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ABSTRACT

This volume presents selected research articles related to early intervention for college programs. This is part of a two volume set designed to showcase some of the best cutting edge research on early intervention programs. Providing an introduction to the types of these programs, this issue: presents research on why the programs are necessary; discusses the value of a classification scheme; makes readers aware of the vast number and types of programs available; and provides research evidence for the necessity of these programs. Following an introduction by Adrianna Kezar, there are two articles on program access that address: multiservice resource centers; restricted focus resource services; last-dollar scholarships and financial aid advising; early commitments of guaranteed tuition; educational awareness programs; academic preparation and precollege counseling programs; and systematic change to facilitate college access. These articles are: "School to College Transition Programs for Low Income and Minority Youth" (Ann S. Coles) and "Missed Opportunities: A New Look at Disadvantaged College Aspirants" (Education Resources Institute). Articles in the section focusing on program necessity are: "Family and High School Experience Influences on the Postsecondary Education Plans of Ninth-Grade Students" (Don Hossler and Frances K. Stage); "Increasing African Americans' Participation in Higher Education: African American High School Students' Perspectives" (Kassie Freeman); "Postsecondary Education Opportunity" (Thomas G. Mortenson); "Access, Equity, and the Privatization of College Counseling" (Patricia M. McDonough, Jessica Korn, and Erika Yamasaki); and "Early Awareness of College Financial Aid: Does It Expand Choice?" (Thomas A. Flint). Appended is a list of early career and postsecondary awareness programs for middle school students, with links to recent information on-line

and searchable by state and local area, and the original publication information for each article. (Most of the articles contain references.) (CH)

VOLUME 4, FALL 1999

ADVANCES IN EDUCATION RESEARCH

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Foreword

Advances in Education Research makes available to the public peer-reviewed, scholarly research supported in whole or in part by the Office of Educational Research and Improvement (OERI) through its educational research and development programs. The goals of *Advances in Education Research* are to bring together from diverse scholarly sources first-rate, exemplary research that relates to important educational themes or topics; disseminate the results of funded research more widely to researchers, educators, and policymakers; serve as a forum for discussing, debating and exchanging research results and perspectives of researchers and education practitioners; and increase public awareness of, access to, and use of high-quality education research that is central and indispensable to improving and strengthening American education.

This fifth volume of Advances in Education Research includes previously published articles from selected refereed journals, which identifies the best research on the impact of early intervention programs. The articles are reproduced with the permission of the authors and the journals in which they originally appeared. They were written by individuals who are practitioners and experts in the field of early intervention.

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Early Intervention for College

Adrianna Kezar
Director, ERIC Clearinghouse on Higher Education
Assistant Professor, George Washington University

Introduction

Access to higher education becomes increasingly important as economic, social and political equity within our society continues to be connected with educational achievement. As the report, *Missed Opportunities* states "expanding educational opportunity has become increasingly important as the benefits that accrue from a college degree have grown" (TERI, 1997). Furthermore, national economic success and global competition depends on a highly skilled populace with the abilities to fulfill job responsibilities in the next millennium. Our democracy depends on a well-educated populace; voting, community organizing, policy development are all greatly enhanced by education. These commonly discussed conditions have lead to a discussion about the ways in which we can guarantee that *all* of our population has the opportunity to go to college. In particular, low income, first generation (student for whom parents' highest level of education is a high school diploma or less), minority, children of divorce, and welfare recipients have difficulty finishing high school and continuing on to college. These are the groups that are growing within our population, demographic projections present an disheartening picture for the future of educational opportunity and access unless trends of attendance among these groups can be reversed.

Why is early intervention important?

Studies have examined barriers and facilitators of opportunity. An example of the former is a recent report from The Education Resources Institute (TERI) which describes this group as "disadvantaged college aspirants" since a myriad of factors work against these individuals' success. One of the factors that makes their success difficult is that the minority student is also often the child of divorce and low-income. The combination of these factors increase the barriers to opportunity. Yet, research, policy and practice have much to offer to address this trend. *One of the major programs recommended to address the problems faced by disadvantaged college aspirants students is early intervention for college programs.*

Early intervention for college programs have become increasingly important as the commitment to affirmative action has been reversed in some states. More and more states will most likely look to other strategies for meeting their goals of creating access, opportunity, and equality. Early intervention programs are being discussed in Texas and California; most likely other states will also follow this trend of trying to discover other models. Federal legislation such as the Gear Up program, also signal that policymakers realize the value of these programs to the future of the country. This collection of research will be particularly important for informing the work of individuals securing Gear Up funds and the resultant programs.

Organization of the contents

This *Advances in Education Research* is part of a two volume set designed to showcase some of the best cutting edge research on early intervention programs. **Volume 4 (Fall, 1999)** provides an introduction to the types of earlier intervention programs, research on why the programs are necessary, and ends discussing the value of a classification scheme. This first volume makes readers aware of the vast number and types of programs and the research that has been conducted categorize this vast terrain. It also provides research evidence for the necessity of the programs. **Volume 4 (Winter, 1999)** also presents research on the landscape of early intervention programs, but focuses more specifically on aspects of the program that have proven to be most successful in helping students and meeting programmatic needs. Furthermore, **Volume 4 (Winter, 1999)** presents research on the impact of early intervention programs. This information in total: why the programs are needed, the type of programs available, successful components of programs, and program impact data, collectively represent the most comprehensive collection of research gathered in one volume about early intervention for college programs.

