only educational experience that all students have in common, has not been considered in studies on student persistence or in theories of student departure. Tinto attempts to address this omission and tries to understand how experiences in the classroom and student persistence are related, and how this might be included in current theories of departure. He argues that classrooms act as small communities within an institutions academic and social structure but that for most students they provide an experience which is disconnected from others and not engaging, especially in the freshman year. The benefit of learning communities are examined and the perspective of classrooms as educational communities are explored.

Tinto, V. (1997). Classrooms as communities: Exploring the educational character of student persistence. *Journal of Higher Education*, 68, 599-623.

This article presented results from a qualitative and quantitative study conducted at Seattle Central Community College examining the use of learning communities and collaborative learning strategies. Data collection for the quantitative portion included utilizing a longitudinal panel study of 517 students. The qualitative portion of the study included site visits, participant observation, interviews, and document review. The study sought to examine to what degree learning strategies enhance student learning. In the Coordinated Studies Program (CSP), students reported greater involvement in a wide range of activities, both academic and social. These same students reported that they perceived to have greater developmental gains over the course of the school year. CSP student showed a significantly higher rate of persistence than those in comparison classes. In the qualitative section of the study, evidence provided insight in the ways in which learning communities influenced persistence. Participation in these communities provided students with a network of supportive peers that helped with the transition to college. Learning communities also served to bridge the gap between the academic and the social. This research provides support for providing first-year students the opportunity to participate in a learning community. Given the site of this study, the findings demonstrate how it is possible to promote student involvement and achievement where it may not be easily attained.

Mentoring

Frierson Jr., H.T., Hargrove, B.K., & Lewis, N.R. (1994). Black summer research students' perceptions related to research mentors' race and gender. *Journal of College Student Development*, 35, 475-480.

Mentoring has become an increasingly important means of supporting students, this study explores the perceptions and attitudes towards research of Black students in

relation to their mentor's race and gender. The impetus behind the study is the few numbers of Black students who continue to advanced degrees, and the small number of those who continue in higher education being the beneficiary of a mentoring relationship. The researchers selected eighteen African American students out of 28 possible participants from students involved in a nine week summer research program. All the students were juniors, with high GPAs, their mean GPA being 3.5. The faculty volunteered for the program and self-identified as being interested in students and furthering their research skills and interests. Mentor/mentee matches were made according to discipline and interests, and conversations took place on the phone to assess compatibility. Both parties had to agree to the partnership. Twelve of the students were matched with White mentors and six had Black mentors. The researchers interviewed the students twice, once towards the beginning of the course and once near the end. They were interested in the students' attitudes towards research, how they interacted with their mentor, their research experiences, and how they perceived their research environment. The responses of the students were identified as being in one of three categories: positive, moderate, and negative. The article provides examples of typical responses for each category. The researchers found that in both interviews the race of the mentor was related to differences identified in the students' perceptions. Although all students regardless of their mentor's race had positive perceptions of research and their experience at the end of the course, those students with Black mentors claimed their interactions with their mentors and their perception of the research environment to be more positive than those with white mentors. By the end of the program there was also a marked difference in the experiences of those students with White female mentors as opposed to those with White male mentors. Although the researchers remind the reader that all the students had positive research experiences on this summer program, they do claim that where there is a deficit of Black mentors for African American students in formalized mentoring programs, that White female faculty are preferable to White male faculty in providing a more positive experience and outcome for the students.

Wallace, D., Abel, R., and Ropers-Huilman, B. (2000). Clearing a path for success: Deconstructing borders through undergraduate mentoring. *The Review of Higher Education, 24*, 87-102.

The purpose of this study is to examine the involvement, experiences and interpretation of students making use of mentoring programs which provide support for first generation, low income students. The authors claim that their research impacts the current literature in four ways: (1) little has been published on programs which provide formal mentoring, their success, and their service for underrepresented students, (2) their work provides insight on students perspectives of the services, (3) they seek to illuminate the role and importance of TRIO programs, and (4) hope to inform practice through theoretical approaches. The researchers focus on three TRIO programs in this study: Student Support Services, Educational Opportunity Center, and Veterans Upward Bound. Twenty students using these programs participated in open-ended interviews at a university which has over 15,000 students. Their research questions were guided by critical theory. The researchers had four major findings: (1) enrollment into college was

facilitated by mentoring services, (2) in the absence of informal faculty mentoring students relied on formal mentoring provided in the programs studied, although the researchers did speculate that the provision of formal mentoring in these programs may have allowed the students to not seek mentoring elsewhere, (3) in contrast to existing literature the researchers found that students formed mentoring relationships in multiple sources rather than relying on one person, and (4) persistence was a by-product as their connection to their mentors gave them a sense of obligation to fulfill their mentors commitment to them.

