COLLEGE SUCCESS PROGRAMS

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The Pathways to College Network is an alliance of major foundations, non profit organizations, educational institutions, and the U.S. Department of Education, working together to improve college access and success for large numbers of underserved youth.

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Executive Summary

In the July 12, 2002,*Chronicle of Higher Education* Sally Stroup, a top U.S. Education Department official, said that the Department would be emphasizing student-retention rates, as well as other issues, as it works with Congress in the next year to reauthorize the Higher Education Act, the law that governs federal financial-aid programs (Borrego, 2002, p. 24). She further stated that, “The record of all kinds of colleges on retaining first- and second-year students was not good." Two months earlier, the May 6 *Chronicle* ran an article on college access and student retention in which Jacqueline King, director of the American Council on Education's Center for Policy Analysis, reported that institutions' retention data "greatly understate" the rate at which students actually complete their undergraduate education.” She added that a significant number of students transfer to other institutions for any number of personal, financial, or education-related reasons. Moreover, even if students leave the first college in which they enrolled, they do not necessarily drop out of the postsecondary system; they often transfer to another school (Borrego).

Background

These conflicting perspectives are indicative of the current discussions about student retention in higher education. Despite a 70-plus-year history of research on student departure, the concern over retention in colleges and universities has only increased (Braxton, 2000, p. 1). Moreover, minority students, who now represent a significant number of the college-going population, have even lower persistence and graduation rates, as well as lower levels of academic preparedness. Only 54% of recent high school graduates from low-income families pursue postsecondary education, compared to 88% of upper-income graduates (National Postsecondary Education Cooperative, 2001).

While a college degree does not guarantee employment, it nonetheless does give people an edge in joining the workforce, particularly disadvantaged individuals. Yet it is this same population that is disproportionately underrepresented in higher education. In 1976, 33.5% of traditional college-age (18-24-year-old) African Americans were enrolled in postsecondary institutions. In 1997, 40% were enrolled, an increase of only 7% (Gandara, with Bial, 2001). For Chicanos and Latinos, the number of traditional college-age students enrolled in college in 1976 was 36%; in 1997, it was 35.8%. However, the Chicano and Latino population increased by more than 200% between 1976 and 1997 (U.S. Department of Commerce, Bureau of the Census, 2000).

Purpose

The purpose of this report is to identify college retention programs that have demonstrated their effectiveness in retaining and graduating traditionally underrepresented college students through ongoing, longitudinal, qualitative, and quantitative evaluations. The goal is to provide college and university professionals—faculty, administrators, and student personnel—accessible, research-proven evidence of successful program strategies that improve the learning, success, satisfaction, persistence, retention, and graduation rates of underrepresented college students. Additionally, this report will look at how effective the program models are when implemented at any two- or four-year institution. Finally, this report will identify program "best practices" utilized to advance college success and access for underrepresented students. For the purposes of this report, "traditionally underrepresented" refers to ethnic minorities—specifically, African American, American Indian, and Chicano/Latino—first-generation, low-income, English as a second language, "non-traditional" adult learners, commuters, academically underprepared, and part-time students.

Methodology and Challenges

The resources utilized for this report were: the Educational Resources Information Center (ERIC), the Library of Congress, the Department of Education Library; the databases First Search, OCLC and Article First; and resources from the Pell Institute. Additionally, the web sites of the institutions whose retention programs were highlighted in the articles were researched. To be included in this research, the retention programs had to demonstrate measurable academic achievement that was equal to, or better than, the campus-wide student population.

While the search yielded over 100 articles on retention programs at both two- and four-year institutions, few of them had been evaluated thoroughly. Instead, many were no more than descriptive reports or articles offering recommendations for implementing activities that would affect an increase in student retention. Additionally, of those programs that have shown positive retention results, some of them are newly implemented programs, and thus have not had the longevity needed to conduct either qualitative or quantitative evaluations. There is also the possibility that there are successful retention programs that have not published their results. One area where research on evaluation is more prevalent, and will be discussed, is in "non-traditional" academic experiences, such as summer bridge programs, extended orientation programs, freshman seminars, experiential learning, distance education, and learning communities.

This research also looked at retention programs specifically committed to increasing minority retention in fields in which they have been traditionally underrepresented—the hard sciences, engineering, and mathematics. Examples of these are the *Emerging Scholars Program*, modeled after the *Mathematics Workshop* at the University of California at Berkeley, and the *Meyerhoff Scholars* at the University of Maryland. Other programs succeeded in retaining students of color by acknowledging their backgrounds, needs, and expectations and then taking action to accommodate them. The *Puente Project,* for instance, addresses the needs of first-generation Latino college students from a cultural perspective. Finally, some institutions that will be discussed are utilizing "cutting edge" techniques in creating their successful retention programs. These programs recently were awarded the Noel-Levitz Retention Excellence Awards to recognize the "most successful, state-of-the-art retention programs of post-secondary institutions in North America based on the following: measurable results, creativity in conception and implementation, adaptability for use at other institutions, use of resources, and a defined focus" (Villa Julie College Web site, 2001). Three of these—Bridgewater University in Virginia, Loyola University New Orleans, and

Central Wyoming College—have implemented successful retention programs that target the entire student population, resulting in significant, systemic changes within all levels of the institution.

Criteria

This report looks at the following criteria: improved grade-point average (GPA), student engagement—both academic and social—and student satisfaction, student retention into the sophomore year, credits earned, graduation rates, the program's role on the campus, and institutional commitment. Additionally, the research includes programs whose focus is to improve the numbers of minority students entering a graduate or professional program, especially where they are the most underrepresented: science, engineering, and math. To a lesser extent, programs designed to encourage low-income students and minority undergraduates to consider careers in college teaching as well as prepare for doctoral study also are reviewed.

THEORETICAL MODELS OF RETENTION

One of the most prominent theoretical models has been Tinto's Student Departure Theory, in which he states that academic integration (the student's academic performance) and societal integration (participation in college life) are the keys to persistence of college students. Students who are unable to connect with either the academic or social subsystems of their institutions are more likely to leave.

Astin's "I-E-O" (Input-Environmental-Output), or Student Integration Model, assesses the impact of various institutional environments and experiences by determining whether students grow or change under varying environmental conditions. Astin believes that the individual plays a central role in determining the extent and nature of growth according to the quality of effort or involvement with the resources provided by the institution (Pascarella & Terenzini, 1991, p. 51).

Bean and Eaton base their Psychological Model of college student retention on four psychological theories: attitude-behavior, coping behavioral (approach-avoidance), self-efficacy, and attribution, or "locus of control." They state that the factors affecting retention are ultimately individual, and that individual psychological processes form the foundation for retention decisions (Bean & Eaton, 2001, p. 73). Additionally, they believe that, given an understanding of these psychological processes involved in developing academic and social integration, an institution can create programs and environments that increase academic and social integration and increase student success (Bean & Eaton, p. 78). Successful retention programs such as learning communities, freshman interest groups, tutoring, mentoring, and student orientation rely on psychological processes (Bean & Eaton, p. 73).

For students of color, the integration into the institution's environment, as well as academic success, can be very difficult, especially at majority White institutions. Also, much of the existing research on student retention was conducted before minority students became a "critical mass" on college campuses (Rendón, Jalomo, & Nora, 2000). Consequently, the research often was based on White male students (Tierney, 1992; Belenky et al., 1986) and hence produced a "monolithic view of students devoid of issues of race/ethnicity, culture, gender, politics, and identity" (Hurtado, 1997).

Tierney posits an alternative model based on cultural integrity and Bourdieu's notions of cultural capital, which explains how social class influences transmission of educational inequality (Tierney, 1999). He argues that the widely accepted theory that college participation is a "rite of passage" where academic and

social integration is required for student persistence, misinterprets anthropological notions of ritual and holding consequences harmful for racial and ethnic minorities (Tierney, 1992). He offers his model of "cultural integrity" as an intervention for those students who are most at risk of departing from college: low-income, urban, Black, and Hispanic youth (Tierney, 1999); one which develops ways of affirming, honoring, and incorporating the individual's identity into the organization's culture (Tierney, 1999). He cites Deyhle's (1995) study that also suggests that Native American children who were secure in their traditional culture and identity—that is, those who refused to accept either assimilation or cultural rejection—were more academically successful in school than their culturally insecure peers.