Critical factors

Why is it that these groups are less likely to enroll in higher education? Financial aid or assistance is an obvious

factor impacting access. Financial support for low-income students has been reduced over the last ten years with middle class subsidies taking their place. Low income students are less likely to take loans or incur debt. The article by Thomas Flint describes how early information about college funding is critical to access. Information about the financial aid system is difficult to obtain and understand, especially if your parents did not attend college. Other studies and policy analysis have had similar findings (**Volume 4, Winter**). A recent national campaign and website called College is Possible sponsored by the American Council on Education is assisting in providing needed financial aid information (and general information about entry to college). Yet even this information mostly reaches middle class audiences since it depends on technology for outreach. This continues to be a problem.

Staying in school is another critical factor. The drop out rate among disadvantaged groups is much higher. For Hispanics, for example, the drop out rate in high school is close to 50%. Often, students' parents never completed high school or did not attend college, so they often have no idea about the value (either economic or social) of a college or high school education. Also, they often lack parental and friends support to pursue higher education or have family responsibilities to maintain. Also, welfare recipients and low income students are often homeless or moving frequently which impacts their stability in school. The GED has been enormously successful for helping adults to complete high school degrees if they drop out of high school. Going back to college after completing a GED sometimes occurs. However, it is difficult for many people to return to college later in life if they have a family and other responsibilities. So, having students complete their high school degree before taking on these responsibilities is critical.

A student's academic record has a significant impact on college entry. Low grades will limit a student's options. Non-rigorous course work will often result in lower test scores that impact admissions. Furthermore there is evidence that certain groups do not perform as well on standardized tests (ACE, 1998). Also, related to academic record is the school's rigor. Poor students often come from areas where there is substandard elementary and secondary schools.

Another barrier is preparing the college admissions materials. As the McDonough article describes, a whole business has developed around standardized test preparation and on counseling for admissions packet submission (**Volume 4, Fall**). A cadre of private counselors can be hired to assist families in helping their son or daughter gain entree into college. Counseling rarely takes place in the schools anymore, especially due to budget cutbacks where one counselor might be assigned to 250 students.

Immigrants often have the added barrier of learning English and needing remedial work. The reduction in funding for remedial education programs impacts students' ability to obtain the education needed to prepare for and be admitted to college. Also, college remediation programs are being reduced in number, especially within the four-year institutions, limiting access points for students. Often a student has excellent math and analytical skills and can perform college level work with some language skills coaching.

Thus, the factors impacting children are complex. Even though the conditions impacting children are complex, some early intervention programs offer limited services. This is primarily due to limited funding. Thus the programs vary significantly from offering only monetary assistance, to support and mentoring, to multi-faceted programs that bring in parents and teachers. More recently, as research about impact of the programs has become available, more comprehensive programs are being shown to be most effective, encouraging changes in the funding and emphasis of programs. This exemplifies why the research in this volume is so important for shaping and providing opportunity for a future.

Highlights of Volume 4, Fall

Program Access

The compendium begins with an overview of programs with examples limited to comprehensive services, focusing on program access with the following aspects: 1) broad focus, multi-service resource centers; 2) restricted focus resource services; 3) last dollar scholarships and financial aid advising; 4) early commitments of guaranteed tuition; 5) educational awareness programs; 6) academic preparation and precollege counseling programs; and, 7) systematic change to facilitate college access. **Volume 4 (Winter, 1999)** includes a different categorization scheme by Dr. Laura Perna. These articles help the reader to understand the complexity in describing, researching, improving, and illustrating the impact of the programs since they serve so many different audiences, vary in purpose, form, and impact.

Missed Opportunities provides a profile of disadvantaged college aspirants. It examines the question of who should be the target of early intervention programs. In addition to understanding more about the groups that fall into the category of low-income, the report reminds us that most disadvantaged students have multiple factors that put them into this category including being from a family on welfare, first generation, a minority, and low-income. This reminds us of the significant barriers faced by disadvantaged youth. Parental divorce emerged as a new factor impacting students' opportunities since divorce often resulted in the splintering of resources.

Program Necessity

College choice

The **Volume 4, Fall** provides a clear portrait of the need for early intervention programs, emphasizing some of the factors I have described above. Hossler's and Stage's review the influences on postsecondary educational plans of ninth grade students. They find that parents' education and expectations exert a strong influence on the post-secondary plans of high school students. Their findings support that intervention must be earlier than high school. By the time students are in high school, it is difficult to impact their attitudes and to reverse academic trends. They also note the benefit of programs that target particular groups either minority or first generation since each group has distinct needs and concerns. Their study illustrated that the predisposition to go to college (parents' expectations) plays a greater role than financial aid. Also, financial aid can be addressed in the last year of college whereas the impact of parents' expectations impacts into students' academic performance, interest in college, ability to stay in school, and attitude toward schooling. This also illustrates the importance of parental involvement in early intervention programs.

Minority students

Kassie Freeman describes both economic and psychological/social variables that impact African American students. African Americans not only lack the finances to attend college but lack the understanding about the financial gain that is associated from attending college. As one student notes, "People are unaware that there are opportunities out there after college. People just kind of see it as, "You get out of college and then what do you do?" Dr. Freeman article reinforces Hossler's and Stage's findings that not seeing college as an option (not having parents of friends talk about it or expect them to attend) is a major barrier. The words of one student capture this sentiment, "A lot of people are not as strong as myself, for instance, and you might need to hear you need to go to college from somebody else." The lack of expectations leads to loss of hope and feelings of helplessness. Instilling possibilities early was also noted as key to expectations. Not knowing what college was like also led students to be intimidated. So, even if they might be prepared or have the grades and test scores they might not apply. Poor school conditions and inactive school guidance counselors were also noted as extremely problematic and limiting opportunity.