Minority Students

Allen, D. (1999). Desire to finish college: An empirical link between motivation and persistence. *Research in Higher Education, 40*, 461-485.

This study investigated relationships between four constructs: (1) motivational factors, (2) student background factors, (3) academic performance, and (4) persistence. The motivation and background factors were investigated to determine what effects, either direct or indirect, had on academic performance and persistence for minorities and nonminorities. 581 freshmen participated in this study at a public, 4-year, regional institution. Findings indicated that background variables and a desire to finish college play a key role in the student persistence process. The author reports a significant motivational effect on persistence for minority students. Minority students with higher levels of motivation tended to persist to their second year of college. Findings from this study do offer some evidence of factors contributing to minority student persistence through to their second year. However, the ability to generalize may be limited because the author only examines one institution.

Dumas-Hines, F.A., Cochran, L.L., & Williams, E.U. (2001). Promoting diversity: Recommendations for recruitment and retention of minorities in higher education. *College Student Journal, 35*, 433-441.

The authors provide a literature review covering the recruitment and retention of a diverse faculty and student body. In addition, the article discusses a research study that was conducted on the campuses of 29 universities in the Midwest. They argue that universities must develop a comprehensive plan that analyzes the effectiveness of their programs. In addition, the authors argue that each institution must provide a university-wide philosophy statement for the recruitment and retention of a diverse student body. In what seems to be a trend in most retention-related research, these authors lament the use of faculty and staff for mentoring programs for minority students. Finally, these authors argue that campuses must develop a clear and concise way to implement these programs and then comprehensively evaluate them to assess their progress in recruiting and retaining a diverse student body and faculty.

Grandy, J. (1998). Persistence in science of high-ability minority students: Results of a longitudinal study. *The Journal of Higher Education*, 69, 589-620.

Given the concern over the lack of representation of minority students in math, natural science and engineering, Grandy completed this longitudinal study of high-ability minority students to assess their persistence in such programs. The author was interested in identifying the reasons why minority students either left their programs or persisted. More importantly, Grandy wanted to examine why those who had the ability to become scientists and engineers left their respective programs. The sample was taken from high-ability students who took the SAT in 1985 and they were tracked through 1990. The total sample consisted of 2,557 students. Using a path analysis model, Grandy analyzed the data using predictor variables such as gender, socioeconomic status, and math/science achievement in high school. Findings indicate that fewer females than males persisted in science and engineering programs. Also, it appears that minority support had an important effect on science ambition and commitment to science during the sophomore year, which in turn had the greatest amount of effect on student status in 1990. Results of this study also show that even when females and males have the same levels of math/science achievement, females have less ambition than males to make scientific discoveries. Grandy discusses policy and research implications for science and engineering students.

Mayo, J., Murguia, E., & Padilla, R. (1995). Social integration and academic performance among minority university students. *Journal of College Student Development*, 36, 542-552.

This study analyzed the effects of social integration on academic performance among Mexican American, Black, and Native American students at a large, southwestern public university. Cumulative GPA was used as a measure of academic integration. This study distinguished between *formal* and *informal* social integration, with *formal integration* involving contact with faculty and staff and membership in student organizations, while *informal social integration* referred to participation in the social life of the campus, relationships with other students, entertainment, and recreation. Data was gathered in the spring semester of 1989 from phone surveys and involved 340 Whites as a comparison group, 315 Blacks, 292 Native Americans, and 344 Hispanic students. Logistic regression was used to determine how social integration variables affected academic performance with cumulative GPA as the dependant variable. Findings indicated that for all four groups GPA was significantly affected by formal social integration. Membership in student organizations played a role in the academic success of White and Mexican American students, but not for Black or Native American students, probably due to the types of organizations these students were involved in. Relationships with faculty and staff proved to be the most significant in terms of social integration. Having faculty or staff as role models was significant for all four groups. Informal social integration had less of an impact on GPA for all four groups, but Black students who reported a good social life on campus had higher GPAs than those who did not report a good social life. Implications of this study suggest the following: (1) differences among the racial/ethnic groups in the study underscore the need for each group to be considered

separately, rather than assuming that all minority groups have the same needs, (2) faculty relationships and organizational membership should be the programming focus to contribute positively to minority student academic performance, (3) contacts with faculty and staff outside of class should be encouraged.

Newman, P.R., & Newman, B.M. (1999). What does it take to have a positive impact on minority students' college retention? *Adolescence*, 135, 483-492.