Likewise, Rendón's (1993) study found that minority and nontraditional students could be academically successful *without* total disconnection from their culture, through "validation": those actions and outcomes that communicate to students, either directly or symbolically, that they have the capacity and competence to complete college successfully. Validation refers to actions taken by persons *other* than the student, and has the following dimensions:

- It is an empowering, confirming, and supportive process, initiated by validating agents, that helps move students toward academic and interpersonal development;
- Validation is a developmental process, not an end;
- Validation is most effective when offered early in the student's college experience, immediately after the student arrives on campus;
- Validation can occur both in and out of class (Terenzini et al., 1996).

Each of the above theories on student departure recognizes that students come to college with a number of characteristics, experiences, and commitments, and that the institution itself has certain characteristics. Upon entry to college, each of the models attempts to describe the ways in which the student and the institutional environment interact with one another to form and re-form student attitudes, behavior, and commitments (Thayer, 2000). All these theories can be utilized to create a successful retention program based on the particular profile of the student population and the specific institutional mission and goals.

PROGRAMS

Comprehensive Programs

For this report, "comprehensive" retention programs are defined as such by the authors of the articles, and generally have all or most of the following components in common:

- academic skills training (test-taking/preparation; textbook reading skills; note-taking skills; listening skills)
- assessment tools (COMPASS, Myers-Briggs, etc.)
- career planning
- centralized academic support
- collaborative learning techniques
- computer and Internet training
- cross-cultural awareness events
- internships
- leadership development
- learning communities
- memory/concentration skills
- parent/family orientation
- peer mentoring
- personal counseling

- developmental education
- early academic progress/warning monitoring
- experiential learning
- faculty mentoring
- frequent meetings
- freshman seminar course
- freshman/new student orientation
- group learning
- group study sessions
- "home base" environment
- proactive and intrusive advising
- research opportunities
- resident counselors
- service learning
- summer bridge programs
- summer orientation
- Supplemental Instruction (SI)
- time management workshops
- transfer services
- tutoring

Serving as a "benchmark" for all college retention/success programs is the federally funded Student Support Services (SSS). SSS programs have the most consistent record for providing access to, and success in, higher education, as well as showing positive outcomes. Like all TRIO programs, SSS operates against specific, measurable outcome project objectives, and is accountable to the Department of Education for meeting those objectives. Moreover, the mandatory annual program and budget reports that SSS programs submit to the Department of Education necessitates that they have ongoing program evaluation.

The National Study of Student Support Services conducted a longitudinal survey of students, beginning in 1991, the findings of which showed that SSS achieved improvements in educational outcomes for typical participants. Freshman participants not only achieved a higher grade-point average, but also were retained into their second year at a 7% higher rate than similar non-participants (Muraskin, 1997, p. 1). Consequently, it is TRIO/SSS "best practices" against which other college success programs were measured for this research (Muraskin, 1998).

Operating on the assumption of "front-loading" program services to students (providing services early in the freshman year), TRIO/SSS utilizes a comprehensive set of strategies to achieve the desired results of student persistence, academic success, transfer, and graduation, based on the needs of the specific populations it serves:

- a structured freshman year program;
- prefreshman-year academic and social preparation;
- a major project role in participants' initial course selection;
- an intrusive advising process throughout the freshman year;
- provision of academic services that buttress the courses in which the participants are enrolled;
- group services that extend service hours and build cohesion among participants;
- a powerful message of success through conscientious effort (Muraskin, 1998).

An example of a successful TRIO/SSS program is the HORIZONS Program at *Purdue University* in Lafayette, Indiana, which received its first TRIO grant in 1978. This comprehensive program has offered classes on study skills and has provided personal and academic counseling. The program has had a computer lab since 1982, maintained for exclusive use by HORIZONS students to help them learn computer basics. Free tutoring by fellow students or graduate students is available. HORIZONS also pairs each freshman with a faculty mentor with whom the students meet three times during the semester.

Students found this to be a great way to meet a faculty member in their major, as well as an opportunity to speak with a professor about their course of study. The HORIZONS staff works closely with new students. Students who continue in SSS provide advice to and serve as role models for the new participants, which fosters an attitude that success is possible.

The cornerstone of the SSS program is the "Strategies for Effective Academic Performance," a four-credit hour required freshman orientation course addressing both cognitive and affective needs. Students meet for three hours per week in a classroom to address the cognitive portion of the course and for two hours per week in a "Community Building/Personal Growth Laboratory" to work on the affective portion of the course Dale, 1995, p. 6). The course also allows the staff opportunities to further assess student needs. Through this course, the staff can ensure participation in appropriate program activities; teach needed affective skills; administer academic tests to determine strengths and weaknesses; provide career, personal, and academic counseling; teach effective study methods; develop a sense of community within the student body; teach students to use computers; expose students to cultural programs; initiate and explain tutorial services; apply thinking skills to math, chemistry, and problem solving situations; provide assistance with financial aid; make peer counselor contacts; and assign mentors and graded mentor discussion topics (Dale). The staff works closely with new students, and students who continue in the program provide advice and serve as role models for the new participants. Finally, students develop strong ties to the HORIZONS staff, and thus are more connected to the school.

In 1990 HORIZONS implemented matched-pairs research designed to determine the impact of its services. Forty-seven first semester freshmen that participated that fall represented the experimental group and a like cohort of 47 students eligible for HORIZONS, but not participating, was the control group. Students were matched via computer for research on (1) the probability of earning a 2.0 GPA, based on SAT scores and high school grades and rank; (2) race (each group consisted of 8 Hispanic students, 14 African American students, and 25 Caucasian students); and (3) school of enrollment. The average combined SAT score for the two groups was 864, more than 150 points below the University average. This comparative study reflected student status after 10 semesters of enrollment. In 1995 the results were as follows: In the HORIZONS group, 17 students had graduated with a bachelor's degree and 23 students were still registered, constituting an 85% retention rate. Five students had stopped out and two students were on academic drop status. In contrast, the control group had 11 students who had graduated and 11 still registered, constituting only a 47% retention rate. Twelve students had stopped out and 13 were on academic drop status.

The research also assessed the value of each of the 15 services offered. Students completed a questionnaire, rating each service's usefulness as very helpful, helpful, undecided, not helpful, or never used by that individual. The top four services ranked as very helpful were, in descending order, as follows:

- Just knowing that help was available 80%
- Tutoring 60%
- Use of the HORIZONS computer lab 52%
- Study skills training 48%

It is not surprising that "Just knowing that help was available" had the highest rating. In such a complex, large environment as the Purdue campus, students found the HORIZONS center a comfortable

environment, serving as a “home base” giving students a place to come to if they have a problem. Four other services tied with a “very helpful” rating at 36%:

- Assistance from the HORIZONS financial aid liaison
- Computer training
- Opportunity to receive financial aid for summer school
- Assessment of skills, interests, and attitudes through testing

During the 1996-97 school year, 90% of all freshmen in the program returned for their second year, compared to Purdue as a whole, which retained 84%of all its freshmen. The successes of the HORIZONS students show that, while they may be less prepared upon entering Purdue, it does not mean that they will have less success at Purdue (Willis, 1995).

Some institutions have made dramatic systemic changes on their campuses to improve the retention, success, and graduation of their students. *Bridgewater College*, a four-year liberal arts college in Virginia, chose a unique approach to address its low retention rates. Upon its president’s suggestion, in 1995 the university implemented the “Personal Development Portfolio” (PDP), which all students must complete. The college wanted a retention program that would get students involved in the campus and community, as well as retain students in many ways: psychologically as well as intellectually. The PDP is a theoretical approach to the "whole student's" education, and is composed of four main concepts addressing the "whole person": a) citizenship, b) intellectual growth, 3) personal/emotional, and 4) ethical/spiritual growth (Brotherton, 2001, p. 35). From their freshman year, each student, working closely with a faculty mentor, sets her/his own goals, then organizes and documents each activity to build a record of achievement over four years.

The PDP is a comprehensive program, incorporating a summer orientation, a freshman success course, service learning, goal and career setting, and leadership development. Students are assigned a PDP adviser and resident counselors, who work with them throughout the freshman year. One of the key components of this program is the Early Warning Committee, which involves the PDP director, representatives from financial aid and admissions, and other major staff from student and academic affairs. Together, they form a cohesive unit that is able to target students’ needs and address them quickly. This innovative program succeeded in increasing the freshman to sophomore rates from 65% in 1993 to 79% in 1999. Additionally, the college has a six-year graduation rate of 61%.