Academic course taking

Tom Mortenson reviews the academic preparation and course taking patterns. His research illustrates that Native Americans, Blacks, and Hispanics, and low-income students take less college preparation courses. College entrance examination scores are also lower for these groups, impacting their access and opportunity.

Guidance counseling

Patricia McDonough describes the shifts that have taken place in the college admissions process that disadvantage first generation students or others unfamiliar with college going patterns. College admissions officers are now more focused on marketing than counseling students about the application process for college. The largest problem, however, is the teachers and school guidance counselors no longer prioritize assistance with college admissions, as McDonough calls it "their virtual divestment of the admissions function." (p. 289) . This disinvestment is the result of counselors concentrating on violence, teen pregnancy, suicide and drug abuse. The changes in the schools' environments and society take their toll on students opportunities and life chances. In addition, funding for the counseling function has decreased; average ratio of school counselor to student is 1:740 and in California it is 1:1,040.

Financial aid

Flint reminds us that even if disadvantaged students overcome psychological barriers, lack of parental expectations or family support, language barriers, lack of support by school counselors and teachers, and taking college preparatory courses without any encouragement and at times active discouragement, they must still face the barrier of paying for college. Hossler and Stage and Freeman both find financial assistance to be a factor, but not as great as the other

Introduction

factors limiting opportunity. Flint reinforces the importance of grants and work study rather than loans for the creation of opportunity. Furthermore, his study illustrates that high school students continue to overestimate college costs and misconstrue financial aid requirements. Programs that provide awareness of financial assistance, including early intervention programs and college savings bond programs for parents, are important public policy for assuring access.

Middle school students

Lastly, this volume ends with an appendix of early career and postsecondary awareness programs for middle school students. You can link to the most recent information on-line at: *www.teri.org*. You can search each state and local area for information on your nearest program and its characteristics.

In conclusion, only the voice of a student can really illustrate the need and value of these programs:

Reflecting on my pre-college experiences, I came to the realization that early intervention and preparation to college actually began in middle school. Entering gifted and talented programs in elementary and junior high, I performed very well academically, enjoyed attending school, and became very involved in extra-curricular activities. Therefore, my parents had very high expectations that I would not only complete high school but pursue post-secondary education. Certain teachers and my guidance counselor from junior high school also took notice of my accomplishments. With their direction and support, I was able to gain acceptance into Benjamin Banneker Academic, the District of Columbia Public School's college preparatory high school.

Banneker provided an academic curriculum that was rigorous and challenging. A very small school, students were able to receive extra attention from teachers, guidance counselors and the administrative staff. A safe, supportive and well-known school for its successful entrance of graduates into college and scholarships awarded to seniors, the environment was very competitive yet encouraging towards my pursuit of a college education.

Although I had proven from my past academic record and community service that I deserved my place at Banneker, I could not help but feel somewhat a step behind in college preparation. Many students came from families where one or both of their parents attended college or had siblings pursuing their degrees. My oldest brother graduated from the University of the District of Columbia but was serving active duty in the U.S. Air Force. My father was retired from the D.C. Department of Recreation and worked as a part-time caddie for a golf club in Maryland. My mother worked as a custodian for the Congressional office buildings on Capitol Hill. Therefore, no one at home had really been through the experience of applying and attending college.

The Howard University Upward Bound program was very instrumental in offering the extra support for a student with my particular needs as a first generation college bound student. Before high school, I really did not understand that I had fit the characteristics of being considered a low income student as well. However, attending high school with the sons and daughters of surgeons, lawyers, principals and judges awakened me to my own social and economic status and its disadvantages when applying to college. Upward Bound provided an opportunity to meet other peers with similar backgrounds and experiences outside of high school. The academic tutoring, financial aid advising, workshops, fee waivers (for college applications and standardized testing) and personal counseling had a positive impact on my successful completion of high school, application and entrance into college. The program director, head counselors and college students (tutor-counselors) were very positive role models whom continue their relationships and support for former Upward Bound students after high school. For instance, two of my former Upward Bound counselors attended my college graduation.

Therefore, early intervention had a significant impact on my success in entering and maintaining enrollment in college. The desire to attend college was instilled at a very young age; however, the special support provided by teachers, school guidance counselors and the Upward Bound program as a whole answered the many questions that I had about higher education and directed me towards the extra resources that I needed to prepare successfully as a first generation, minority, low income student. Unfortunately, many peers from my neighborhood did not have the opportunity or were not interested in pre-college programs. As a result, they became discouraged from attending college, dropped out after freshman year or went through extra hardships to obtain their degree.

Sherri Martin, Trinity College, Masters Program in Student Personnel Administration

Acknowledgments

Several groups have been extremely influential in helping to drive the national dialogue on access and equal opportunity. Many of these groups have developed programs that promise to broaden the group of individuals entering higher education. First, the Council for Educational Opportunity (formerly NCEOA) has been involved in research, advocacy, program development, and policy that assists in assuring access to all students, particularly first generation, minority, and low income students. The Education Resources Institute (TERI, 1985) is a non-profit organizations that aid students in attaining education and assists institutions in providing education in an economical fashion, assuring access. The College Board has several programs and conducts research on issues of access. Equity 2000 is a widely recognized program for first generation students. The American Council on Education Annual Trends of Minorities in Higher Education has been influential in impacting policy and practice related to this particular population. It is important to acknowledge the work of these organizations and the very dedicated individuals within them. Also, the Offices of Policy and Planning and Educational Research and Improvement at the Department of Education have been instrumental in commissioning studies of early intervention for college programs. They should be commended on providing evidence to support the importance of these programs.