This article describes a program at The Ohio State University entitled the Young Scholars Program (YSP), which attempts to expand the number of African American and other minority students who enter higher education. Students are nominated for this program in the 6th grade by teachers, counselors, or parents based on academic performance and promise, leadership, and other talents. The program is designed to establish early relationships between the student, the parents, and the university. Students in the program receive a loan-free financial aid package and must maintain a 2.0 to have the scholarship continue. Students attend a Summer Institute, spending time on campus doing academic work, career exploration, and social and cultural activities. As of 1996, 535 students (from 1,000) had successfully completed the pre-college program. Of those, 347 enrolled at Ohio State. Retention (after six quarters) for the first group of YSP students enrolled in Autumn 1994 was 72% compared to 70% for the entire freshmen class. A comparison group (SES, GPA, gender, HS rank) had a retention rate of 62%. This program seems to have some type of impact on students who participate. Certainly the financial package alleviates many of the worries about debt for these students. This program seems to be one that could be modeled by other colleges and universities that enhance the connections between college and 6-12.

Padilla, R.V., Trevino, J., Gonzalez, K., & Trevino, J. (1997). Developing local models of minority student success in college. *Journal of College Student Development*, 38, 125-135.

The authors in this study attempted to depart from the focus of traditional research that tends to examine what students do "wrong" and then leads them to leave college. They utilized the expertise model of successful college students to help them develop a local model of successful minority students. The authors used a matrix technique that allowed them to collect and analyze data in a qualitative fashion. There were 28 participants in this study and data were collected using 3 dialogue groups. Results of the study yielded four grounded categories of barriers that successful minority students overcame. The categories included: (1) discontinuity barriers, (2) lack-of-nurturing barriers, (3) lack-of-presence barriers, and (4) resource barriers. Discontinuity barriers included obstacles that impeded a student's transition from high school to college. Lack of nurturing barriers included lack of supportive resources on campus such as lack of role models. Lack of presence barriers, such as the absence of minorities in the curriculum and university programs, were discussed by the authors. Lastly, resources barriers related to the lack of financial resources available to the students and the challenges of the financial aid system. This local model technique offered by these authors seems to be an

interesting and useful one. It most likely needs more research to examine the effectiveness of its use in measuring the success of minority students.

Rendón, L.I., Jalomo, R.E., & Nora, A. (2000). Theoretical considerations in the study of minority student retention in higher education. In J.M. Braxton (Ed.), *Reworking the student the student departure puzzle* (pp. 127-156). Nashville, TN: Vanderbilt University Press.

Much of the early influential work on retention is based on a student population that was predominantly White and male. In this paper the authors analyze the separation and transition phase of Tinto's student departure theory, evaluate his concepts of academic and social integration, and offer avenues for future research. They are concerned with the formulation of theories and methods that will enable institutions to understand and assist the retention process of minority students without assuming the necessity of, or relying upon, assimilation and separation. Towards this end they discuss, for example, the concepts of biculturalism and dual socialization to illustrate how research on persistence needs to uncover and access the impact of multiple issues, such as race, gender and class, upon the growing numbers of diverse students at diverse institutions.

Sanchez, I.M. (2000). Motivating and maximizing learning in minority classrooms. *New Directions for Community Colleges*, 112, 35-44.

As more minority students enter higher education, this chapter relates how their success and persistence may be positively impacted by an awareness of the 'cultural tools' which inform their learning styles and strategies. Sanchez synthesizes research on the effects of teacher expectation upon student achievement and also that exploring different learning styles and preferences. Research from two 1996 studies looking at Hispanic and Native America learning are the basis of some basic suggestions for instructors when considering the 'design and delivery' of educational programs with and for these groups of students. An understanding of the impact students' 'cultural tools' may have upon the way they learn and participate in the classroom is considered important, for example, students from these two cultural groups were found to be more reflective than the majority group which has implications upon classroom participation. Other suggestions which would benefit the learning styles and needs of minority students included group-work, learning communities, and the practical application of abstract concepts.

Taylor, J.D., & Miller, T.K. (2002). Necessary components for evaluating minority retention programs. *NASPA Journal*, 39, 266-282.

The authors described a study that tested a model for the evaluation of retention programs. The researchers had a sample of 97 African American students. The primary interest of the researchers seemed to be minority student retention at predominantly white institutions. The Necessary Components Retention Program Assessment Model

(NCRPA) consisted of six components which included: (1) ethnic and peer attachment, (2) social integration, (3) worth and competence, (4) reliable alliances, (5) guidance, and (6) leadership opportunities. This study explored the linkages between the NCRPA and a program entitled Continuing the Legacy of African American Success (CLASS). CLASS is a residence life program developed at a PWI to enhance the retention of African American students. The Social Provision Scale, the Multigroup Ethnic Identity Measure, the Intragroup Ethnic Demographic Questionnaire, and the Student Adaptation to College Questionnaire were utilized in this study. Results from this study indicate that leadership opportunities were the greatest contributor to the differences between CLASS participants and nonparticipants. The authors also argue that present theories and research on social integration are lacking in examining the minority perspective. Leadership opportunities influenced minority students' levels of social integration, worth and competence, ethnic and peer attachment, guidance, and reliable alliances. This study is important because it highlights the importance of campus leadership and involvement opportunities for minority students. Additionally, it provides a framework for practitioners to use when evaluating their own programs. More research using this model is warranted.

