

# Literature Review: Intervention Methods and Programs for Pre-college Entry for Disadvantaged Students



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## COMPENDIUM STUDIES

*Advances in Educational Research*, National Library of Education, Office of Educational Research and Improvement, U.S. Department of Education, Washington, DC, Volume 4, Fall 1999

Illustrates the scholarship of early intervention programs for mainly first-generation college students from the most cutting edge scholars in the field. The study presents an overview of programs and their comprehensive services in the form of: Program Access: (Academic resource centers, financial aid assistance, last dollar scholarships, guaranteed tuition, educational awareness, and precollege counseling/academic preparation) and Program Necessity: (College choice: Parents education and aspirations often effect the student's predisposition to attend college more so than financial aid. Pre-high school intervention programs are necessary to exert a stronger influence on postsecondary expectations.

Minority students: Economic and psychological/social factors that impede African Americans' academic achievements; Academic course taking: Underrepresented and minority students traditionally take high school course that are less rigorous and fail to academically prepare them for postsecondary academic environments; Guidance counseling: Disadvantaged students are unaware of college going rates of information. Counselors have shifted their attentions to more pressing issues that address social dysfunctions instead of academic counseling; Financial aid: A factor that limits educational attainability, but not as pressing as other psychological barriers.

Gandara, Patricia. *Paving the Way to Postsecondary Education: K-12 Intervention Programs for Underrepresented Youth*, Washington, DC, National Postsecondary Education Cooperative, 2001.

1. Ten major impediments to educational accessibility for underrepresented students: limited cultural support; community resources; peer support; racism; educational inequalities; ineffective guidance counseling, low aspirations; limited financial resources; fewer networking opportunities; and high levels of retention
2. Thirty-three prototypes that feature intervention programs that are either private not-profit; community based, government sponsored servicing k-12 and postsecondary/k-16 constituents.
3. Key program components that occur alone and/or as a combination of other initiatives: (28) counseling; (26) academic enrichment; (18) parental encouragement; (18) cultural/social activities; (13) mentoring; and (10) offered some type of financial support.
4. Thirteen promising programs that have received substantial evaluation to determine measurable effectiveness: **A Better Chance; AVID; College Pathways; Florida (CPOP); GE College Bound; I Have a Dream;**

**Indiana (ICPAC); Minnesota (PEOP); NAI; Posse; Project Grad; Puente; and Upward Bound.**

Gandara concludes that while the most effective intervention programs have indeed increased rate of retained high school student who matriculate into 2-4 year college programs, several limitations remain: underreported rates of attrition; underrepresented number of male participants; non-continuous services between educational levels; fiscal expenditures thus cost effectiveness remains undetermined; lack of evidence concerning academic achievement; and measurable outcomes assessment.

James, Donna Walker et al. *Some Things Do Make a Difference for Youth: A Compendium of Evaluations of Youth Programs and Practices*, Washington, DC American Youth Policy Forum, 1997

An evaluation which studies and reports on forty-nine programmatic interventions were summarized in the compendium that are described within three headings: Extended learning (academic learning outside of the classroom setting, within schools and external settings, short/long term, summer, programs that are career based, service learning, entrepreneurial) Community based (community partnerships that provide mentoring, guidance, foster respect and encourage service learning while enhancing academic and leadership abilities); and increased retention rates for middle-high school students (career awareness, counseling, financial aid, and program referrals)

While the study serves to address the social and economic forces confronting today's youth and examines such relevant intervention programs as: adult support; effective pathways from high school to college; career academies/school to work programs; and supportive youth initiatives that are implement in the formulation of youth policy, a limited number center on intervention programs to assist low-income and under-achieving youth with staying in school and transiting from high school to postsecondary institutions. Surmises that successful youth programs that feature a mentoring component, maintain long-term close contact with students, and provide occupational training significantly increase retention rates, high school completion, and college attendance.

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*Raising Minority Academic Achievement: A Compendium of Education Programs and Practices*, Washington, DC, American Youth Policy Forum, 2001

The compendium is a compilation of 38 community, state, private, and federally supported programs that have been analyzed and identified as being effective indicators of school and youth academic programs for minority and disadvantaged youths from early childhood to postsecondary study. The report offers a narrow focus on program evaluations and successful academic outcomes for minority students.

Utilizing pre/post quantitative surveys, random sampling, control and comparison groups, and longitudinal studies during a five year period the findings on such programs as: **Abecedarian Program; Advancement Via Individual Determination (AVID); Alaska Onward to Excellence & Alaska Rural Systemic; Boys & Girls Clubs of America; Career Academies; Chicanos in Higher Education-national; Gateway for Higher Education; High School Puente; High Schools that Work; I Have A Dream; KIPP Academies; Sponsor-A-Scholar; Success for All; and Upward Bound** were examined using evaluative methods to determine the quality program quality, professional development such as summer session and after-school tutoring, parental involvement, peer mentoring, increasing curricula standards, community involvement, cultural and social activities, and financial assistance. Although the educational gap between mainstream students and underrepresented students remains wide, the scholars conclude there is definite evidence of academic achievement and that earlier intervention methods will continue to enhance access to academic attainment.