The retention initiative at *Loyola University* in New Orleans presents a strong example of an institution that created effective, systemic changes aimed at improving the quality of student life and learning. The university took a collaborative approach to improve its student recruitment and retention. The initiative, called “It Takes a Campus to Graduate a Student,” was composed of three steps, following in a logical progression. First, the university reviewed and substantially changed its recruitment and enrollment strategies. These changes involved a lot of education on all levels, from the Board of Trustees down. Second, it focused on student success and retention. The school created a large, 120-member University Task Force on Student Success and Retention, divided into 10 working groups. Each group focused on one of the following: instructional effectiveness, academic advising, academic support and career development, campus diversity, freshman experience, post baccalaureate programs, student life and campus tradition, campus services, alumni affairs and public relations, and recruitment and financial aid (Brotherton). Finally, the university developed a new integrated marketing and communications plan, which

it began to implement in 2001. Increased retention was the result of the institution's goal of improving the quality of student life and learning. This is an ongoing process, as the institution continues to evaluate its effectiveness.

Their summative evaluation criteria were as follows:

- An annual freshman to sophomore persistence rate of 83% for students entering in Fall 1999 and a gradual increase in the annual freshman to sophomore persistence rate for classes entering in Fall 2000 to 85%, Fall 2001 to 87%, Fall 2002 to 89%, and Fall 2003 to 90%.
- A cohort four-year graduation rate of 60% for students entering in Fall 1999.
  A cohort five-year graduation rate of 70% for students entering in Fall 1999.
- The mean score of each scale in the Student Satisfaction Inventory (SSI) increased by 0.5 points by Fall 2000.

The formative evaluation criteria included outcome assessments and key indicators of success associated with the 10 strategic areas. Preliminary results were positive:

- The entering class of 1999 was one of the largest and brightest in recent history (totaling 809 freshmen who averaged a GPA. of 3.62, SAT combined score of 1166, and an ACT score of 26). Similar trends were predicted for the class of 2000.
- Comparison of the fall to spring freshman transition rates indicates an upward trend (i.e., 87.5% in Spring 2000 compared to 83.1% in Spring 1999).
- The graduation rates show a slight improvement.
- A comparison of 1999 with 1998 SSI results registers more satisfaction on most scales. (Loyola University, 2000)

Since the implementation of the campus-wide initiative the university's retention rate for freshman to sophomore year increased from 74.2% in the Fall of 1995 to 84.8% for Fall 2000. The four-year graduation rate, as well as recruitment and enrollment statistics, also are on the rise. It is clear that the successes at Loyola University are the result of an intentional, institutional decision to create a "true systemic, university-wide changes that potentially affect every student as well as involve virtually every staff and faculty member" (Loyola University, 2000).

Learning Communities

While it has been around for several decades, one of the most important retention strategies currently being promoted and implemented is the learning community, based on Alexander Meiklejohn's Experimental College, which he founded at the University of Wisconsin in 1927 (Powell, 1981). Meiklejohn believed that the undergraduate college must teach students how to think, and he aspired to make students into "thinking, caring, active citizens with the intellectual skills to participate in a democratic society." Today, institutions of higher education are utilizing learning communities to address a variety of educational issues: the mismatched expectations of career-oriented students and research- and discipline-oriented faculty, the inadequate amount of intellectual interaction between students and between faculty and students, the lack of coherence among most of the courses taken by students outside of their major, inadequate resources and opportunities for faculty development, and the growing complexity and interdependence of contemporary issues (Hill, 1985). Additionally, current literature on learning communities indicates that they can have a significant impact on the academic success of disadvantaged

students, students of color, academically underprepared students, students needing remedial support, and non-traditional students.

According to Gabelnick, MacGregor, Matthews, and Smith (1990, p. 19), the learning community is "any one of a variety of curricular structures that link together several existing courses—or actually restructure the curricular material entirely—so that students have opportunities for deeper understanding and integration of the material they are learning, and more interaction with one another and their teachers as fellow participants in the learning enterprise" (Kellogg, 1999). There are five major types of learning community models: Linked Courses, Freshman Interest Groups, Coordinated Studies, Learning Clusters, and Federated Learning Communities.

Linked Courses

This model links a cohort of students with two common courses, one of which is typically content-based, such as science or math, and the other an application course (writing, speech). The faculty of each course may teach independently or together and coordinate syllabi and assignments so that the classes complement each other. This model provides a shared experience for students and focuses on a content-based course that is actively supported by a skills course. The *University of Washington* (UW) Interdisciplinary Writing Program (IWP) provides five-credit expository writing courses, each of which is linked to a discipline-based lecture course. Students enroll in both the writing and discipline-based courses, and complementary assignments allow them to improve their writing skills within a subject area of their own particular interest (University of Washington Web site). Another example of the Linked Course is the "Students and Teachers Achieving Results" (STAR), at *Long Beach City College*. Implemented in 1995, the program was designed to intensely develop reading, writing, math, study, and college survival skills for underrepresented and at-risk students at LBCC. Students register for a cohort of classes in which curriculum is integrated. The faculty that teach the courses meet regularly to monitor student progress and modify the curriculum to help students meet academic and personal goals. Cooperative learning, communication skills, and development of self-esteem are emphasized (Long Beach City College STAR Web site). During the first year of STAR, 90% of the students completed the program, and several went on to transfer-level work and received scholarships from the LBCC Foundation. Students reported that STAR helped provide inspiration, as well as showing them how to get started in college: 80% of the 1995-96 students re-enrolled in the 1996-97 STAR community. The persistence rate of STAR students is 76% versus 72% for non-STAR students, and for a third semester the STAR persistence rate is 62% versus 51% for non-STAR. Additionally, STAR students advanced at a faster rate from third level English to college English composition than the non-STAR students. For example, STAR students advanced from third level 801A, skipping 801B, to 105 (one level below English composition) at a 40% rate versus non-STAR students who advanced at 30% (Long Beach Community College, 2001).

Freshman Interest Groups (FIGs)

FIGs link three freshmen courses together by a theme; they are linked around academic majors and include a peer adviser-led weekly seminar. Freshmen can discuss course work and problems adjusting to college. Faculty plays a lesser role in this model, but may be active in the FIGs by attending social events or, occasionally, the weekly seminar. The *University of Missouri-Columbia* implemented their FIGs program in 1995, and combined some of the elements from the Universities of Oregon and Washington models with elements of theme-related residence halls. Between 10 and15 students were enrolled in each FIG and, with few exceptions, they lived together on the same floor in a residence hall and were co-enrolled in three courses during the Fall semester. Initially the FIGs program at MU consisted of 22 learning communities organized around general academic themes (e.g., Ancient People and Culture, Society and

Science, America[1]s Diversity, etc.). Participants attended a one-credit, one-hour weekly Freshman *Proseminar,* taught by the peer adviser assigned to the FIGs. These Proseminars were designed to improve students' study skills, provide an additional orientation to campus, give students additional theme-related information, and help them integrate information they gained from their in- and out-of-class experiences.

The evaluation of the FIGs program was conducted in two phases, the first phase of which examined students' academic records to determine if participating in the FIGs program was associated with higher levels of academic achievement and persistence. Measures of academic achievement included grade-point averages for the fall and winter terms as well as cumulative grade-point average. In the second phase, first-year students were surveyed in the fall using the MU Freshman Survey, which provided information about the extent to which students were able to fit into the university culture and their commitment to succeeding at MU. During the winter term, students were again surveyed using the College Student Experiences Questionnaire (CSEQ*),* which provides measures of the quantity and quality of students' involvement in- and out-of-class, their interactions with faculty and peers, and their efforts to integrate their first-year experiences.