Tierney, W.G. (1999). Models of minority college-going and retention: Cultural integrity versus cultural suicide. *Journal of Negro Education*, 68, 80-91.

In this article, Tierney argues that Tinto's model of student departure does not explain the experiences of minority students. He argues that minority students cannot dissociate from their pasts as the Tinto model suggests. In Tinto's model, the students who integrate and assimilate are those who are most likely to persist. Tierney argues that minority students need to embrace their communities and cultural identities in order to have a better chance to graduate from college. Further, Tierney discusses the notion of cultural capital in this article. He provides a good overview of this concept in this article. Further, he argues that institutions of higher education must also be responsible for honoring the cultural differences of students. In the latter part of this article, Tierney discusses a program called "The Neighborhood Academic Initiative" that focuses on college preparations programs. Students of color who participate in this program learn about college before they even set foot on a college campuses. This article provides a good discussion of minority students and possible reasons why they do not persist. It also provides an interesting discussion about the ways colleges and universities can help to alleviate this problem.

Models/Theory/Typologies

Baird, L.L. (2000). College climate and the Tinto model. In J.M. Braxton (Ed.), *Reworking the student departure puzzle* (pp. 62-80). Nashville, TN: Vanderbilt University Press.

This paper discusses thinking about departure decisions in general psychological terms and through a more psychological approach to Tinto's departure theory. The author utilizes a scheme devised by Naylor, Pritchard, and Iglan (1980) as an example of

analyzing how a psychological climate is formed and describes the main aspects of a psychological climate as found in research studies. Baird also explores evidence of the importance of environmental perceptions in students' departure decisions and thoroughly examines the consequences of climate research for research design, theory and policy.

Bean, J.P., & Eaton, S.B. (2001). The psychology underlying successful retention practices. *Journal of College Student Retention, Vol. 3*, 73-89.

Utilizing their psychological model of student departure developed and aired by the authors in Braxton's 'Reworking the Student Departure Puzzle' (2000), this article describes the psychological components of retention programs and examines how academic and social integration are impacted through psychological outcomes in different programs. To illustrate this four of the most popular retention programs are chosen to demonstrate the psychological processes that increase the possibilities of student success. The four programs are: (1) service-learning, (2) learning communities/freshman interest groups, (3) freshman orientation seminars, and (4) mentoring programs. Within the context of their model each program is examined for three types of psychological outcomes: (1) effects on approach-avoidance/coping strategies, (2) effects on changes in locus of control, and (3) effects on academic and social self-efficacy.

The article shows that psychological theories can explain the process of social and academic integration and this research can aid the development of programs specifically designed to help students develop their self-efficacy, their attitude towards school, academics, and internal locus of control.

Bean, J.P., & Eaton, S.B. (2000). *A psychological model of college student retention*. In J.M. Braxton (Ed.), *Reworking the student departure puzzle* (pp. 48-61). Nashville: Vanderbilt University Press.

Commenting on the reliance of researchers to look at sociological theories to explain student departure, Bean and Eaton show how psychological theories and processes can also engender an understanding of why students leave. They posit that the integration of psychological explanations will provide a more complete picture than purely sociological rationalizations. In their paper they present four psychological theories (1) Attitude-Behavior Theory, (2) Coping Behavioral Theory, (3) Self-Efficacy Theory, and (4) Attribution Theory, which they fuse into a heuristic psychological model. This model deals with student behavior, social environment is of concern only in how it is perceived by individuals. The psychological theories are fairly complicated and are simplified by necessity within this paper but the stance is refreshing and studying behaviors with behavioral theory rather than sociological theory makes sense.

Braxton, J.M. (2000) *Reinvigorating Theory and Research on the Departure Puzzle*. In J.M. Braxton (Ed.), *Reworking the student departure puzzle* (pp. 257- 274). Nashville, TN: Vanderbilt University Press.