***Reaching The Top: A Report of the National Task Force on Minority High Achievement, The College Board, Washington, DC 1999***

### **Academic Preparation/Pre-College Counseling Programs**

#### **Academic Preparation/Counseling**

There are hundreds of academic preparations and precollege counseling programs for minority/disadvantaged students. While some programs such as **Upward Bound, the National Science Foundation, the Department of Energy, or other federal agencies** are federally funded, privately funded initiatives include the University of California's **Mathematics, Engineering, and Science Achievement Program (MESA)**, which serve students in grades 6-12, has been replicated in Arizona, Colorado, and other several states and the Kenan project funded by the Kenan Foundation, which operates in six southern states.

Targeting students between 9<sup>th</sup> and 12 grade, most programs are operated on college and university campuses. There are some programs that encourage students to pursue health careers and are situated at hospitals an medical schools. Components of academic programs are: academic/social support (summer residential programs; cultural and social enrichment activities; Saturday activities; peer mentoring; tutoring; college courses while in high school) precollege counseling (assistance in college selection and completing applications; emulating the college-level experience; financial aid planning; career planning; internships; and parent workshops; and guaranteed admission and scholarships and tuition assistance.

Program evaluations have concluded that students earned more high school credits in rigorous courses-math, English, foreign languages, sciences, social studies, remedial and vocational studies; students who had initially had lower educational aspirations earned

higher credits than their non participating peers across all academic subjects; ethnic students such as Hispanic experienced an increase in high school credits; and the rate of retention decreased after one year.

**Advancement via Individual Determination (AVID):** Federal GEAR-UP program that services low income, underrepresented middle and high school students during the academic year. Key components 1) classroom instruction/tutoring 2) encourages parental involvement 3) increased college awareness 4) mentoring 5) academic preparedness

**Project Grad:** Federal GEAR-UP k-16 program that services low income, underrepresented minorities, first-generation students during the academic year, during/after school, Saturday academies, and during the summer. Key components 1) tutoring 2) peer mentoring 3) college scholarships 4) financial planning 5) cultural/social activities 6) academic advising

**I Have A Dream:** Provides personal financial commitment with individual support services to randomly selected minority and disadvantaged youths in sixth or seventh grade to remain in school and to consider going on to college. Key components include: support services (tutoring, summer programs, enrichment activities); mentor/case manager who interacts with students through high school; guaranteed college tuition funding. Evaluations have concluded that target groups have been successfully reached; retention rates have increased; student have adapted a more positive attitude toward education; and there had been an increased level of peer mentoring support among recipients.

### **Educational Awareness Centers**

Offers academic and social support services for minority/low income inner city students. Centers provide information in the form of workshops and pamphlets to encourage student to finish high school and be able to meet academic standards set by post secondary institutions. Programs exist statewide and are funded as a collaborative initiative among federal, sponsoring colleges and universities, public school systems, professional associations, state agencies, corporations, and student loan agencies. Students are either selected to participate or they volunteer. Programs target different grade with activities that are appropriate for that grade level. While each program is individually tailored, certain key functions: include: academic support (tutoring; mentoring; peer advising; weekend/summer enrichment activities; cultural and social activities; academic advising/ preparation) information (college site visits/planning; financial aid workshops and information for students and parents; classroom activities related to career development and training (academic advisors and mentors)

### **Program Examples:**

**I'm Going to College** (4<sup>th</sup> graders)

**College Knowledge Club** (8<sup>th</sup> graders in selected middle schools in DC)

**Career Beginnings** (11<sup>th</sup> and 12<sup>th</sup> grade in California)

**Sponsor-A Scholar:** Philadelphia based five year (9th grade-freshman year of college) mentoring program for disadvantaged youth to complete high school and continue on to postsecondary education. Key program components include: mentoring and financial assistance. Based on surveys, the program evaluation concluded that the students obtained higher GPAs; there was increased participation in college preparation activities; students were more likely to attend college right out of high school; and students who had previously lower rates of performance did better than their non participating peers. Although the study did not indicated an increase in self-esteem, more frequent contact with mentors increased measurable outcomes of personal satisfaction.

### **Broad Multi-Focus Resource Center**

Operated statewide or concentrated in major cities, these centers are free and centrally community based in public libraries or schools. These centers include extensive resource libraries, are complete with counselors who provide information on postsecondary awareness programs, financial aid, careers, admissions, testing, and assistance with admissions and financial aid applications, for typically first-generation college bound students. While the majority of centers do not provide extensive individual involvement, the centers offer an array of services in the areas of dissemination, and academic preparation. The centers funding sources are derived from federal, state, city agencies, private foundations, corporations, colleges, and universities.

Statewide: Arizona, California, Indiana, Oklahoma, Vermont, and Wisconsin

Citywide, Limited Statewide: Boston, MA, Seattle, Pacific Northwest, and Omaha, Nebraska

Citywide: Philadelphia and St. Louis

### **Restricted Focus Resource Centers**

Operate in a similar fashion as broad based center but are limited in scope by providing services to targeted ethnic groups, high schools, or neighborhoods. The system of operatives vary from local initiatives that are operated as part of a national program initiative, such as APRIRA and LULAC, grass roots efforts, private, non-profit organizations, or part of social service agencies. They are financially supported through foundations, the federal government, in-kind contributions, individual and corporate donations.

External evaluations and longitudinal studies have concluded that resource centers provided information, college, and financial aid application assistance had a profound impact on college going. As a result, college enrollment among underrepresented students increased and a number of students were able to finance their education.