Also, I want to thank the individuals who served in an advisory capacity for this issue of Advance in Education Research

Cliff Adelman, OERI
Anne Coles, TERI
Robert Fenske, professor, Arizona State University
Laura Perna, Patterson Research Institute
Andrea Reeve, National TRIO Clearinghouse
Scott Swail, The College Board

They each provided helpful advise and are committed and passionate about helping disadvantaged and at-risk students. I applaud their dedication to providing opportunities for all youth.

1

Program access

School to College Transition Programs for Low Income and Minority Youth

Dr. Ann S. Coles
Senior Vice President, Education Information Service,
The Education Resources Institute (TERI)

Introduction

Promoting access to higher education for low income and minority youth has been a major concern of educational leaders and policy makers since the 1960's. This concern has focused on enabling students to overcome three major barriers: lack of awareness of postsecondary opportunities and how to prepare for them; limited opportunity to secure the academic preparation necessary for postsecondary success; and lack of resources to pay college costs. Many programs have been initiated to help students overcome these barriers, providing them with information, academic support and financial aid. Despite such efforts, the college-going rates of minorities have not risen substantially; they still lag behind the rates of majority youth. Much more remains to be done if the numbers of minority youth who have the potential to benefit from higher education are able to do so.

Programs to promote college access first appeared in the 1960's as part of the nation's efforts to eradicate poverty and ensure equal opportunities for racial minorities. The first special programs to prepare talented minority students for college were piloted in 1964. Funded by several national foundations, these programs evolved into the federally funded Upward Bound programs launched a year later by the Office of Economic Opportunity. In 1965, the federal government also made its first substantial commitment to financial aid for needy students without regard to merit. Authorized as part of the Higher Education Act, two of these programs—the Student Educational Opportunity Grant (SEOG) and College Work Study (CWS)—still exist today. In order to make sure that the students for whom these programs were intended knew about their availability, the Higher Education Act also authorized the Educational Talent Search program which today is an important source of pre-college information and counseling for minority and low income students across the U.S.

Programs promoting college access for disadvantaged populations expanded rapidly in the 1980's. This expansion was partly a response to the publication of *One Third of a Nation*, a report documenting that by the year 2050 at least one-third of the U.S. population would be people of color. This report pointed out that in order for the nation to maintain its world leadership position, it would have to dramatically improve its performance in educating this population. The importance of addressing the problem of minority participation in higher education was further underscored by the decline in minority enrollments from the late 1970's when they had peaked.

Today, there are hundreds of programs promoting access to higher education for low income and minority students. Colleges and universities, public schools, and state agencies all sponsor special programs to facilitate postsecondary access for students who otherwise would be unlikely to attend. Non-profit organizations, whose primary mission is to promote access to postsecondary education, have emerged. It is impossible to inventory every postsecondary access program that exists, springing up as they do in response to local concerns and supported by a variety of funders. Except for a group of federally funded programs known as TRIO, there is little national coordination and communication among these programs.

Postsecondary access programs can be categorized into different types, based on the student needs they address. This paper examines seven different categories of postsecondary access programs, describing the similarities and differences among them. Various federal and state initiatives to encourage postsecondary attendance among low-income and minority students also will be discussed. Organizations which have provided leadership in coordinating efforts to increase postsecondary access are identified. In addition, the paper offers recommendations regarding desirable models and promising practices.

Paper was commissioned by the DeWitt Wallace-Reader's Digest Fund

Programs to promote college access

All programs promoting college access address in some way the issues of academic preparation for college, awareness of educational opportunities, and financial aid for college costs.

Most programs take a student-centered approach, providing direct services and advocacy for individual students seeking to further their education or with the potential to do so. Such programs contribute significantly to improving the college going rates of the students served, but do not address the larger issues of deficiencies in the college preparatory offerings of the secondary schools the students attend. Also, they serve a relatively small number of students.

A few programs take a different approach, viewing systemic change and school reform as the primary means to promote postsecondary access. This typically involves upgrading the curriculum and teacher training for secondary schools. While all students benefit, the gains for individual students are less than if students were in special programs focused on preparing them for college.

For the purposes of this paper, programs promoting college access for minority and low-income students are categorized as follows:

1. broad focus, multi-service resource centers;
2. restricted focus resource services;
3. last dollar scholarships and financial aid advising;
4. early commitment of guaranteed tuition,
5. educational awareness programs;
6. academic preparation/pre-college counseling programs;
7. systemic change to facilitate college access.

BROAD FOCUS MULTI-SERVICE RESOURCE CENTERS

The primary purpose of these programs (Table 1, Appendix A1) is to provide young people, their parents, and in some cases, adults interested in returning to school with information, advice and application assistance regarding all aspects of planning for higher education. Many programs also offer educational awareness programs for younger students, and some operate toll-free telephone information hotlines. Services are provided at a central community-based office, in schools and at various community locations. While most of these programs serve the general public with few restrictions, typically they target youth who will be the first generation in their families to attend college.

The services provided by multi-service resource centers include information on postsecondary programs, financial aid, careers, admissions, testing, and other issues related to postsecondary planning. They also advise people on setting career goals, school and college selection, and identifying financial aid resources; and they assist people with admissions and financial aid applications. A few also administer last dollar or minority scholarship programs. Most offer workshops on academic preparation for college as well as self-esteem building. Some programs are statewide, including the Indiana College Placement and Assessment Center (ICPAC), the Vermont Student Outreach Program, and the Arizona Education Planning and Information Center. Others concentrate their efforts in major cities, while offering some statewide services. Examples include the Higher Education Information Center in Boston, which operates a statewide toll-free hotline and assists other Massachusetts cities with developing educational awareness programs, and the College Planning Network in Seattle which offers workshops throughout the Seattle area and publications that encompass the Pacific Northwest. Other programs focus citywide, such as the College Access Program in Philadelphia.