The results of the evaluation showed that the students in the FIGs program were significantly more successful than other students, particularly in terms of their retention. Of the 225 students who participated in the FIGs program in Fall 1995, all but 10 were enrolled for the Winter term, a 96% retention rate, compared to 91% for other students. FIGs participants also had significantly higher one-year retention rates than other students (87% versus 81%), as well as higher grade-point averages. For the Fall 1995 semester, FIGs students had a mean GPA of 2.89 compared to a mean GPA of 2.66 for other students. Even after controlling for differences in entering ability, FIGs students' grades were significantly higher than the grades of other students. Both the MU Freshman Survey and the College Student Experiences Questionnaire provided important data about the effects of the FIGs program on the development of identity, involvement in out-of-class experiences, interaction with faculty and peers, and integration of information gathered from in- and out-of-class experiences. The MU Freshman Survey showed that students in the FIGs program reported significantly higher levels of academic integration and institutional commitment and social integration. Compared to other students, FIGs students reported that they had significantly greater interaction with their peers, that the intellectual content of interactions with faculty and peers was significantly greater, and that FIGs also provided greater opportunities for students to integrate their in- and out-of-class experiences.

The UM Web site has a more detailed description of the FIGs programs and the evaluation (University of Missouri Web site).

Coordinated Studies

Nationally, *Evergreen State College* and *Seattle Central Community College* are the leaders in implementing the "coordinated studies" learning community model, and have achieved very positive results in student involvement, learning, persistence, and retention. This model involves faculty and students participating in full-time active learning based on an interdisciplinary theme; the curriculum can last for an entire academic year, and the faculty has the opportunity to redesign the entire curriculum, providing extensive professional development for faculty.

At *Evergreen State College* the Coordinated Studies Program is the primary teaching and learning mode. The program is a team-taught, generally full-time—16 credits per quarter—interdisciplinary unit with two to

five faculty members and 48 to 100 students. The work is centered around a common reading list, seminar discussions, lectures, workshops, individual projects, and sometimes internships.

- *Innovative academics* — students enroll in a single comprehensive program rather than a series of separate courses, and explore many aspects of a theme or topic through different but related academic subjects. By tackling topics in an interdisciplinary way, students learn not only about a broad range of subjects and issues, but also become critical thinkers and skilled communicators.
- *Collaborative learning* — The faculty works together in teams of two, three, or four teaching in one program. They plan activities such as labs, workshops, seminars, and field trips to create an atmosphere of shared learning with groups of 23 to 25 students. Students get a real-world learning experience through hands-on exploration and internships.
- *Narrative-style evaluations* — Instead of letter grades, students are evaluated in detailed, written narratives by faculty that become part of students' academic transcripts. Students' self-evaluations are included on these noncompetitive transcripts as well.

Tinto studied the Coordinated Studies Program (CSP) at *Seattle Central Community College* to determine whether the program made a difference in student learning, and if so, how, compared to "traditional" classroom learning (Tinto, 1997). Two forms of inquiry were performed: a longitudinal panel study (quantitative) and a qualitative case study. The results showed that the CSP students reported greater involvement in a range of academic and social activities and greater perceived developmental gains over the course of the year, than did the students in the traditional curriculum (Tinto, p. 606). Additionally, the CSP students reported significantly more positive views of the college. The persistence rate of CSP students from the fall to the spring semesters was 83.8%, compared to the traditional cohort at 80.9%. The fall to following fall persistence rate showed a much greater difference in percentage between CSP students and the traditional cohort, 66.7% compared to 52.0% (Tinto, p. 607). The qualitative case study revealed that there were three main components that showed the ways in which the communities influenced persistence: a) building supportive peer groups, b) shared learning-bridging the academic/social divide, and c) gaining a voice in the construction of knowledge. Thus, the learning community had a significant impact on how students, peers, and faculty connected inside and outside of the classroom.

Learning Clusters

This model is similar to the Linked Course, except that instead of linking two courses together, three or four courses are linked with one cohort, often serving as the students' entire course load. Learning Cluster courses generally are based on a theme, historical periods, issues, or problems (Kellogg). The *University of Texas, El Paso* (UTEP) implemented learning clusters in their "Model Institutions for Excellence" program to help improve the performance of incoming minority students—specifically Hispanics—in the fields of math, science, and engineering. Through this initiative, UTEP aimed to *redesign* education to fit the specific needs of the Hispanic student population. Each "cluster"—generally a maximum of 25 students—takes classes together, thereby fostering collegiality and familiarity. Each cluster is provided with a physical place where the students can meet outside of class, work on joint projects, and receive free tutoring from peer facilitators. They take Mathematics, Introduction to Engineering, and English Composition, the latter serving as a means to articulate what is being studied in all Cluster classes.

Federated Learning Communities

The most complex learning community model, this involves students taking three theme-based courses in addition to a three-credit seminar taught by a "Master Learner." The Master Learner is a professor from a

different discipline who takes the courses and fulfills all the requirements of the classes along with the students, then leads the seminar and assists students in synthesizing and exploring the opinions and points of view of students from the three courses (Kellogg).

Freshman Year Experience Programs/Structured First Year Programs

While the learning community could be defined as the deliberate or intentional restructuring of the curriculum to connect students and faculty to foster greater intellectual connections, the Freshman Year Experience could be defined as a "deliberately designed attempt to provide a rite of passage in which the students are supported, welcomed, celebrated, and ultimately assimilated." Further, the Freshman Year Experience recognizes that the freshman year is the foundation upon which the rest of the college experience is based. It also acknowledges the fact that not all freshmen are the same, and consequently have a variety of special needs for orientation, support, and programs due to the heterogeneity of their backgrounds (Hankin & Gardner, 1996).

Focusing on the freshman year is not a new idea. Freshman seminars, for instance, date back to the first such initiative in 1882, at Lee College in Kentucky, and the first "for-credit" seminar became part of the curriculum at Reed College in 1911. In the ensuing years the freshman seminar lost its popularity; however, with the current and ever-changing profile of the college-going student, many colleges and universities again have begun incorporating similar initiatives to address their increasingly low retention and graduation rates, as well as an effective way to address many of the issues and problems of contemporary college life. The *University of South Carolina* introduced its "University 101" course in 1972 in response to student riots in 1970 protesting the Vietnam War, other perceived social injustices, and local campus issues. The primary goal for the course was to "build trust, understanding, and open lines of communication between students, faculty, staff, and administrators" (University of South Carolina Web site).

A variety of programming is utilized in First Year Experience programs, including some or all of the following activities: assistance in getting acquainted with the institution (orientation), living and learning communities, freshman seminars, career exploration assistance, student-peer and/or student-faculty mentoring, academic advising and counseling, academic-skills training, and other social-support activities.

Orientation Programs

Orientation programs are designed to help students make a successful transition to the college environment and to initiate the process of higher learning. They facilitate student learning in three general dimensions: the transition process, academic integration, and personal and social integration. Successful programming promotes confidence among matriculating students and their families that they have selected an appropriate institution that may lead to a successful college experience (Robinson & Burns, 1996).

Orientation programs have several characteristics in common that distinguish excellent programs from others that fail to meet their program objectives (Robinson & Burns):

- Total Campus Commitment
- Orientation Activities Prior to Beginning Classes
- Prematriculation and Early Registration Programs
- Pre-Fall Programs
- Combined Designs

- Freshman-Year Orientation Activities
- Orientation Courses
- Academic Enhancement Services and Programs
- Learning Communities
- Mentoring Program Evaluation and Improvement Methods

The University of South Carolina's Freshman Year Experience is composed of an extended orientation and freshman seminar, University 101. It is a nationally and internationally recognized three-credit freshman seminar course, beginning with a one-day summer program for advising and course registration and continuing with a pre-fall semester series of programs and activities to introduce students to the nature of higher education, and to acquaint them with USC resources and programs to aid their educational success (University of South Carolina).

Although it was not developed specifically to target African Americans, University 101 nonetheless has successfully improved the academic success, satisfaction, retention, and graduation of African American students. Its success is based on its incorporation of several "avenues of change," as proposed by Pounds (1989), into the seminar. The first avenue of change is to provide meaningful ways to involve African American students in campus life. University 101 encourages African American students' participation in campus activities, which helps them to become socially integrated (Fidler & Godwin, 1994, p. 35). The second avenue of change is to assist students in forming positive attachments to adults. This is achieved by encouraging the students to build close relationships with their peers and their faculty. Additionally, the seminar provides guest speakers, from various departments and services across the campus who could serve as potential information sources and/or mentors. The third avenue of change is to provide security from threatening situations. The University 101 class is structured as a support group, in which students participate in values exercises, discussions, or field trips. It reinforces the notion that the university is a friendly and supportive environment. A fourth "avenue of change" incorporated through University 101 is to help all students gain an appreciation for diversity. Students are introduced to the "Carolinian Creed," which is a number of formal statements of desirable student relationships stressing the importance of tolerance for differences (Fidler & Godwin).