## **Literature**

### Articles

Ackerman, Susan P. "The Benefits of Summer Bridge Programs for Underrepresented and Low-Income Student," *College and University* Summer 1991 p. 201-208

Building on Vincent Tinto et al's works of social and academic assimilation as a predictor of successful college socialization, Ackerman examines the effects of

summer bridge programs on the academic, personal, and social development of underrepresented and low-income students during their first year at **University of California, Los Angeles**. Based on a questionnaire and an on-going longitudinal evaluation, the first comprehensive external evaluation of UCLA's **Academic Advancement Program (AAP) Six-week Freshman Summer Program and Transfer Summer Program (FSP/TSP)** was conducted in 1988.

Designed to bring students already accepted for admission prior to their first year, evaluation of FSP/TSP indicated 5 program components of Phase I: academics, student and professional staff training, parental involvement, social and cultural activities, and counseling. Phase II a longitudinal study, tracked the students' academic progress from the summer of 1988 to the winter quarter of the following academic year. Ackerman determined that underrepresented students fulfilled both their academic and nonacademic goals and objectives; were able to keep up with most of their classes; were realistic about coursework; and prepared students to face challenges of university life. Therefore, underrepresented students significantly benefited from summer bridge programs because of their allowance for students to successful transition to an academic environment.

Baker, Therese L. and William Velez. "Access to and Opportunity in Postsecondary Education in the United States: A Review," *Sociology of Education* 96 p. 82-101

Baker and Velez revisit the issues of access to and opportunity in postsecondary education that was posed during the 1960s. The article presents five points of examination: 1) demonstrate how rates of college enrollment and choice have varied by such factors as race, socio-economic status, gender, academic ability; 2) consider how access to financial aid has altered access to higher education; 3) provide research on access to different types of colleges and universities; 4) examining the factors that determine college completion; 5) discussion of major policy implications of access and suggest further avenues of research.

A survey data set was devised for a twenty-year span between 1960-1980. In the 1960s the major longitudinal data set was Project Talent, the 1972 National Longitudinal Study (NLS) provided data for the 1970s, and in 1980 the major longitudinal data set was the federally supported survey High School and Beyond (HSB). The study illustrated four factors for disparaging numbers of underrepresented students attending postsecondary institutions: changes in financial aid packages; continued lacking of social and cultural integration methods; a backlash in affirmative action policies; and access to college information. The study concluded that postsecondary education continues to be increasingly segmented in favor of traditional students. Although the flexibility of some institutional policies such as scheduling, deferred payment options, student advisement, and registration has increased the enrollment number of minorities and women, colleges and universities need to make additional institutional accommodations to offer other types of support.

De Necochea, Gloria. "Expanding the Hispanic College Pool: Pre-College Strategies That Work," *Change* May/June 1998 p. 61-65

De Necochea contends that while there are no one individual model of effective intervention programs for increasing the number of Hispanics in college there are some critical strategies that must be present for both short and long term success: 1) early identification (6<sup>th</sup> grade) for college preparatory curriculum; 2) attention to math and science; 3) school preparation through the form of pre-college activities, social and cultural activities, fostering peer group support, restructuring placement exams; 4) utilizing recruiters, faculty, financial aid officers to expose students to the world of college; 5) conducting study skills workshops, research strategies, academic enrichment on Saturdays and during the summer; 6) parent outreach and participation in planning events; 7) outside support as a means of consolidating pre-college information of available programs

De Necochea hopes that regional, state, and national pre-college programs directors could synthesize their best practices as a critical effort toward program evaluation. Although the essay offers no insight in terms of evaluation, she contends that accurate record keeping and tracking individual students are the keys to expanding the college pool.

Moore, William E., Willa Moore, and Annie W. Henderson. "Pre-college Skills Enhancement: The Effects of Technology and Parental Participation," *Education* v. 115, Fall 1994 p. 58-62

Southern University Laboratory School's academic enrichment program for 100 precollege students from the area of Baton Rouge, Louisiana. Implemented in 1992, the **Skills Enhancement Approach (SEA)** evolved out of a university based outreach program for college freshmen. Funded by the General Electric Foundation, SEA serves students in grades 9-12 from a variety of backgrounds, abilities, and professional aspirations. SEA utilizes the theory of secondary involvement, the maintenance of faculty journals, the impact of parental influence, pre/post testing, academic skills enhancement, and the significance of technology on academic development. Although the results offered are preliminary, the evaluations included measuring the results between the simulated ACT in comparison to the exam taken by juniors and seniors not in the program, holistic changes in student/parental relationships, and improved testing scores in reading in mathematics.

Simmons, Ron. "Pre-college Programs: A Contributing Factor to University Student Retention. Summer Programs," *Journal of Educational Development* v. 17 Spring 1994 p. 42-45

Simmons utilized Vincent Tinto's model that credits high attrition rates with limited social and academic integration in campus life. The study examines three academic enrichment programs at the University of Virginia that focus on

academic preparation, campus socialization, academic assistance, retention, and adaptation strategies. **The Research Assistantship Program (RAP)**, focuses on rising juniors and is designed to enhance research capabilities with college faculty members. The program also features a summer component, are invited to enroll in one freshmen level course, provided counseling, tutoring, cultural and social activities, and are supervised by undergraduate and graduate students. **The Introduction to Engineering (ITE)** is also open to rising juniors and its premise is to expose students to college curriculum. The summer component consists of a one-week visit with a faculty member in each engineering field, who provide students with hands on instruction and presentations. Also included are social and cultural enrichment activities. **The Summer Transition Program (STP)** a six-week academic enhancement program designed for entering college freshmen identified as having deficiencies in math, science, and reading. Daily tutorials, study groups, cultural, academic, and recreational activities are incorporated to help students learn how to be successful in college. Enrollment of the academic year is contingent upon successfully completing STP.