Funding sources include federal, state, and city agencies, foundation and corporate grants, student loan agencies, and colleges and universities. Broad focus multi-service centers are based in state agencies and student loan agencies, or function as private, non-profit organizations.

Broad-based multi-service centers have many similarities. Their services are free for individual users. They emphasize information dissemination, advice on school selection, and financial aid information and application assistance. They serve from 500 to over 100,000 people each year. Most programs do not have extensive involvement with individual students unless a student chooses to participate in a variety of early awareness activities or visit the resource center

repeatedly. While all programs address academic preparation, in most cases this involves workshops about what courses to take in high school, test-taking strategies, and study skills. Only the Wisconsin Educational Opportunities Program includes in-depth academic preparation.

Significant differences among programs are related largely to budgetary resources. Annual program budgets range from under $100,000 to over $1 million a year. This means that some programs can offer a broad array of services, while others have more limited services and reach people primarily by telephone and the mail.

Table 1
Broad Focus Multi-Service Resource Centers

Range of Services		Geographic Focus	Major Funding Source	Organizational Base
Information resource materials: careers, postsecondary programs, financial aid, admissions tests, GED preparation, (print, video, computerized); toll-free hotlines; large scale mailing; workshops *Advising* career goals, school/college selection, financial aid resources *Application Assistance* Admissions, Financial aid, Admissions tests, Fee waivers *Outreach* Schools, Churches Youth organizations, Youth employment program	*Educational Awareness* *Grades 6–11* workshops, campus visits, work-site field trips, mentoring, college and career fairs, parent workshops, publications *Financial Aid* administer last dollar, minority scholarship programs *Academic Preparation/Self-Esteem Building* Workshops (study skills, test taking) SAT prep, tutoring Summer enrichment, leadership development	*Statewide* California Indiana Oklahoma Arizona Vermont Wisconsin *Citywide, Limited Statewide* Boston, MA Seattle, Pacific Northwest Omaha, Nebraska *Citywide* Philadelphia St. Louis	Federal State City Foundations Corporate grants Student loan agencies Colleges and universities	State agency Private nonprofit organizations Student loan agency Consortium of local organizations

The size and accessibility of their information resource collections also vary. Some have extensive collections including college catalogs from across the U.S., college and career directories, listings of private scholarships, pamphlet files, computerized guidance systems, and videos that can be used by visitors. Other programs have more limited resource collections, and a few have only a telephone information hotline.

Outreach activities also vary considerably. Some programs, especially those serving rural areas, rely extensively on outreach to serve people. The program in Arizona has a van which travels across the state, spending a week at many locations. Vermont's Educational Outreach Services are offered primarily by counselors traveling to many locations in each of the state's regions to assist people. Several of the large city programs also conduct extensive outreach activities, primarily because the people who need their services the most are the least likely to seek them.

Program access

Restricted focus resource centers

Restricted focus resource services (Table 2, Appendix A2) do not offer the array of programs or serve the large and varied populations that the broad focus programs do. They all provide information about colleges and financial aid, individual advising, and application assistance. Most target a defined population—either a particular ethnic group, a set of high schools, or a neighborhood. Typically, they serve fewer than 1,500 students per year. Most services are provided on site at the schools attended by the students they target, most of whom are in grades 9–12, except for federally funded Talent Search projects which work with students in grades 6–12.

Restricted focus programs vary among one another in certain respects. Some offer information, counseling, and educational awareness programs, while others are restricted to one or two services such as financial aid advising. Some programs, although they operate in particular cities, are part of a national organization such as ASPIRA or LULAC. Others are grass roots programs founded by one or two concerned individuals in response to a local need. Annual budgets vary from $10,000 to $400,000, and the number of students served ranges from 50 to 1,500. Some operate as private, nonprofit organizations, while others are part of a social service agency such as the Options Center for Educational and Career Choice at the Goddard Riverside Community Center in New York City.

With the exception of Southwest College Horizons in New Mexico, all of the programs in Appendix A2 offer free services. Funding sources include foundations, the federal government, individual and corporate donations, and in-kind contributions. Some of the LULAC Educational Service Centers also receive United Way funding. Others are partially supported by the cities where they are located.

Table 2

Restricted Focus Resource Services

Range of Services	Geographic Focus	Major Funding Source	Organizational Base
All programs offer some of the same services as broad focus, multi-service programs	Target African American, Asian-American, Hispanic youth Focus in particular neighborhoods, high schools, communities	Foundations Federal Individual Corporate donations Fees for service United Way In-kind contributions City	Private, non-profit organization Social service agency

Last Dollar Scholarship and Financial Aid Advising Programs

These programs encompass financial aid information, advising and application assistance, last dollar scholarships which make up the difference between other aid awards and the total cost of education, and college retention services for last dollar recipients (Table 3, Appendix A3). In some cases, programs also include college admissions information and application assistance as well as early educational awareness activities for younger students.

The geographic focus of last dollar scholarship programs is almost always citywide. Programs operate either as private, non-profit organizations or as part of a public education foundation. Funding comes from foundations and corporations, individual donations, and in-kind contributions. The programs in Ohio also receive state funding. In some cases, funds have been used to establish major endowments, the income of which is used for scholarships and operating costs.

Last dollar scholarship programs are similar in many respects. All offer financial aid information, advice and application assistance, and all advocate actively for students throughout the financial aid application process. To qualify for last dollar scholarships, students must receive aid from other sources first. An underlying assumption of all programs is that it is more cost effective to help students maximize the financial aid they receive from other sources than simply to distribute private money for scholarships. It is estimated that for every last dollar awarded, students receive at least six dollars from other sources.