This important chapter forms the conclusion of Braxton's book about student departure in which contributing authors have been given the opportunity to tackle the

subject by either revising Tinto's theory or abandoning it. Braxton personally believes that Tinto's theory should be revised rather than discarded as four of his relationships between the student and departure decision have been extensively empirically verified. The author suggests that these should provide the foundation for a theory which "builds on economic, organizational, psychological and sociological theoretical perspectives" (p.258). He explains how an inductive theoretical revision can be achieved through the use of qualitative and quantitative research, and suggests that these means be utilized to investigate the influence of constructs derived from the four theoretical frameworks, posited above, on college student departure decisions and social integration. Braxton offers some possible avenues for empirical research within each of the four theoretical perspectives, and proposes some guidelines for future research. He concludes that the continuance of fruitful, meaningful research in student departure is reliant upon researchers exploring the questions and following the guidelines indicated in this section.

Braxton, J.M., Sullivan, A.V.S., & Johnson, R.M. (1997). Appraising Tinto's theory of college student departure. In J.C. Smart (Vol. XII), *Higher Education: Handbook of Theory and Research* (pp. 107-164). New York: Agathon Press.

The authors of this book chapter conducted a review of the empirical assessments of Tinto's model of student departure. This review was quite comprehensive and reviewed articles and studies that assessed all of Tinto's 15 propositions. In the aggregate, the authors argue that empirical evidence in regards to the 13 primary propositions indicate partial support for Tinto's theory. Five relationships were affirmed by single institution studies and three were strongly supported by multi-institutional assessments. The authors also provide an overview of the conceptual critiques of Tinto's model. The authors provide a very detailed review of empirical studies as they relate to Tinto's model. This piece would be a good starting point for those interested in summary of empirical studies. They also provide recommendations for future scholarship including a revision of Tinto's model of student departure.

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

This study attempted to examine the extent to which two models of student departure could be merged. The two theories were Tinto's student integration model and Bean's student attrition model. A structural equation model was used to test simultaneously all non-overlapping propositions of each conceptual framework. The student sample used in this study was drawn from a freshman class of full-time, first-time students at a large urban institution. Results show that a better understanding of student persistence could be derived from combining these two major theories of college student persistence. Findings in this study also show that by merging the two theories into one integrated model, one could better understand the complex relationships among individual, environmental, and institutional factors as they relate to student persistence.

DesJardins, S., Ahlburg, D., & McCall, B. (1998). An event history model of student departure. *Economics of Education Review, 18*, 375-390.

These researchers completed this study using a modeling technique that has historically been utilized in economics and other disciplines but rarely applied to educational research. The event history model was utilized to examine the temporal dimensions of college student departure at a large research university. Exogenous factors such as race, high school rank, ACT scores, gender, age, and time-varying factors were hypothesized to affect a student's enrollment decision at certain points during their academic careers. This current study confirmed the findings of much of the previous research examining these factors but indicated that certain explanatory variables had different effects over time. Therefore, pinpointing times during an academic career where students were at risk of leaving college would allow campuses to develop more intervention strategies that could help the students persist at the institution. This study provides a different and interesting model that could help to better understand student persistence in higher education.

Gold, J.M. (1995). An intergenerational approach to student retention. *Journal of College Student Development, 36*, 182-187.

Gold presents the effects of intergenerational family patterns on students' adaptation to college. According to this approach, the student first moves away from home (family of origin) to the university and carries family-sponsored messages about college, success, and separation from home. Gold illustrates the application of this approach with two case studies regarding retention issues. He applies this approach to preventive and remedial programs. This intergenerational model helps the student to examine family patterns and resolve the issues that may interfere with their college success. Gold discusses the use of a genogram to help the students visually understand the positive and negative messages inherited from the family. Gold also discusses the advantages/disadvantages of using such a method. This was an interesting article in that it proposes a unique avenue in which to examine student retention.

Kuh, G.D., Hu, S., & Vesper, N. (2000). "They shall be known by what they do": An activities-based typology of college students. *Journal of College Student Development, 41*, 228-244.

The researchers analyzed the responses to the College Student Experiences Questionnaire (CSEQ) from 51,155 undergraduates at 128 institutions to develop a heuristic student typology. This typology was based upon their progress towards important self-reported outcomes of college, and their engagement in educational activities. Based upon their data analysis and major student typologies published since 1960, the researchers developed a typology which identified the following 10 groups of students who shared common patterns of engagement in activities: Artist, Collegiate, Conventional, Disengaged, Grind, Individualist, Intellectual, Recreator, Scientist, and Socializer. The analysis of the data is explained step-by-step. The findings corroborate the major themes in college impact research, they verify the presence of many of the

student types identified in the typologies of the 1960s in institutions of the 1990s, and provides information about the inclinations, behavior, and the nature of students within these different groups. Kuh, Hu, and Vesper are explicit about the limitations of their study, especially concerning the self-reporting nature of the data.