Follow-up consisted of student transcripts and questionnaires. Students were encouraged by the programs components and responded favorably. Of the student who participated in RAP and ITE, 48 were enrolled in institutions such as Duke, Brown, Cornell, UVA, and Georgia Tech and several had planned to enroll in graduate school. Participants in STP had maintained college enrollment. Students contended they learned the value of research, working with peers and faculty, and were more focused. Students who had less than stellar performance readily admitted that they should have put more effort into the programs took personal.

Tierney, William G. "Models of Minority College-Going and Retention: Cultural Integrity Versus Cultural Suicide," *Journal of Negro Education* v. 68 Winter 1999 p. 80-91.

Tierney's article refutes Vincent Tinto's notion that retention rates for minority and disadvantaged students are high due to limited socialization into the academic cultural mainstream. Tierney contends that this theory of cultural assimilation is theoretically flawed because it fails to account to the historical legacy of American racism that would permit such a degree of social inclusiveness. Emphasizing the importance of maintaining cultural integrity that engages students' racial background toward the development of relevant pedagogical training Tierney illustrates how the **Neighborhood Academic Initiative (NAI)** program provides access for low-income and underrepresented youths. Tierney dispels the myths that low-income and minority students should not have to conform to the majority Anglo environment and that while financial assistance is a major impediment to college access, it is singly not the most important factor.

#### Books

Adelman, Clifford. *Answers in the Tool Box: Academic Intensity, Attendance Patterns,*

*and Bachelor's Degree Attainment*, U.S. Department of Education Office of Educational Research and Improvement, Washington, DC, June 1999.

The study examines academic resources (testing, class rank/GPA, and academic intensity) that contribute to successful completion of a four-year college degree. Although Alderman's study fails to indicate specific intervention programs, the surveys surmised that students who were engaged in a higher quality academic program were sensible predictors of successful college entrance and matriculation.

Utilizing principle data drawn from the High School and Beyond/Sophomore (HS&B/So) cohort files, assessment was determined via longitudinal study from 1980-1993 of high school/college transcripts and SAT scores. The study Disregards such variables as persistence, parental educational background, and college preparatory because they are considered to be unreliable factors of educational desirability. Aldeman argues that academic resources and achievement more so than socioeconomic status, race, and gender bear more weight as to whether or not students obtain a bachelor's degree. Aldeman credits academically intensive and rigorous school curriculums that feature AP courses, laboratory science courses, foreign language, and mathematics beyond Algebra 2 as more than doubling the odds that students will be academically prepared to enter college and will experience a higher rate of retention.

#### Dissertations

Adams, John E. "A Study to Determine the Impact of a Precollege Intervention on Early Adolescent Aspiration and Motivation for College in West Virginia," Ph.D. Dissertation Virginia Polytechnic Institute and State University, 1997

Examines the impact of the **Junior High Washington Gateway Academy (JHWGA)**, a precollege intervention program. Program components include a week of activities such as academic enhancement through modifying study skills, assistance in career planning, understanding students' academic motivations/aspirations. Utilizing a five-scaled survey questionnaire to compare the responses of eighth graders who participated in the program in 1996 against those who did not. Adams concluded that the T-tests and chi square tests revealed no measurable differences between the two groups.

Mireles, Hilda Nellie. "The Cognitive and Attitudinal Effects of a Pre-college Intervention Program for Enhancement in Science, Mathematics, and Engineering (Cognition), Ph.D., The University of Texas at Austin, 1995.

Mireles investigates the achievement type and cognitive effects of **Pre-college Intervention Program for Enrichment (PIPE)** an intervention program for underrepresented minorities and females in science, math, and engineering (SME). Centered on the selection of rising ninth grades from five schools located near the Mexican border. Utilizing achievement tests and a questionnaire,

Mireles produced a 5-point Likert-type questionnaire to examine the cognitive effects of the programs impact. In comparison to non-participants, PIPE students had measurably improved testing performance, but there was no significant difference between the control group and the non-participants aspirations towards pursuing SME careers.

#### Working Papers/Reports

Cabrera, Alberto F. and Steven M. La Nasa. "Pathways to a Four-Year Degree: The Higher Education Story of One Generation," Pennsylvania State University, Center for the Study of Higher Education, July 2001.

The authors contend that the challenges facing underrepresented and minority students to obtain a four-year degree exist in such factors as academic preparedness, college awareness, and assistance in the application process. Although such programs as **Chapter I**, **TRIO**, and **GEAR-UP** fill some aspects of this void, other factors such as parental, faculty, community, and peer encouragement, financial aid, professional and academic aspirations, peer mentoring, etc. are important determinants to ensure academic access. Relying on a tabulation of databases, weight analyses, variables, a series of logistic regression models, and observed probabilities the authors compiled a post decade examination of the 1980 High School Sophomore Cohort. While the study sought to understand the differences between disadvantaged students and their more affluent peers in terms of post-secondary attendance, the authors concluded that factors other than socioeconomic played a larger role in obtaining a four year degree. In fact career and professional aspirations, demographics, family support, academic preparedness, financial support, access to higher education information, and curriculum instruction were likely factors of academic achievement and college success. Other than the aforementioned programs the study does not focus on intervention programs nor does it provide any program analysis.