The success of University 101 in improving African American student retention is significant: Evaluated annually, the data shows that African American students who took the course had freshman-to-sophomore return rates that were higher than White students in almost every year since 1973 (Fidler & Godwin). Studies conducted by the late Paul P. Fidler, who was Director of Research, Grants, and Planning in the University's Division of Student Affairs, found higher retention and higher GPAs for those enrolled in University 101 regardless of race or sex (Fidler, 1991). Additional research by Shanley and Witten (1990) also has shown higher graduation rates for University 101 student and has influenced many institutions with high dropout rates for first-year students to adopt first-year seminars modeled after USC's University 101 course (University of South Carolina).

As mentioned earlier, the HORIZONS SSS Program at Purdue University in West Lafayette, Indiana, incorporates a freshman orientation course, Strategies for Effective Academic Performance, through which first year students receive the most services. The program has achieved significant retention and graduation rates—85%--for their participants over 10 semesters, compared to only 47% of the control group.

Likewise, at *Mount Ida* College in Newton, Massachusetts, students who participated in the Freshman Orientation Week (FOW) were retained at 91%, compared to 80% of the cohort group, and had a mean GPA of 2.3 compared to 1.58 for the cohort group. (The Freshman Orientation Week is the first component of an academic achievement and enhancement program for at-risk students called "The Learning Circle.") Mount Ida College is a 2 + 2 open admissions college whose delivery system of services was lagging behind the changing population. Some of the major components of the FOW are student residency in the dormitories; various skills classes (time management, study and computer skills, etc.); orientation to the campus, faculty, and staff; and self-management techniques such as self-esteem building, conflict resolution, and personal adjustment to the social environment. The FOW component's success was measured by the following criteria: at-risk students' perceptions, professional participant observations, program documents, and a variety of other formal and informal data sources. Results showed that participation in The Learning Circle Program created a great sense of solidarity among the participants, as well as between the participants and the faculty and administrators. Additionally, the willingness of the program faculty to forego some of the planned activities to deal with the affective and social issues that arose reinforced for the students a sense of trust between the students and their perception of Mount Ida College (Erickson, 1998). In a report to the Mount Ida Board of Trustees the following results were provided:

- The comparative mean GPA for FOW participants was 2.3, compared to 1.58 for the cohort group.
- Average GPAs were 2.9, compared to 1.65 for the cohort group.
- Qualitatively, the participants, as a group, attained a C+ average, compared to a D+ average for the cohort group.
- Sixty-seven percent of the participants earned a GPA of C or better, nearly 40% of whom earned a B- or better. In contrast, 65% of the cohort group had a GPA of D+ or lower.
- The Learning Circle's .64 and .72 higher GPA respective averages and means are more than double the .30 achieved in the nation's TRIO Programs.

Freshman Seminar Programs

The most common types of freshman seminars are the extended orientation, academic orientation with uniform academic content, academic orientation on various topics, professional or discipline-based orientation, and basic study skills-oriented orientation (Barefoot & Fidler, 1996). Many institutions, however, offer a hybrid of these types, based on the needs of their student population. The seminars are utilized to accomplish specific goals, such as easing the students' transition and adjustment to the college environment, assisting the students in developing academic skills, and providing an orientation to campus resources and facilities. They also provide a mechanism for motivating students to engage in the kind of activities that the institution values and that have been shown through research to improve retention (Kluepfel, 1994, p. 29).

For over thirty years, *Marquette University*'s Freshman Frontier Program (FFP) has served students conditionally admitted to the institution who do not meet regular admission requirements, but who show potential for success through a high school counselor recommendation (Marquette University Web site). If admitted, the students complete a five-week summer program that includes a three-credit course in an area of past academic strength, two non-credit learning skills courses, mandatory summer residency for students not from the Milwaukee area, organized evening study sessions, and academic advising. During the fall component, the FFP students take a reduced course load and receive tutoring and consistent and

intrusive academic monitoring. They also participate in the regular fall freshman orientation in order to meet the other students and hear about student activities and organizations on campus.

The FFP began in 1970 and has served almost 3,200 students since its inception. For the past 17 years, FFP has conducted student surveys at the end of the academic year. Students are asked questions such as, "Would you recommend a high school student to attend Marquette through the Freshman Frontier Program." Ninety-nine percent of the students surveyed have responded that they would recommend the Program.

Summer Bridge Programs

University summer bridge programs or transitional programs for high-risk, low-income, and minority students are becoming an established part of the effort to recruit, retain, and graduate a population of students underrepresented in higher education (Ackermann, 1991, p. 201). These programs enable students to get a head start on building academic skills, especially in English and math. Additionally, they provide opportunities for students to become acquainted with college resources, college expectations, and interaction between students and faculty and staff. They also assist students in developing an attachment to the campus community. Finally, most of the summer bridge programs require that students reside on the campus throughout the program. One of the benefits of the residential program is that it provides a context in which at-risk students can learn to integrate their social lives with their academic lives. The program activities isolate them from many of the competing priorities found at home—such as low peer group value for education—and help them focus on school as a priority. The most successful summer bridge programs are very structured, and convey the clear message that college is “serious business” (Kluepfel, p. 28).

The *University of California Berkeley*’s Summer Bridge Program focuses on the need for minority students to feel connected to the institution, focusing more on the difficulties affecting minority students who are targeted for admission through affirmative action programs. The six-week intensive, academic residential program assists entering freshmen with their transition from high school to college and helps to minimize the stigma typically associated with support programs that target weaker students. The students enroll in courses in Math, English, Chemistry, and Social Science. Other components of the program include weekly seminars, skills workshops, and peer support. The students may not work while attending the Summer Bridge, and also must remain on campus on the weekends. The program also is mandatory for students conditionally admitted to Berkeley in the fall. While no data could be found, this program has existed for more than 20 years. Additionally, the program has served as a model for other summer bridge programs, including the FSP/TSP at UCLA.

In July 2003 the *University of California, San Diego* received the Noel-Levitz Retention Excellence Award for its Summer Bridge Program. For over 25 years the UCSD Summer Bridge Program has provided a rigorous academic and residential experience for students from educationally disadvantaged backgrounds. To date it has served more than 2,500 freshmen. Summer Bridge is a four-week program; it serves about 150 incoming freshmen each summer, assisting them in making a smooth transition from high school to college through a comprehensive summer-long orientation that acclimates them academically and socially to college life. They receive instruction in math, science, college writing, contemporary issues, leadership, critical thinking, and campus orientation. The students reside on the campus, and are encouraged to participate in leadership roles in campus groups and organizations, as well as to avail themselves of the wide range of academic support services provided by the Office of Academic Support and Instructional Services (OASIS). According to Dr. Patrick Velazquez, the Director of OASIS, the Bridge Program has

never operated as a "remedial" program, but maintains a high level of expectation for its students, both academically and socioculturally (University of California, San Diego Web site).

The Summer Bridge participants persist and achieve at rates high as or higher than students from similar backgrounds who did not participate in the program. A study of the 2001 freshman cohort revealed a freshman-to-sophomore-year retention rate of 96%, four percentage points higher than the 92% rate of non-Summer Bridge participants. They had an average grade-point average (GPA) during the freshman year of 2.91, compared with 2.88 for non-participating freshmen. Additionally, fewer Summer Bridge students were in academic difficulty—defined as having a GPA below 2.0—than non-participants. They also had higher graduation rates: For freshmen who participated in the program in 1995, 81% graduated within five years, compared to 78% of freshmen in a non-participating cohort. Finally, recent student evaluations reveal an impressive 100% of participants agreed or strongly agreed that the program aided their transition to the university (University of California, San Diego).