Mashburn, A.J. (2000). A psychological process of college student dropout. *Journal of College Student Retention, 2*, 173-190.

Adapting models that explain the psychological process in the turnover of employees, Mashburn tests a theoretical model of college student dropout which attempts to elucidate the psychological process of student departure by explaining the relationship between ‘attitudes, cognitions, and student dropout behavior’. Greatly influenced by the employee turnover research the author’s model of the psychological process for his study is three pronged: student dissatisfaction –leading to—withdrawal cognitions, which are identified as (1) thoughts of quitting, (2) search intentions, and (3) dropout intentions – leading to – student dropout. The sample of 185 participants were enrolled in one of three psychology classes and given a class credit for completing a questionnaire during the last two weeks of the spring quarter at a public university. The instrument had three sections, one for demographic information, the second measuring their satisfaction in relation to their academic environment, and the third measured their satisfaction as a whole, and the three withdrawal cognitions outlined above. A year after the administration of the questionnaire, academic records of the participating students were consulted to ascertain whether the student persisted, dropped out, or was academically dismissed. Mashburn’s analysis of his data leads him to posit two significant findings. Firstly, that the factor analysis of the withdrawal cognition constructs suggests that they are part of a ‘single, higher-order factor’, and therefore the relationship between student satisfaction and student dropout is mediated by these cognitions. Secondly, satisfaction directly affects cognitions which effect behavior; satisfaction leading to behavior did not significantly effect the model and also did not indicate a direct relationship between satisfaction and dropout behavior. The author offers some implications for designing and evaluating programs that purport to control student dropout, and offers some suggestions for future research.

Stage, F.K., & Hossler, D. (2000). Where is the student? Linking student behaviors, college choice, and college persistence. In J.M. Braxton (Ed.), *Reworking the student departure puzzle* (pp. 170-195). Nashville, TN: Vanderbilt University Press.

In this paper the authors have developed a student-centered theory of college completion or persistence which combines elements of college predisposition models with college persistence models. This five stage model looks at variables within the students’ backgrounds, school experiences, intentions/engagement, college entry, and persistence/dropout. Although similar to other models it differs in its combination of background characteristics, and significantly emphasizes the individuals’ psychological characteristics. The authors explain their categories, variables, and how they envision these being measured. They believe that this model, with its reliance upon the self-

efficacy work of Bandura (1994,1997), will enable researchers to learn more about the individual experiences of students today.

Tierney, W.G. (2000). Power, identity, and the dilemma of college student departure. In J.M. Braxton (Ed.), *Reworking the student departure puzzle* (pp. 213-234). Nashville, TN: Vanderbilt University Press.

Tierney considers student departure within historical and cultural parameters, where systems of education and the consequences of participation or early departure is a reflection of cultural inequalities. He states that rather than expecting minority students to assimilate the culture of their educative institutions and integrate to succeed, that the culture of the organization adapt and incorporate the identity of individuals. His model has five significant areas which he describes as: (1) collaborative relations of power; (2) connections across home, community and schooling; (3) local definitions of identity; (4) challenge over remediation; and (5) academic support. His model is derived from a year long study of a college preparation program in south Los Angeles called the Neighborhood Academic Initiative (NAI). This program draws thirty-five students each year from two schools in a low-income area and aims to educate the students so they are able to enter college. Tierney illustrates how his key areas are enacted in the program and offers the model as a theoretical lens which might encourage the study of college student departure in a new way.

Native Americans

Brown, L.L., & Kurpius, S.E.R. (1997). Psychosocial factors influencing academic persistence of American Indian college students. *Journal of College Student Development*, 38, 3-12.

The authors completed a study with 288 American Indian undergraduates at a southwestern university. They examined which psychosocial factors were related to academic persistence for these students. The researchers discuss aspects of the American Indian student such as cultural background, family background, and financial status. They utilized a 42-item survey based on Tinto's 1975 model. Using a longitudinal design, Brown and Kurpius examined which psychosocial factors influenced persistence. The findings indicate that persistence was significantly affected by academic aspirations, performance, and interactions with faculty and staff. Those American Indian students who persisted reported higher degree aspirations, being more prepared in high school, and had higher GPAs. The authors provide some discussion of different programs or practices that campuses could employ to enhance the success of American Indian students on college campuses.

Non-traditional Students

Cubeta, J.F., Travers, N.L., & Sheckley, B.G. (2001). Predicting the academic success of adults from diverse populations. *Journal of College Student Retention, 2*, 295-311.