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“Understanding the College-Choice Process of Disadvantaged Students,” *New Directions for Institutional Research*. No. 107 Jossey-Bass Publishers

Cabrera and La Nasa contend that research literature illustrates that socio-economically well off high school students are conditioned to develop a predisposition to attend college, search for college materials, and chooses specific institutions as early as the 7<sup>th</sup> grade. Their predisposition begins with career and occupational aspirations that inform them what skills are needed; conjoined with parental encouragement in the form of financial support and advisement, and institutional guidance in the form of academic advising, advance placement support, and providing program information.

The authors contend that while underrepresented and disadvantaged parents who are often undereducated and low-income have similar aspirations for their children they are unable to supply career information, academic advice, or lend financial support. While SES are definitive factors for limited enrollment in

academic institutions, as long as the student is academically prepared he/she faced a higher probability in obtaining academic success. Utilizing longitudinal databases and logistic regression models the study failed to identify specific academic programs or interventions.

Coles, Ann S. "School to College Transition Programs for Low Income and Minority Youth," Education Information Service, The Education Resources Institute, October, 1993

The purpose of the study is to illustrate the plethora of programs promoting college access for disadvantaged populations who aspire to obtain access to post secondary institutions. All the programs are student centered, provide direct services, student advocacy, and serve to promote the issues of academic preparation, awareness of educational opportunities, and financial assistance. While, the number of program fostered student success increased student performance and attrition, the fact remains the paucity of students these programs tend to assist overall, remains limited. Coles' paper provides college access programs in the following categories: multi-service resource centers; restricted focus resource services; last dollar scholarships and financial aid advising; early commitment of guaranteed tuition; educational awareness programs; academic preparation/counseling; and systematic change to facilitate college access. Coles provides detailed analysis on the array of available programs, services, evaluations, and promising practices; federal, state, and local initiatives; coordinating/intermediary organizations; listings of experts in the field of college promotion; and a review of available literature.

*Confronting the Odds: Students At Risk and the Pipeline to Higher Education*, Statistical Analysis Report, National Center for Education Statistics, October 1997

*Programs at Higher Education Institutions for Disadvantaged Pre-College Students*, Statistical Analysis Report, National Center for Educational Statistics, December 1995.

## **ENGAGEMENT: PARENTAL/PEER STUDENT INVOLVEMENT**

### Working Papers/Reports

Horn, Laura J. and Xianglei Chen. "Toward Resiliency: At-Risk Students Who Make It to College," Office of Educational Research and Improvement, U.S. Department of Education

The purpose of the study was to determine whether engagement factors (peer, student, and parent) had any bearing on the academic success of at-risk students' transition from high school to college. Utilizing the work of a previous study composed by the National Center for Education Statistics, Horn and Chen's study explores the circumstance of high school achievement and college enrollment among students who were identified at risk. While the categories of risk factors are often synonymous with demographic characteristics, the study includes five additional risk factors: lowest socioeconomic status quartile, single-parent households, older sibling failure to complete school, transferring schools, average grades of C's or lower. Composed in 1997, the researchers extrapolated data set from the 1988 National Education Longitudinal Study of 8<sup>th</sup> graders who had recently completed high school despite their socioeconomic status.

In the effort to describe the "pipeline" methods of academic resiliency, the projected statistical variables concluded that even the most modest form of parental involvement increased the odds of students' enrollment beyond high school, but not necessarily towards a 4-year institution. The presence of friends with college aspirations, school outreach programs, engaged teachers and other school staff increased the likelihood of student's chances in applying to college. Once enrolled, increased success of highly involved learning activities could be achieved in the form of peer engagement and student's extracurricular activities.

## FEDERAL/STATE INITIATIVES

### Federal Programs

The U.S. Departments of Education, the Department of Energy, Health and Human Services, Labor, and the National Science Foundation in collaboration with colleges, universities and community agencies, coordinates the largest number of federal programs to promote college access among low income and underrepresented youth. With the passage of the 1964 Economic Opportunity Act, the Department of Education established the Upward Bound Program in 1965, which was thereby later incorporating with the **Student Support Services**, and **Talent Search Initiative**, compounding in the **TRIO** program.

The majority of programs operate with the following basic features: integrated K-16 initiatives; increasing parental involvement; peer mentoring support; financial support; cultural and social activities to promote liberal learning, well roundedness, and critical thinking; academic enrichment through after school and Saturday tutoring to enhance math, science, and English; curricula advisement such as advance placement; career exploration; and a 6-week summer enrichment academic program.

Research has illustrated the TRIO program has had positive attributes in the form of multigenerational impact, has had a long term success rate of providing underrepresented students access to academic institutions; and has supplied all the necessary supportive factors to retain students in academic programs.

The TRIO program

### State Programs

Obtaining the number and description of state operated programs has been challenging at best. Research has illustrated that at the moment a comprehensive state by state listing is nonexistent. Programs are administered by a variety of agencies and an effort to obtain this information has produced limited results.

### Literature

Blake, J. Herman et al. "The Full Circle: Trio Programs, Higher Education, and the American Future," *The Journal of Negro Education* v. 67 no. 4 Fall 1998 p.329-455.