This paper was commissioned by the DeWitt Wallace-Reader's Digest Fund

Most last dollar scholarship programs inventoried focus on students in the 11th and 12th grades; only I Know I Can (Columbus, Ohio) and the Crosby Scholars Program (Winston-Salem, North Carolina) offer early educational awareness programs. All programs work with students on site at the schools they attend, and all are restricted to public school students. The Cleveland Scholarship Program also works with parochial school students, but charges a fee to these schools. Finally, the college retention services provided by the programs are restricted to students receiving last dollar awards and are not available to students receiving financial aid advising only.

The differences among these programs relate to funding and the type of advising provided. Some programs are supported by an endowment built through individual and corporate contributions, while others conduct annual fundraising drives. With regard to advising, some programs focus exclusively on financial aid application assistance, assuming that college counseling is the responsibility of school guidance counselors. Other programs, while they do not provide college selection advice, assist students with the college application process.

Table 3
Last Dollar Scholarships and Financial Aid Advising

Range of Services	Geographic Focus	Major Funding Source	Organizational Base
Financial Aid Information aid advice, application assistance, last dollar scholarships, parent workshops, advocacy with college aid administrators, newsletter	*City-wide* Winston-Salem (NC) Cleveland (OH) Philadelphia (PA) Baltimore (MD) Alexandria (VA) Boston (MA) Columbus (OH) Miami (FL) Richmond (VA) Norfolk (VA) Providence (RI) Detroit (MI)	Foundation Corporate contributions Individual contributions Endowment income In-kind	Private, non-profit organization Public education foundation
College Admissions Information, application assistance, application fee waivers			
College Retention Counseling on managing college costs, renewable scholarships, newsletter, telephone hotline, emergency loan fund, mentors, summer jobs			
Early Awareness Workshops, publications			

Early Commitment of Guaranteed Tuition

The underlying assumption of programs which guarantee tuition to students before they begin high school is that such a commitment will motivate students to take the necessary steps to prepare for college while they are in middle school and high school (Table 4, Appendix A4). Such programs are either privately supported, state funded or sponsored by a college or university. The best known of the privately sponsored tuition guarantee programs is Eugene Lang's I Have a Dream program which currently has 140 chapters. In the case of privately sponsored programs, students are either from a designated classroom or grade level of a particular school. College sponsored programs serve students selected on a citywide or statewide basis. Funding sources include state, foundation and corporate contributions, individual donors, and colleges and universities. Programs are operated either as private, non-profit entities or divisions of community service agencies, by state agencies, or by colleges and universities.

Program access

There are many similarities among guaranteed tuition programs. Most offer some form of academic and personal support as well as college application assistance. Only the dollars for grades programs do not. All programs make commitments to students between fourth and eighth grade. One program, ScholarshipBuilder 2000 sponsored by the Merrill Lynch Foundation, commits to students in first grade. All programs emphasize sustained involvement with the same students from the time they are selected through college enrollment. Most of the community-based programs are privately funded by individuals or corporations. The only publicly funded guaranteed tuition programs identified by this study are the Rhode Island Children's Crusade and Indiana's Twenty-First Century Scholars Program.

There are significant differences among guaranteed tuition programs. Some programs require students to meet certain conditions, including achieving specific grade point averages and remaining drug and alcohol free. A few programs also have specific expectations for the parents of the students they serve and require parents to sign contracts stating they will meet these expectations. Other programs have no requirements. Privately funded programs allow students to use scholarships anywhere they choose, while state-funded and college sponsored scholarships almost always are restricted to certain institutions. The student selection process also varies. Privately sponsored programs choose students only once rather than every year. For the student, being chosen for a privately sponsored program is like winning the lottery because the student happens to be fortunate enough to be in the class or grade level chosen at a particular school in a particular year. In the case of college and university sponsored programs, students are chosen every year and, in some cases, anyone can apply for the program. The number of students participating in college and university programs is considerably higher than in the privately sponsored programs where students are chosen only once.

Table 4
Early Commitment of Guaranteed Tuition

Range of Services	Geographic Focus	Major Funding Source	Organizational Base
Academic Support/Cultural Enrichment Tutoring, summer enrichment program on a college campus, field trips, recreational, cultural activities	Selected classrooms Grade level of a city school system Statewide Citywide	State Foundation Individual donors Corporate Sponsoring university/college	Private, nonprofit organization College/university Community service agency State
Social/Personal Support Mentoring, case management, self-esteem building, workshops, parent workshops, follow-up counseling			
Application Assistance Admissions, financial aid			
Scholarships Difference between other aid and college costs Some restricted to the sponsoring college Money for grades—held until student attends college			

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Educational awareness programs

Educational awareness programs (Table 5, Appendix A5) encompass a great variety of activities, geographic locations, and sponsorships. They offer academic and social support, information and exposure related to career exploration, planning for the middle to high school and high school to college transitions, college and career fairs, publications, and campus visits. Some programs also include classroom activities, teacher training, and volunteer mentors to provide career and college information. Educational awareness programs are offered in geographic locations with high concentrations of minority and low-income students who lack awareness of educational opportunities. Programs exist in all 50 states and are sponsored by a wide range of institutions including: national, regional, and local non-profit organizations; colleges and universities; and public school systems. In some cases, financial aid agencies and associations of college admissions and financial aid professionals also sponsor programs. Major funding sources include foundations, sponsoring colleges and universities, public school systems, professional associations, state agencies, corporations, and student loan agencies.