The authors of this article assess the predictive validity of the Risk and Promise Profile (University of Maryland) using a diverse sample of 542 two and four-year college students who were nontraditional in age. The sample was drawn from six different institutions. The mean age of participants in this study was 35. The survey is a 78-item, self-report measure that can outline personal and social influences as they relate to student persistence. The dependent variables used in this study were GPA, number of semesters completed, and the ratio of credits earned to credits attempted. Results indicate that the survey showed reasonable internal validity. Successful students in this study tended to be older and reported having more positive prior educational experiences. The more successful students also reported higher levels of academic self-efficacy as learners and higher motivation to succeed in college. Successful students in this study also self-reported that they perceived the campus to be more tolerant of diversity than those students who were less successful. This study provides some support for the use of the profile but more research seems to be warranted.

Second-Year Students

Gohn, L., Swartz, J., & Donnelly, S. (2001). A case study of second year student persistence. *Journal of College Student Retention, Vol. 2*, 271-294.

The premise of this study is that institutions of higher education lose just as many students from second year to graduation as they do during the first year, although most studies and retention efforts are focused on persistence from first to second year. This research studied second year students at a mid-south major university and their perceptions of themselves in regard to future graduation. The study uses qualitative methodological tools with some use of descriptive statistics also employed. The study explored questions regarding four main influences on retention: (1) academic factors, (2) financial concerns, (3) emotional and personal support, and (4) commitment and aspirations. The sample of 20 students was randomly selected from a pool of students with certain characteristics which are listed in the article. This study was specifically designed to illuminate the pattern of post-freshman departure noticed at this institution. Based on their research they give recommendations for second year students such as academic support systems, career choice workshops, financial consulting, and a review of the policies regarding scholarship renewal.

Senior Students

Mohr, J., Eiche, D., Sedlacek, W. (1998). So close yet so far: Predictors of attrition in college seniors. *Journal of College Student Development*, 39, 343-354.

The purpose of this study was to understand issues relevant to college seniors who disenroll from their academic programs before graduating. 90 undergraduate students who had 86 credit hours or more, at a large, Eastern public university took part in semi structured phone interviews. Over half of the participants reenrolled in the university one semester later, after they had temporarily stopped out. The qualitative data revealed that the top six reasons for disenrollment were: economic factors, enrollment in another school, academic difficulties, family responsibilities, personal problems, and poor advising or teaching. Four dimensions of school dissatisfaction were identified from the data: institutional alienation, dissatisfaction with guidance and access to information, dissatisfaction with quality of education, and dissatisfaction with school policies and facilities. The non-returning and returning seniors in this study differed most on scales related to institutional alienation and productive, meaningful contact with faculty and advisors. Results suggested that seniors are less likely to drop out or stop out if they have regular, meaningful contact with faculty and advisors.

Supplemental Instruction

Congos, D. (2001). How supplemental instruction (SI) generates revenue for colleges and universities. *Journal of College Student Retention*, 3, 301-307.

Congos discusses the utilization of supplemental instruction and how it can affect revenues for a campus. He maintains that by implementing SI programs, campuses can retain monies that are ordinarily lost due to student attrition. He offers examples and formulas explaining the benefits of adding supplemental instruction to the array of services offered on campus. Congos provides examples for state-supported and private institutions in this article. The author argues that it is less costly for an institution to retain a student than it is to recruit a new student. Therefore, programs such as SI can help the campus fully realize their revenue potential. He also briefly discusses the other benefits of SI such as the increase in the educational experience for those who take advantage of such programs.

Congos, D.H., & Schoeps, N. (1999). Methods to determine the impact of SI programs on colleges and universities. *Journal of College Student Retention*, 1, 59-82.

As many programs of Supplemental Instruction (SI) are required by their institutions to measure their impact and outcomes on the students to whom they provide service, this article presents three methods of assessment which SI programs can utilize to justify their existence and improve their programs. The authors briefly illustrate how anecdotal information, descriptive statistics, and inferential statistics can assist in this endeavor. All the methods they employ compare the students in the SI programs against

comparable students not in SI programs. Replication of their methods of assessment should be dependent on the SI program and the purpose of the assessment.

Hensen, K.A., & Shelley, M.C. (2003). The impact of supplemental instruction: Results from a large, public, Midwestern university. *Journal of College Student Development, 44*, 250-259.

The authors of this study describe an SI effort that targets difficult entry-level mathematics and science courses. At this institution, more than 30% of students enrolled received D and F grades and then withdrew from the courses. Results of this study indicate that students utilizing SI earned a higher percentage of A and B grades, a smaller percentage D's, F's, and withdrawals, and reported higher mean course grades than those students not participating in SI. They also found that SI participants have lower preentry characteristics (ACT scores) than nonparticipants. Despite these lower ACT scores, SI students in biology, chemistry, and math achieved higher grades than those who did not utilize SI.