The authors contend that while minority serving institutions (MSIs) such as Historically Black Colleges and Universities (HBCU), Hispanic Serving Institutions (HSU) and Tribal Colleges are making definitive strides toward providing higher educational access for minority and disadvantaged youth, majority institutions must continue to make institutional commitments to increasing the enrollment and retention rates of low-income and underrepresented students.

## FINANCIAL ASSISTANCE

### **Early Commitment of Guaranteed Tuition**

Private, state funded or college/university sponsored these programs guarantee tuition to students between fourth and eighth grade as a means to motivate them to better prepare for college. The most notable program of this sort is Eugene Lang's **I Have a Dream** that chooses students from either a designated classroom or grade level of a particular school. While there are significant differences and expectations among some programs such as the expectation that students would remain drug and alcohol free, maintain in good academic standing, and there would be some parental involvement, most offer some form of academic or personal support, provide assistance with applications. All programs emphasize sustained involvement from the point of selection to college enrollment.

Participation in these programs among younger students had produced an increase in attendance, test scores, and had a positive effect on academic performance. In the case of initial selection student participation is limited to the "luck of the draw." In some instances students in colleges and universities can apply through open admission and the number of student participants is considerably higher than in privately sponsored programs. The pay-for-grades programs were not as successful.

### **Last Dollar and Financial Aid Programs**

Operated on a citywide basis, as private, non-profit organizations or as part of a public education foundation. These programs mainly focus on 11<sup>th</sup> and 12<sup>th</sup> grade public students; encompass a range of services such as financial aid information, advising, application fee waivers, and application assistance. The program couples counseling with scholarships that make up the difference between other financial aid awards. Funding comes from foundations and corporation, individual donations, and in-kind contributions. The geographic areas served are: Baltimore, Boston, Cleveland, Columbus (OH), Miami, Richmond (VA), Providence, Detroit, Alexandria (VA), and Winston-Salem,

Follow-up studies concluded that college retention rates were higher for the award recipients. Concrete program evaluations were hindered by the lack of an alternative control group, and the fact that several of these programs did not evaluate students who received financial aid advising as opposed to monetary scholarships.

### **Program Examples**

**ACCESS** based in Boston offered scholarships for 11<sup>th</sup> and 12<sup>th</sup> public students.

**CollegeBound** based in Baltimore offers a college access program for disadvantaged high school students. Key components of the initiative include: individual counseling, application, financial aid, and testing assistance and financial aid in the form of "last-dollar" packages. Evaluations have concluded that the dropout rate was lower in comparison to other Baltimore students and students' odd of attending college were increased.

### **Literature**

Macy, Beth. *From Rusty Wire Fences to Wrought-Iron Gates: How the Poor Succeed in-Getting to-and Through-College*, The College Board, Washington, DC, January 2000.

Offers personal perspectives of several first-generation college students who were traditionally, negatively identified as “non college material”: minority, older, female, ethnic, disadvantaged, low-income, and academic challenged. Although individual access to higher education has been democratized under the Morrill Land Grant Act of 1862, the GI Bill of 1944, and the Higher Education Act of 1965-Pell Grant and Guaranteed Student Loans, students in large numbers continuously fail to gain access to information concerning the possibility of college attainment. While many of the students featured in the study required some level of academic enrichment, their main impeding obstacles existed in identifying and attaining financial support. Although no particular programs are mentioned, Macy demonstrates how peers mentors, college outreach programs, family encouragement, guidance counselors, and teachers, all served as intervening factors of college possibility by showing students the process of filling out forms, applications, academic preparation, and academic counseling.

## INSTITUTIONAL COLLABORATIONS

### Articles

De Necochea, Rafael Magallan, and Deborah J. Hirsch. "Programs That Work. Early Intervention Programs to Increase the Number of Hispanic Students Going To College," *Change* v. 20 May/June 1988 p. 63-65

Identifies several private, state, and nationally supported early intervention programs for college bound Hispanic students: **The Options for Excellence Project; Mathematics, Engineering, Science Achievement (MESA); Project Step (The Student/Teacher Educational Partnership); The San Antonio PreFreshman Engineering Program (PREP); The University of California Partnership Program: University Express; Hispanic Mother Daughter Program; Project 1000; and the North East Consortium of Colleges and Universities in Massachusetts (NECCUM)/Lawrence Project**

Organizational Programs: **Hispanic Association of Colleges and Universities (HACU); APIRA; and National Council of La Raza**

Scholarship Programs: **National Hispanic Scholar Awards Programs; National Chicano Council on Higher Education (NCCHE) Math and Science Doctoral Fellowship Program**

Gillespie, Michael C. "An Urban Intervention That Works: The Bronx Corridor of Success," *New Directions for Community Colleges* no 103 Fall 1998 p. 21-30

Gillespie defined **The Bronx Corridor of Success Initiative** as a program composed of a collaboration of educational, social, and community organizations that serve kindergarten through college students in the south central Bronx. Designed in 1992 and funded by the Ford and Danforth Foundations the program features **Fridays at the College**, a weekly enrichment program for seventh and eighth graders at Bronx Community College; **Cross Age-Tutoring; Cross Institutional Learning; and Parental Involvement**. Although Gillespie's findings are more holistic than evaluative he posits that student participation in the program has allowed them to exceed in educational environments beyond their own grade level.