University of California, Los Angeles' Academic Advancement Program received the Noel-Levitz Retention Excellence Award in 1997 for its work in bolstering the academic success of underrepresented, first-generation college, and low-income students (Wolpert, 1997). Established in 1971, the AAP has served more than 7,100 disadvantaged undergraduates with programs and services that include the academically rigorous Freshman Summer Program and Transfer Summer Program (FSP/TSP) for entering students, which includes counseling, tutoring, mentoring, and scholarships. The FSP/TSP is a six-week summer bridge program designed to bring newly admitted students onto the campus prior to their first term to become familiar with the campus and its resources. Each participant receives close personal attention, either in small groups or in individual sessions, from their teaching assistants and tutors. Ninety percent of the students reside on the campus, making it easy for them to participate in a wide variety of cultural and social events, as well as to interact with students of diverse backgrounds. The curricular component includes either a mathematics intensive or an English composition and general education intensive. The mathematics intensive consisted of a morning mathematics course and an afternoon Professional Development Program workshop, patterned after the UC Berkeley program. The English/general education intensive students are enrolled in an English class according to proficiency, and in a general education course according to proficiency and interest.

The first comprehensive, external evaluation of the summer bridge program was conducted in 1988. It was a two-phase evaluation. Phase I was a programmatic review and concentrated on the five components of the program that purportedly had the greatest impact on student success: academics, student and professional staff training, parental involvement, social and cultural awareness, and counseling services. Phase II of the evaluation was a longitudinal study, designed to track the 1988 FSP/TSP students' academic progress from the summer through the winter quarter of the 1988-1989 academic year. (Ackermann, 1991, pp. 202-203) The students' subsequent academic performance at UCLA after attending the bridge program showed the FSP/TSP's success in preparing the students for the academic challenges of the university. The mean GPAs for the summer, fall, and winter quarters of 1988-89 were 2.64, 2.30, and 2.37, respectively, and the persistence rates were 97% for FSP students and 93% for the TSP students continuing into their second year, compared to 90% of all underrepresented freshman students at UCLA (Ackermann, p. 206).

Developmental Education Programs

The National Association for Developmental Education defines developmental education as "a comprehensive process that focuses on the intellectual, social, and emotional growth and development of

all students. Developmental education programs and services commonly address academic preparedness, diagnostic assessment and placement, development of general and discipline-specific learning strategies, and affective barriers to learning" (National Association for Developmental Education Web site).

In addition to developmental courses, the most commonly used intervention, there are a wide variety of other interventions utilized to assist academically underprepared students to be successful in college, such as tutoring, special academic advising and counseling programs, learning laboratories, and comprehensive learning centers (Boylan, 1999). According to Boylan, the successful developmental education programs have in common the following traits:

- There exists an institutional commitment to the concept of educational development.
- It is delivered by well-trained faculty and staff and is student-oriented and holistic.
- The goals and objectives of a strong developmental education are consistent with the goals and objectives of the institution.
- They are integrated into a seamless progression of academic standards enabling students to easily make the transition from one level of content to the next level of content (Keimig, 1983; Roueche & Roueche, 1993).
- It is based on explicit goals and objectives.
- Good developmental education incorporates critical skills into all of its activities. Critical thinking, metacognition, and study skills and strategies are not taught in isolation.
- Good developmental education is evaluated.

The *University of Minnesota's* General College (GC) reflects the strength and value of developmental education. GC has existed for 70 years and originally was a degree-granting institution awarding the Associate in Arts degree. Currently GC is the entry point for students whose admissions/academic profile precludes them from immediate admittance into one of the degree-granting colleges. It also acts as a national research leader on developmental education. GC offers developmental coursework, intense and intrusive advising, and comprehensive support services to a broad range of socioeconomic, educational, and cultural backgrounds. Students spend the first two semesters taking a full load—12 to 13 credit hours—of courses in math, composition, and science. All students work with a professional advisor in creating a clear academic plan with the intent to complete a bachelor's degree. Additionally, students must meet with an advisor before registering for classes, which has helped to drastically reduce the incidence of course withdrawals (University of Minnesota General College Web site).

In every year since GC was charged with its new mission, the college has improved on the critical measures of retention and transfer rates:

- For students who entered General College in 1999, the second-year retention rate is 76%. The rate is up from 61% in 1990.
- Transfer rates have improved dramatically over the past decade. The three-year transfer rate of the 1996-97 freshman cohort is at 54%. The three-year transfer rate for the 1997 cohort exceeded the four-year transfer rate for the 1996 cohort, consistent with improving trends across the board. The one-year transfer rate has *improved sevenfold in the twelve years since Commitment to Focus.* For the 1998 cohort, the first year transfer rate is at 31%, up from 5% in 1987.

- The graduation rate five years after transfer for GC students who transfer to the College of Liberal Arts equals or exceeds the five-year graduation rate for students initially admitted to CLA.

GC was selected by the American Productivity and Quality Center (APQC) as one of the nation's top five programs representing "Best Practices" in developmental education. The college also was recognized by the National Association for Developmental Education as the 2000-2001 Best Practices Site via the John Champaign Award.

The New Student House (NSH) learning community at *LaGuardia Community College* is a developmental cluster, and offers Basic Reading, Basic Writing or ESL 099, along with a college-level content course and a Freshman Seminar. Students register for a full block of courses that include Basic Reading, Basic Writing, Freshman Seminar, and a college-level content course. This is a highly integrated learning community that includes joint readings, projects, field trips, and large group meetings (for debates and role playing activities). The counselor who teaches the Freshman Seminar meets regularly during the semester with faculty teaching in the House to offer guidance and feedback, especially for the most at-risk students (LaGuardia Community College, CUNY Web site).

Tinto and Riemer (1988) studied the New Student House and sought to answer the questions, “Does the program make a difference?” and “If it does, how does it do so?” They conducted a survey similar to the one Tinto conducted at Seattle Central Community College, using both a longitudinal panel survey and a qualitative case study. Each method of inquiry yielded information that together provided a better understanding of how the experience manifested in students the kinds of behavior that caused them to persist in their education. They summarized their findings in three areas:

Building Supportive Peer Groups. NSH students developed a network of supportive peers through the learning community. They found a great deal of value in their associations, and found that the experience played a significant role in their decision to persist, despite other struggles they faced.

Shared Learning-Studying Together. Tinto and Riemer found that the students’ experience in NSH served to bridge the academic-social divide that most new college students face. Because of their participation in the learning community, their interpersonal relationships grew both inside and outside of the NSH; consequently, their engagement with each other fostered their continued learning.

Involvement, Learning, and Persistence. Because they were more engaged with each other, they tended to spend more time attending to their studies, as well as participating more fully in the classes.

Tinto and Riemer found that New Student House participants reported themselves more satisfied with their experiences at LaGuardia. They also performed better academically as a group than the comparison group, as well as students campus-wide. The students saw the shared learning environment as providing an educational setting that was different from and, for most students, richer than those they had experienced in the past (Tinto & Riemer). Consequently, these students persisted at a greater rate than the comparison group. The fall-to-fall persistence rate for NSH students was 69.8%, compared to 62.5% for the comparison group.

Supplemental Instruction Programs

Supplemental Instruction (SI) is a student academic assistance program that increases student academic performance and retention. The SI program targets traditionally difficult academic courses—those that have 30% or higher rate of D or F final course grades and withdrawals—and provides regularly scheduled, out-of-class, peer facilitated sessions. SI does not identify high-risk students, but rather identifies high-risk classes. SI thus avoids the remedial stigma often attached to traditional academic assistance programs (Arendale, 1993).

Through Supplemental Instruction sessions, learning and study strategies, such as note-taking, organization, and test preparation, are integrated into the course content, providing immediate practice and reinforcement of these acquired skills. Thus, students think about and process the content, as well as identify appropriate or critical learning strategies (Ramirez, 1997b, p. 2).

The Supplemental Instruction Program was created by Dr. Deanna C. Martin, Director of the Center for Academic Development (CAD), at the *University of Missouri-Kansas City*, in 1973. The program initially was targeted at the health science professional schools, and later was expanded throughout the institution. The SI program underwent a rigorous review process in 1981, and became one of the few postsecondary programs to be designated by the U.S. Department of Education as an Exemplary Educational Practice. The Department of Education validated three research findings: (1) Controlling for motivation, prior academic achievement, and the demographic variables which connote "non-traditional" (i.e., ethnicity, gender, marital status, extracurricular part time and full time employment, and age), students participating in SI within the targeted historically difficult courses earn higher mean final course grades than students who do not participate in SI. (Blanc, DeBuhr, & Martin, 1983) (2) Controlling for motivation and prior academic achievement, students participating in SI within targeted historically difficult courses succeed at a higher rate (i.e., withdraw at a lower rate and receive a lower percentage of D or F final course grades) than those who do not participate in SI. (3) Students participating in SI persist at the institution (reenrolling and graduating) at higher rates than students who do not participate in SI (Martin & Arendale, 1997).