Table 5
Educational Awareness Programs

Range of Services	Geographic Focus	Major Funding Source	Organizational Base
Academic/Social Support Tutoring, mentoring, peer advising, Weekend/summer program, enrichment campus, Advice selecting high school courses, Cultural/motivational activities, Promotional campaigns: school wide, media *Information/Exposure* Career exploration, high school/college planning, financial aid workshops for students and parents, college/career fairs, publications, campus visits, classroom activities/projects related to college and careers *Training/Technical Assistance* Teachers to do early awareness activities Mentors to provide career, college information	National Cities with large numbers of minority/low-income students	Foundations Sponsoring colleges/universities State Public schools Professional associations Corporations Student loan agencies	National, regional & local private/nonprofit organizations Collaboration between national organizations and local public schools and higher education institutions College & university Public school system Statewide financial aid agency Professional group

Educational awareness programs have many common features. All provide information on postsecondary programs, financial aid, academic preparation necessary for college, the importance of higher education for promising careers, and the need to complete high school. They offer workshops and distribute handouts to encourage students to complete high school and take the courses they need to prepare for college. Almost all include campus visits and exposure to role models, i.e. professionals and/or college students from backgrounds similar to the students they serve. Most programs emphasize career exploration as a way to help younger students understand the relevance of college even though it seems far away to them. All programs include information for parents in the form of work-

shops and written materials. Almost all programs are collaborative efforts, involving public schools, local colleges and universities. Some also include business partners, cultural organizations and state agencies.

There are many differences among educational awareness programs. Some offer one-time activities such as college and career fairs or school assemblies, attended by large numbers of students with no follow-up provided. Other programs involve students in a series of activities extending from six weeks to one year. One example is the College Knowledge Club for eighth graders at selected middle schools in Washington D.C. Students attend several meetings a month throughout the school year, listen to speakers, go on field trips, and plan other special activities to increase their understanding of college and career opportunities. Programs target different grades with activities which are developmentally appropriate for students at that grade level. Two examples are the I'm Going to College program for fourth graders and the Career Beginnings program for eleventh and twelfth graders in California. The fourth grade program involves classroom activities and a day of structured activities on campus where children pretend to be college students. Career Beginnings involves mentors, summer jobs, and assistance with the college and financial aid processes. Some programs reach all students at a particular grade level, while others involve only students who volunteer or are selected for participation. Finally, while a few programs provide training and assistance to help classroom teachers conduct early awareness activities, most use paid staff or college volunteers to do so.

Academic preparation/pre-college counseling programs

Literally hundreds of programs offer academic preparation and pre-college counseling to promote access to higher education for disadvantaged students (Table 6, Appendix A6). The largest of these programs is the federally funded Upward Bound program, of which there are 534 projects serving 45,835 students in grades 9-12. In addition, some states fund programs modeled after Upward Bound. There also are groups of privately funded programs. One of the best known is the Mathematics, Engineering, and Science Achievement program (MESA) which originated at the University of California. This program now operates 20 centers in California, serving 14,000 students in grades 6–12. It also has been replicated in Arizona, Colorado, and several other states. Another group of programs, known as the Kenan Project and funded by the Kenan Foundation, has sites in six southern states. Groups of programs also are funded by the National Science Foundation, the U.S. Department of Energy and other federal agencies (see Table 8). In addition, colleges and universities across the U.S. have invested substantially in academic preparation programs targeted primarily to minority students, supported by their own funds and moneys raised from foundations and corporations.

Academic preparation programs offer academic and support services and pre-college counseling services. They almost all include a summer residential program, Saturday school year activities, academic advising and self-esteem building. These programs also provide information about college opportunities and help with college selection and completing admission and financial aid applications. In addition, a few college-sponsored programs guarantee participants admission and/or tuition assistance at those institutions. A few also offer college level courses for students while they are still in high school and training for secondary school teachers. Major funding sources, in addition to those mentioned above, are states, public schools, foundations and corporations. Most programs are located at colleges and universities. A few programs which encourage students to pursue health related careers are at hospitals and medical schools. There also are a few run by private, non-profit, community organizations.

There are many similarities among academic preparation and pre-college counseling programs. Most activities are held on college campuses and have summer residential components two to six weeks in duration, depending on the students' grade level and budgetary resources. The majority of programs target students in grades 9–12, and serve the same students over a two-four year period. Most programs serve a small number of students, ranging from 30 to 150. Staff members typically develop close personal relationships with students, and students come to rely on them for academic and personal support throughout high school and the transition to college. All programs emphasize academic skill building and enrichment, and provide follow-up academic advising during the school year to ensure that students take college preparatory courses and perform well in those courses. Tutoring and counseling assistance is provided to students when they run into difficulty. Programs focusing on careers which require math and science backgrounds emphasize courses and enrichment activities related to those fields.

There are significant differences among academic preparation programs. Some programs prepare students for college in general, while others focus on particular careers such as engineering, health careers, and teaching. The type of

Table 6
Academic Preparation/Pre-College Counseling Program

Range of Services	Geographic Focus	Major Funding Source	Organizational Base
Academic/Social Support Summer residential academic, cultural enrichment program, school year Saturday activities, motivational, self-esteem building, mentoring, tutoring, academic advising, college courses while in high school, leadership development *Pre-College Counseling* Information, college selection advice, college, financial aid application assistance, career exploration, internships, parent workshops *Guaranteed Admission & Scholarships* Tuition assistance for sponsoring college, guaranteed admission at sponsoring college Teacher training	Small number of students selected statewide or city-wide Selected middle and high school students in a designated urban area	State Public Schools Foundations Corporations Sponsoring colleges/universities Federal	Colleges/university Hospital/medical school Private, non-profit organization

student targeted by programs also varies. Some programs focus on high achieving students who, with additional exposure and enrichment, are likely to be admitted to highly competitive colleges and universities. Other programs work primarily with "average" students who have potential to do well in college but need special help and encouragement in order to realize their promise. Few of these programs work with high risk students, probably because such students are perceived as needing more help to prepare for higher education than the programs are equipped to provide.