Hill, Norbert. "AISES: A College Intervention Program That Works," *Change* v. 23 March/April 1991 p. 24-26

**The American Indian Science and Engineering Society (AISES)** features two goals: teaching Native youth about science and engineering, yet in a cultural relevant matter. Organized in 1977, two years after the Congressional Indian Self-Determination Act, which allowed Native communities the right to determine how to best employ their human and natural resources on the reservation. Begun in 1977, the goal of AISES to produce Native scientists and engineers.

AISES' effective relationships with private industries, universities, federal, and private governments has allowed for the development of a pre-college program, which consists of a four-year progression of culturally sensitive summer camps followed by one year of academic enrichment. In addition to the summer math and science camps on various university campuses, AISES also offered peer mentoring between Native college students and high school student, providing financial aid information, offers the AISES Scholarship Program, and creating effective bridge programs. At the time of this article AISES maintained 60 chapters on college campuses. Hill concludes that due to the nature of applied learning in culturally sensitive environment, preliminary results contend that students who participate in AISES are more than likely to attend and succeed in a college environment.

Laguardia, Armando. "A Survey of School/College Partnerships for Minority and Disadvantaged Students," *The Urban Review* v. 30 no 2 June 1998 p. 167-186

Article focuses on K-12 partnerships between schools and postsecondary institutions that were created to improve academic preparedness and access for minority and underrepresented students as a means of channeling these students into the precollege pipeline. Twenty-one partnerships of at least five years or more were identified, surveyed, and the data was gathered via questionnaire. Although 5 programs were discontinued due to lack of funding the survey found that the remaining 16 partnerships sincerely believed they had achieved the goal of increasing minority educational enrollment. The data suggest that while school/college partnerships increased the likelihood of academic success, the emphasis is primarily centered on K-12 thereby producing limited interest in postsecondary success. Although the study fails to indicate examples of partnerships, the survey contends there should be a national initiative to address the barrier to college such as the disparities of financial aid policies.

Rose, Richard B. "Resources for Early Intervention Strategies: College and School Cooperation in San Antonio. University and Private School Cooperation," *College and University* v. 68 Spring/Summer 1993 p. 68-71

Rose examines the relationship between school and college partnerships through the Incarnate Word College's early intervention projects: **The Brainpower Connection (BC)** and **Joint Admissions**. Started in 1987 BC aimed to strengthen the curricular resources of a private high school, grade school, kindergarten, and college. As a K-16 initiative BC promoted such tenets as school retention, completion, and encouragement to first generation precollege students. The **Senior Connection** allowed twenty high school seniors to take courses for credit, which would satisfy requirements for both a diploma as well as a baccalaureate degree. **The Hispanic Association of Colleges and Universities (HAUC)** organization provided additional support through components such as: **the Joint Admissions Program, and the Summer Bridge to Success** program

which is funded by the Ford Foundation and Pew Charitable Trust. Rose concludes that enrollment incentive programs that offer cross-institutional arrangements benefit minority students in addition to those students who are first generation college bound.

Shom, Charles L. "Minority Access to Higher Education: The Precollegiate Response To Minority Economic and Social Enhancement," *Journal of College Admissions* no 132 Summer 1991 p. 16-20

Shom contends programs such as **Upward Bound** and the **University of California's Early Outreach Program** have had impressive results in increasing the academic enrollment numbers of disadvantaged, minority, and underrepresented youth, namely African American, Hispanic, and Native American. While academic intervention programs were designed to lessen the performance gap between minorities and Anglo majority, Shom argues that intervention methods must be applied prior to the student entering the college environment. The solution for minorities gaining access to college is beyond the "numbers games" of increased recruitment.

Other programs identified in the study:

- **The University of Colorado "Pre-college Development Program:"** Started in 1987 the program provides high school juniors with monthly workshops in tutoring, counseling, academic skills, and offers a five week summer academic enrichment program. Evaluation methods were not indicated, however student grades and ACT scores significantly improved.
- **Texas University Systems "Youth Opportunity Unlimited Program:"** Focused mainly on the rate of attrition for minorities and disadvantaged youths. Not only did a significant number remain in school, a large portion indicated their intentions to attend college.
- **The Cleveland "Early Awareness Project:"** Targets eighth graders in Cleveland Public Schools who participate in career days at Cleveland State University, attend career fairs, and participate in campus site visits.
- **Boston College "College Bound Program:"** Middle school students are provided with biweekly tutoring; attend a two-week summer enrichment academic program; and upon completion of high school are promised institutional support-tuition, room, and board for four years.
- **Metropolitan State College of Denver "Higher Vision Program:"** Entering high school students visit the campus once a week during the summer where they participate in culturally sensitive social and academic activities with peer counselors.

Strider, Linda M. "College and Me: Program for Fifth to Eighth Graders," *Phi Delta Kappan* v. 76 September 1994 p. 92-93

**College and Me** is an experimental program conducted by Garrett Community College in the Appalachian area of Garrett County, Maryland. Designed in

response to the Maryland Higher Education Commission's initiative to promote higher education in rural areas, the program allows 5<sup>th</sup> graders to visit GCC for one week. In addition to traditional instruction, students participate in enrichment activities such as the library and conversational access to faculty and college students. Parents are encouraged to spend one day on campus engaging in conversations about college financial planning, conferring with elementary academic counselors, and attending enrichment courses. While the program College and Me begins in the fifth grade, its methods are reinforced in grades six and eight. Although pre/post experience surveys serve as the primary method of evaluation, early indicators suggest that self-esteem and motivation to the intention to pursue a college degree have increased.