It has been shown that Supplemental Instruction is cost-effective and more economical to administer than tutoring, the traditional service it most closely approximates. UMKC estimated that the cost of servicing 106 students by one leader during two semesters was $12 per student, substantially more service at lower cost than what one individual could have provided these students in a conventional program (Ramirez, 1997a, pp. 78-91). Additionally, SI has been implemented at over 300 other colleges and universities. It has also been implemented in several other educational environments, such as a pilot program at an ethnically-diverse inner city high school in Kansas City, Missouri. Lastly, several test preparation programs for the medical profession (e.g., Medical College Admissions Test, National Board Examinations) use SI to enhance their programs (Martin & Arendale, 1993).

An offshoot of SI is the Videotaped Supplemental Instruction (VSI), also developed and first implemented at the University of Missouri-Kansas City Center for Academic Development (CAD). VSI was developed to provide academic assistance to Division I athletes who were off campus during critical times in the academic year. While these students met NCAA standards for admission, some demonstrated academic weaknesses. However, the CAD staff was charged with providing the athletes with assistance that was "not categorically different from that which was available to others" (Martin & Arendale, 1993). In assessing how to provide for the needs of some of those athletes who required significant academic assistance, they found that SI alone was insufficient, because it operated on the assumption that students needed to be able to perform four tasks:

- Hear and understand the professor's language, and therefore the lecture;
- Read and understand the textbook and ancillary readings;
- Sit through a lecture and take some relevant notes;
- Write well enough to express ideas in an essay examination. (Martin & Arendale, 1993)

This was not completely true for either the athletes, or for other marginally-prepared populations on the UMKC campus: college-bound, inner-city youth.

VSI provided several advantages: control over the rate of the flow of information, the opportunity to monitor the quality of student comprehension as it occurred, and the direct integration of study skills and content, and the extended time which would be needed to identify and correct both content and skill deficits. The three main steps utilized in delivering the VSI were:

- *Preview* both the vocabulary and the main topics to be covered in the lecture. ("Tell them what you are going to tell them.")
- *Process* the videotape. ("Then you tell them.")
- *Review* the lecture. ("Tell them what you told them.") (Martin & Arendale, 1993)

At the time of the article, a comprehensive VSI study was in progress. However, the data below from the Fall 1992 program is representative of the pilot studies conducted at UMKC. The study included 18 students enrolled in a special VSI section of Western Civilization and 157 students who were enrolled in the comparison group. Eighteen students in the comparison group who took the course "pass/no pass" were excluded from the study. In most aspects of the students' backgrounds, those in the comparison group presented profiles that showed them to be more academically prepared than the VSI group:

VSI Group	Comparison Group
• 69% undeclared majors	• 31% undeclared majors
• 39% athletes	• 4% athletes enrolled
• 50% ethnic minority students enrolled	• 25% ethnic minority students enrolled
• 0% on Dean's List	• 13% on the Dean's List
• 28% probationary status	• 12% probationary status
• Mean ACT score of 16	• Mean ACT score of 25
• Graduated in 78th percentile of high school classes	• Graduated in the 52nd percentile of high school classes

The effectiveness of VSI was measured through course grades and persistence. Ninety-five percent of the VSI group earned A or B grades, and no one received D grades or failed, compared to 53% students in the comparison group earning A or B grades with 24% who either received a D grade or failed the course. The mean final course grade average for VSI participants was 3.6 on a 4-point scale, compared with 2.3 for the comparison group. Finally, all but one of the VSI participants and all of those on probation reenrolled for the following semester, compared to 85% of the control group and 45% of the probationary students who returned to the University the following semester (Martin & Arendale, 1993).

The results proved that VSI can be a viable alternative to remedial coursework and showed that underprepared, at-risk students, when provided with the appropriate intervention, can excel in historically difficulty courses as they develop needed basic skills.

Mentoring Programs

Mentoring typically is defined as a relationship between an experienced and a less experienced person, in which the mentor provides guidance, advice, support, and feedback to the protégé. The word dates back to Greek mythology and the character Odysseus, whose close friend named Mentor, cared for Odysseus's son for 10 years while Odysseus traveled. Mentor embodied both female and male qualities, such as being nurturing, supportive, protective, as well as aggressive and risk taking. Mentor acted in the role of parent, teacher, friend, guide, and protector to Odysseus's son.

From a higher education perspective, mentors can provide encouragement and support to their students as they develop habits and attitudes that lead to academic and personal success. By working with students beginning in their first year, mentors can assist their "mentees" in building solid academic foundations, as well as forestalling the potential isolation and loneliness that ethnic minority students often experience on a majority White campus. Mentoring can be extremely valuable in providing support to first-generation, low-income, ethnic minorities, and academically underprepared students. There are student/student and faculty/student mentoring programs, as well as programs that pair students with leaders or business people in the community.

Villa Julie College, in Stevenson, Maryland, received a Noel-Levitz award for its mentoring program, *Partnerships and Student Success* (PASS). The program was created to address the high attrition rate of its conditionally admitted students. Implemented in 1996, the program partners these freshmen, who generally ranked in the bottom 20% of their high school class, with Villa Julie College faculty, staff, and administrative mentors to help ease their transition into the academic and social environments of college. The core objective of PASS is to create a partnership in which the student and mentor share a commitment to a common goal—the student's success. The mentors receive a detailed manual that outlines their duties, as well as handouts and contact information (Brotherton, 2001, p. 39).

At a kick-off event just before the beginning of each fall semester, students are introduced to their mentors and to other incoming freshmen. The mentors meet with their mentees weekly during the first semester, and provide an effective support system by encouraging time management, reinforcing study skills, promoting involvement in campus activities outside of the classroom, and fostering academic success. The mentors monitor the students' progress through periodic reports from the professors. The students are required to attain at least a 2.0 GPA at the end of their first semester, as well as participate in designated activities, the first of which is the kick-off event, held every August.

As a result of the mentoring program, more than 70% of the participants earned a final GPA above 2.0, leading to a marked decrease of students on academic probation, and freshman-to-sophomore retention rates climbed to nearly 73%. The program also demonstrated success by the repeat participation of 94% of the mentors (Brotherton). Following are anecdotal comments from both students and faculty, from the institution's Web site (Villa Julie College Web site).

"*My mentor helped me with my studies and personal issues, and I gained a new friend!*"

"A strength of the program is that mentors can provide support for students—without judging or grading them."

"This program made my transition from high school to college much easier."

"PASS was important to me because I always had someone to talk to who would listen to anything I had concerns about."

"I enjoy knowing my mentees academically as well as personally. Students have a 'go to' person when questions arise."

Culturally Conscious Programs

Culturally Conscious programs are so named because of their underlying intent to increase the number of ethnic minorities either in specific fields, like the hard sciences, mathematics, engineering, or computer science, or generally to improve the access, retention, and graduation rates of ethnic minorities in postsecondary education.

One of the most successful programs is the Puente Program. *Puente* was founded in 1981 by Felix Galaviz and Patricia McGrath at Chabot College in Hayward, California. *Puente*, the Spanish word for "bridge," was launched as a grassroots initiative to address the low rate of academic achievement among Mexican American and Latino community college students, and currently now serves a full range of California's at-risk students. Galaviz and McGrath reviewed over 2,000 community college students' transcripts and inferred that students were avoiding academic counseling, were not enrolling in college level writing courses, and were generally first in their family to attend college (Puente Project Web site).

The Puente model integrates these three major components:

- *Writing.* Puente students have two consecutive semesters of intensive freshman English instruction, focusing on writing and reading about the students' Latino cultural experiences and identity.
- *Counseling*. Counselors in the English classrooms have firsthand knowledge of the organizational, cultural, and academic challenges that students face.
- *Mentoring*. This is designed to build a positive environment in which students draw on their backgrounds and experiences to achieve their academic goals. Puente students are provided with a structured mentoring program where they are matched with professional mentors from the community who act as role models and guides to share their educational background and career expertise with students. Additionally, the students are exposed to both community and cultural environments to support the students' academic, career and, personal growth (Puente Project).