Kochenour, E.O., Jolley, D.S., Kaup, J.G., Patrick, D.L., Roach, K.D., & Wenzler, L.A. (1997). Supplemental instruction: An effective component of student affairs programming. *Journal of College Student Development, 38*, 577-586.

Dispute over the effectiveness of supplemental instruction (SI) programs, their ability to support students in meeting their learning goals, and previous assessment of this being limited to small samples were three of the concerns that instigated this study. The researchers have examined a large pool of participants, 11,000, at a large Rocky Mountain research university to determine the effectiveness of SI in introductory physical and social science courses. From the initiation of SI programs at the institution in the Spring of 1986, detailed program assessment and evaluation has been collected. Quarterly information has been gathered from four areas: (1) the surveys that students in courses which offer SI take at the beginning of the term, (2) the same students do an evaluation at the end of each term, (3) each SI session has an attendance record, and (4) information from university student records. The researchers have utilized this data, focusing on that collected over 6 consecutive 10-week quarters in the 1992-93, 1993-94, academic years. The researchers claim that their results are important due to the large sample size and the efforts they made in controlling for student ability in their analysis. They provide strong positive evidence that students who participate in SI programs earn higher average course grades than those who do not, but also indicated that no relationship was found between a student's expected performance and SI attendance which signified that there was no evidence that only the better students attend SI.

Two Year Colleges

Somers, P., Cofer, J., Below, D., & Freeman, T. (2002, June). *Persistence of students of color in two-year colleges*. Paper presented at the Association for Institutional Research Forum, Toronto, Canada.

As Hispanic and African-American students are still entering and persisting within higher education at lower numbers than white students, this paper examines the impact of many variables on their persistence in comparison with white students in two-year colleges. The data source for this study is NPSAS:96, restricted to include only students in two-year programs or less. Using a conceptual framework based on sociological and economic theories, the model includes the following areas as factors: “background, aspirations, achievement, college experience, price and subsidies.” The total sample was 28,732, African Americans constituted 4,163 of that total, Hispanics, 3,072, and whites, 20,417. The researchers found that persistence through the lens of ethnicity is affected by a mixture of variables. Their main findings include, (1) dependent students from all ethnic groups persisted more than independent students, (2) marital status had varying results, positively associated with African American persistence, negatively with Hispanics, and did not effect White students, (3) older students persisted in higher numbers for African American and White students, but lower for Hispanics, (5) students who aspired to achieve an advanced degree were more likely to persist than students aspiring to a Bachelor’s degree, (6) full time enrollment in comparison with part-time enrollment had higher levels of students who persisted, (7) those African American and Hispanic students who participated in remedial courses were more likely to persist than those who did not in their respective populations, and (8) price and the variance in subsidies significantly effected all students, financial aid encouraged persistence and work-study seemed to have the most positive impact on persistence. The study is limited by it’s within year focus, especially as this serves as a ‘proxy’ for financial aid sufficiency. Also the means of measuring social and academic integration are limited by the data available in the NPSAS source.

Women

Landry, C.C. (2002). Retention of women and people of color: Unique challenges and institutional responses. *Journal of College Student Retention*, 4, 1-13.

This article contains a literature review concerning retention issues as they relate to women and minority students on college campuses. While minority students continue to make gains in college enrollment, they remain underrepresented at every degree level. The article discusses various problems and reasons for departure for minority students such as adjustment, especially for first generation students. Many minority students leave for reasons such as financial constraints, being unprepared for college, and due to unequal access to resources. For women, outside social forces seem to play more of a role than academic forces in determining why they leave college. The author discusses institutional responses that can help to foster higher retention rates among women and minority students (i.e. faculty/student mentoring programs, multicultural centers, and

summer transition programs). Additionally, Landry discusses the importance of transforming the curriculum so that the experiences of women and minority students are included.

Staehr, L., Martin, M., & Byrne, G. (2000). Improving the retention rates of women in computing: An intervention program. *Journal of College Student Retention, 2*(2), 127-140.

A report on the results of an intervention program that was developed and implemented from 1994-1997 in a computing degree program at La Trobe University Bendigo, Victoria, Australia, is the subject of this study. The researchers wished to increase the retention rates of first-year women students in the program as part of a governmental concern regarding the low percent of women involved in non-traditional courses. Their two main objectives were to investigate the effectiveness of the intervention program, and to identify background factors that might predict the continuance of first-year students to the second year of the course. The authors utilized a mixture of qualitative and quantitative techniques to gain data on the program which was continually modified through the years of study in accordance with the qualitative response of the students involved in the course. The quantitative results identified significant factors that contributed to the success of female students.