## MENTORING

### Literature

#### Articles

Marable, Tony D. "The Role of Student Mentors in a Pre-college Engineering Program," *Peabody Journal of Education*, 74 (2) 1999, p. 44-54

**Pre-college Initiative for Minorities in Engineering (PRIME)** A 6-week summer bridge program for twenty participants designed to provide access for underrepresented minorities to college and to indoctrinate them into the college environment. Administered concurrently with regular summer school, the program and supported by the McDonnell-Douglas Foundation, the GTE Foundation, and the College of Engineering at Tennessee Technological University, program components include: academic enrichment, tutorials, funding, undergraduate counselors, afternoon and evening mentoring sessions, and peer mentoring. Since there have only been two cohort groups there has been little done in terms of evaluation. Early indicators predict that PRIME has had a direct impact on the process of mentoring and student retention.

#### Books

Levine, Arthur and Jana Nidiffer. *Beating the Odds: How the Poor Get to College*, (San Francisco: Jossey Bass Publishers, 1996)

Through a series of surveys and interviews, authors Levine and Nidiffer's study examines twenty-four low-income students from alternative backgrounds who have all managed to chart a path that enabled them to attend either two-year colleges, public institutions, or selective four-year institutions. Each case study illustrates that somewhere along the way, an individual who was either a relative, acquaintance, or school administrators had mentored the student anywhere from one year to a much longer period. Aside from providing personal encouragement, this person provided opportunities for students to attend preparatory schools through programs such as Another Better Choice (ABC) and the Bronx Science School, assisted them with selecting upper level academic courses, assisted them with completing college applications, and explained the financial aid process.

Rose, Mike. *Lives on the Boundary: The Struggles and Achievements of America's Underprepared*, (New York: The Free Press, 1986)

While the central theme of *Lives on the Boundary* deals with the underlying issues of student academic unpreparedness, through his own personal journey scholar Mike Rose dictates that what mostly under achieving students lack is academic mentoring. Rose, who began his career as a first-generation college student, has published several works on language and literacy. He began his academic career mislabeled, low-income, an unstable family environment, and surrounded by the turbulence of inner-city poverty. Along the way of his academic ascension Rose illustrates there had always been a teacher or counselor who provided inspiration

for him and enticed him to think more critically. Although the study does not recognize any particular academic programs per say, Rose's poignant perspectives illustrate the importance of such interventions as: parental aspirations, peer/student engagement, academic counseling, and financial aid.

## SCHOOL-TO-WORK

### **Description:**

In response to the growing concern of the two-tiered academic system of academic preparation for some and vocational training for the others, the concept of School-to-Work was designed to restructure academic learning by making it applicable to the world of work. "The model of learning by doing" results with students who are armed with the skilled confidence of their academic subjects and workplace skill, who are now able to gain transferable knowledge towards a range of postsecondary options: two/four year college or technical training. The School to Work Opportunities Act of 1994 provided individual states with five years of grant money to implement STW programs. Key components: 1) work based learning 2) school based learning 3) connecting activities between work and school learning components

The program links students, employers, workers, teachers, administrator, and parents.

### **Evaluations:**

Like most legislation, it is required that the initiative be evaluated for progress and outcomes. Section 402 of the Act sets out goals and outcomes for STW programs. For the most part, evaluation has been based on student surveys and site visits to determine student success in the areas of: early focus on career awareness; higher quality employment opportunities; career guidance and support; attrition, and retention.

### **Extended Learning Programs:**

**Career Academies:** With twenty-five years in application, the program emphasizes retention, career preparation, and college preparation. At its inception, the program initially targeted minority students in grades 9-12 who were on the verge of dropping out. Previously, the students were enrolled in both academic and career courses, but the program has since evolved to assist a broader range of students. Key featured components of the program were: career themes; traditional classes; employers who served as mentors; the formation of advisory groups that were comprised of employers, school officials, and Career Academy representatives; teachers; career and college counseling; and some form of financial aid or support from employers. Although the majority of resources are allocated for program maintenance, evaluations based on surveyed participants have illustrated that while the rates of student performance, retention, and attrition improved overall when compared to other underrepresented students who did not participate in the program, the question of whether student's educational objectives were realized or idealized higher career aspirations were obtained proved to be inconclusive.

**Career Beginnings:** Started by Brandeis University, and now administered by School & Main, the program seeks to improve education, career opportunities, and transitional access to high school and postsecondary education for low-income and under-achieving high school students. Key components include: partnerships between schools, colleges, and business community; financial assistance in the form of summer employment; monthly workshops on a wide range of career and academic topics; and adult mentors from the business and professional community. Program evaluations have concluded that

among this subset of students the rate of college attendance has increased; attrition rates are higher; and students spent less time distracted by work and were better able to focus on school.

**The Center for Research on the Education of Students Placed at Risk (CRESPAR):** Career academy structured collaborative between Johns Hopkins University and Howard University's School of Education.

**FUTURES 2000:** Managed by School & Main, a career and educational awareness program designed to improve career opportunities and transitional assistance from high school to postsecondary institutions. Key components include academic curriculum enhancement and classroom related projects. Program evaluations have concluded that student participation has resulted in improved attendance, enthusiasm, and professional aspirations. There had been increased amounts of learning, career choices were expanded, and there had been a favorable increase in the interaction between parents, students, and teachers.