Since 1981, Puente has expanded to 98 programs at 56 community colleges and 36 high schools throughout the state. To date, more than 20,000 students have received direct services, and more than 280,000 have been served through the extended impact of Puente training services (Puente Project *Fact Sheet*). Puente high school students have enrolled at four-year colleges and universities at twice the rate of matched controls (Gandara, Puente Project *Fact Sheet*), and the term-to-term retention of Puente

community college students is 92%, compared with 60% for community college students statewide (Puente Project *Fact Sheet*).

Minorities in Science, Math, Engineering Programs

The Emerging Scholars Program (ESP) is a nationally recognized program in which freshman calculus students also take a supplemental problem-solving course. Students who have strong academic credentials and a history of achievement in mathematics and sciences are invited to participate. The program allows highly motivated mathematics, science, and engineering majors to work closely with faculty members and other high-achieving students. Students in the program have the chance not only to excel in calculus but also to learn calculus in a more thorough, more satisfying way. Modeled after Uri Treisman's Mathematics Workshop at the University of California at Berkeley, ESP's long-term goal is to increase the diversity of students who receive advanced degrees in mathematics and mathematics-intensive fields of study. The program targets historically underrepresented individuals including women, Latinos, African Americans, American Indians, and students from rural areas, and focuses on interpersonal communication in the context of collaborative, small-group problem solving, and on not simply understanding the calculus material, but on mastering it to the point of excellence (Puente Project *Fact Sheet*).

The *University of Wisconsin, Madison* implemented the Wisconsin Emerging Scholars Program (WES) in 1994. The WES students attend the same large calculus lecture and do the regular homework problems, take the same exams, and are graded in the same fashion as the all other students. Instead of enrolling in the discussion section (DS) that meets twice a week for 50 minutes and is led by a teaching assistant, WES students enroll in a workshop that meets three times a week for two hours. They also receive two extra credits for this time commitment. The workshops are composed of approximately 15 to 18 students, compared to the 25 enrolled in the DS. The WES strives to maintain a heterogeneous group; about 50% are majority students and 50% are ethnic minorities: African American, Native Americans, and Hispanic Americans. The WES Program also targets women and students from rural backgrounds, both of whom also have high attrition rates in the fields of science, math, and engineering (Millar, et al.,1996).

End-of-course grades and percentage of course completion were the two outcome measures in the quantitative analysis. The WES students consistently outperformed DS students with respect to adjusted mean grades, which were 4 to 7 grade points higher for each of the five course semesters studied. Additionally, the ethnic minority students in the WES consistently outperformed the ethnic minority students in the DS, with the largest impact seen in Spring 1994. The WES mean grade was 3.32, compared to the DS mean grade of 2.38 (Millar et al.).

The qualitative results were based on the feedback of the students' experiences. Their participation in the WES Program had very positive, validating experiences for the ethnic minority students (Millar et al.). They actively associated with others like themselves who were committed to meeting the challenge of calculus in preparation for mathematics-based careers. They also articulated the importance of the community environment in helping them overcome their individual difficulties with calculus.

Minorities in Health Care and Other Professional Programs

These programs also focus on supporting and retaining a specific ethnic group—in this case American Indians—in fields that lack representatives in the communities that need them most. In the fields of psychology and rehabilitation training programs, nursing, teacher education, social work, law, and medicine, American Indians represent a very small percentage receiving degrees. According to Thomason, the lack of American Indian psychologists "is a multifaceted problem, involving lack of cultural relevance of

pathology-oriented models and lack of psychologist role models for prospective Indian students"(Thomason & Thurber, 1999). The institutions that are successful in retaining American Indian students combine distinctive cultural elements with a pragmatic approach to education. Instructors serve as "agents" of American Indian history, language, and culture, which fosters in students the belief that their culture and community have great value (Pavel & Colby, 1992).

One successful program is the Department of Counseling and School Psychology at San Diego State University's School Psychology Program. It is an integrated four-year (three-plus-internship) full-time graduate-professional program, which culminates in the M.S. degree and school psychology credential. It is one of four programs offered by the Department of Counseling and School Psychology that has as its mission the preparation of culturally competent practitioners, "who integrate educational, psychological, and social and cultural foundations with relevant disciplines to create and engender a vision of educational equity in the public schools" (San Diego State University Web site).

Thomason and Thurber cited nine elements that the department has implemented, that guide systematic change:

- Culturally compatible and culture-focused studies and processes.
- Continuous supervised field experiences.
- Mediation of the culture of graduate school with a summer orientation to clarify requirements and expectations.
- A critical mass of same-ethnic students and cohort cohesiveness of ethnic groups.
- Proximity to family; closeness promotes better success.
- Equitable admissions; criteria apply to all graduate applicants.
- Unobligated financial support involving grants, not loans.
- Sense of community, belongingness, and ownership.
- Role models and mentors.

Some of the department's programmatic outcomes include: receiving over $8 million from the U.S. Department of Education (USDE) to support culture-specific and multicultural preservice training projects; being identified as one of the top two school psychology programs in the nation for (a) recruitment and retention of ethnic minority students and (b) infusion of multicultural content, issues, and perspectives in the curriculum (*Rogers, Ponterotto, Conoley, & Wiese, 1992; Rogers, Martin, & Druckman, 1994);* consistently enrolling a majority of students of color—at least 70% since 1990—and providing financial support for ALL of students. Additionally, the department has graduated the only five Native American school psychologists in the State of California, more bilingual (Spanish) school psychologists than any other program in the nation, the first native-Vietnamese-speaking school psychologist in the State, and is second only to Howard University for their enrollment of African American students. Also, it was included as a "promising practice for immigrant students" by a Harvard University research group (San Diego State University).

The *University of North Dakota* (UND) College of Nursing received funding to develop and implement a project to increase the number of nurses, nurse midwives, and nurse practitioners delivering health care services to Indian people. The Recruitment/Retention of American Indians into Nursing Program (RAIN) is one of four projects of the Quentin N. Burdick Indian Health Programs, funded under Section 112 of the Indian Health Care Improvement Act, 1988 Amendment, Public Law 100-713, 25 USC 1616e. The provision of health services to American Indian people by providers who are from similar cultural

backgrounds, knowledgeable about the socioeconomic realities of reservation living, and are committed to the improvement of health in their home communities, is the long-term expected outcome of a collective working together to achieve this end (University of North Dakota College of Nursing Web site).

The existence of the RAIN Program has had a significant impact on the relationships between American Indian students and faculty in the following ways:

- There is more faculty/student interaction.
- The faculty is more aware that the curriculum is heavily influenced by the dominant culture; changes have been made to create an awareness of the influence of culture on the development of health professionals in their education and practice.
- American Indian students now have the option of receiving their clinical practice experiences in settings other than the usual community hospital and Nursing Home Page settings; for example, Community Health students have an opportunity to work in a reservation setting (University of North Dakota College of Nursing).

Prior to the implementation of the RAIN program in the Fall of 1990, American Indians represented 2% of the total UND enrollment and 4% of UND College of Nursing enrollment. In Fall 1994, the percentage in the total UND enrollment increased to 2.8% and in the UND College of Nursing to 10%. This is evidence that the RAIN Program has made an impact (University of North Dakota College of Nursing).

CONCLUSION

There are many programs that are making significant strides in improving access to and success in postsecondary education for first-generation, low-income, underrepresented, and other “nontraditional” individuals. While most programs have not conducted long-term research, they nonetheless are having positive results.

The institutional environment has a powerful impact on a student's satisfaction with the institution, as well as his or her academic success. The institutions that are successful in integrating, educating, retaining and graduating their students are those that are responsive not only to the academic needs, but also to the social and cultural needs of their constituents. They continually reevaluate the delivery and effectiveness of their support services, are proactive and intrusive in reaching out to underprepared students who are the least likely to utilize support services, and they implement educational programs that address the needs of the developmental student while maintaining academic integrity.

The challenge is in inspiring the institution as a whole to buy into this approach to teaching and learning, and to adopt the philosophy of creating an institutional environment that is conducive to *all* students’ learning and educational needs, both inside and out of the classroom.

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