Systemic change to facilitate college access

In the late 1980's, large scale projects designed to bring about systemic change in public school systems as a means to promote college access began to emerge. This study identified ten such programs (Table 7, Appendix A7). Several of the programs are funded by major national foundations and involve network of major cities. These include the Community Compacts for Student Success, Equity 2,000, and the National Center for Urban Partnerships. Other models involve a college or a university as the lead organization in a collaboration with a nearby school district to work on education reform, curriculum development, and teacher training. Examples include the University of California at Irvine's Project STEP and the Think Tank at Arizona's Maricopia Community College.

These projects are similar in several respects. Most focus on a group of high schools or an entire school system. They all include curriculum development and in-service training for teachers. Most programs involve all the students in the targeted schools or school district, while few serve targeted ethnic groups such as American Indian or Latino students. Some programs also provide direct services to students attending the schools served including summer enrichment programs, tutoring, and parent workshops. Finally, most involve a formal collaborative arrangement between the schools and partner postsecondary institutions.

There are differences among the projects in terms of geographic focus and funding sources. Some projects have been initiated by national foundations which select the participating cities. Other projects have resulted from local school systems and a nearby college or university joining together to work on school reform issues. A few projects focus on a particular subject area such as Equity 2,000 which involves all 9th graders taking algebra. Other projects work on systemic change across the curriculum, attempting to upgrade academic offerings for all students.

Systemic change initiatives that promote college going are managed national non-profit organizations, colleges and universities, and public school systems. Funding varies considerably. In most cases, projects receive support from multiple sources including foundations, public school districts, states, colleges and universities, federal grant programs, state governments and corporations.

Table 7

Systemic Change to Facilitate College Access

Range of Services	Geographic Focus	Major Funding Source	Organizational Base
School Restructuring Curriculum development, two + two program professional development for faculty and staff, teacher inservice training, Direct service summer academic program, tutoring for students, scholarship aid for students, two + two program, enrichment, motivational activities, parent involvement activities	*Statewide* Targeted cities e.g. Equity 2000—6 cities Community Compacts—11 cities Urban Partnerships—16 cities National–multi-state Targeted high schools in a rural area	Foundations Public school systems State Colleges & universities Federal Corporate contributions Membership dues	National private, nonprofit organization College, university Public school system

Federal and state programs

Federal and state governments have played a major role in encouraging and supporting the development of programs to promote college access among low income and minority youth.

Federal programs

Programs to promote college going among disadvantaged students are sponsored by various federal agencies. The largest number is concentrated in the U.S. Department of Education, which oversees the TRIO program, the oldest of the federal programs to encourage postsecondary participation. Other programs are sponsored by the U.S. Department of Energy, Health and Human Services, Labor, and the National Science Foundation. Most federally funded programs are operated by colleges, universities and community agencies. Funds are distributed through grant competitions, with grants typically awarded for two-four periods. Originally most programs focused on high school students. In recent years they have expanded to include middle school students as policy makers have recognized the importance of reaching students at a younger age so they have time to prepare for college.

The major federal programs encouraging college going are summarized in Table 8. Many programs have summer academic enrichment components, tutoring, career exploration, academic advising and personal counseling. The programs sponsored by the National Science Foundation, Department of Energy, and Health and Human Services are designed to encourage students to prepare for math, science, and health careers, fields where minorities are under represented. The TRIO pre-college programs—Upward Bound and Talent Search—emphasize college and financial aid advising and application assistance to a greater extent than do the others. The TRIO programs also include a small number of regional Upward Bound programs focusing on math/science. TRIO funding has more than doubled in the last ten years from $154.7 million in 1983 to $388.1 million in 1993. Fifty-seven percent of TRIO funds support pre-college programs (16.8 percent Talent Search, 40.2 percent Upward Bound). Despite the substantial

increase of TRIO funding, it is estimated that these programs serve only less than 10 percent of the students nationally who need TRIO services and meet federal eligibility criteria (first-generation and 150% poverty.)

While most federal programs promoting college going emphasize direct services to students, there are several focusing on the school-to-work transition which involve systemic change, i.e., restructuring the high school experience and easing the transition to postsecondary training. Embedded in such programs is the recognition that preparation for work frequently requires postsecondary education and training. ProTech, which is one of the demonstration programs sponsored by the U.S. Department of Labor, involves formal collaboration among public high schools, community colleges, and a major employer. It enrolls eleventh grade students in a four-year program preparing them for specific careers; students completing the program earn both a high school diploma and an Associate's degree. Students take courses at the same time they work in entry-level jobs related to the career for which they are preparing, and may begin college level courses before they complete high school.

Table 8

Federally Funded Programs to Promote College Going Among Disadvantaged Students, 1983

Federal Programs	Program Activities	No. Programs/ No. Students Served	Funding
U.S. Department of Education			
A. TRIO: Upward Bound	Instruction in reading, writing, study skills, mathematics Summer residential program Academic, personal counseling Cultural, recreational, tutorial services Information on postsecondary ed., financial aid careers Assistance in completing college admissions testing, and financial aid applications	534/42,481	$143 M
B. TRIO: Upward Bound Math/ Science Center	Same as above with greater emphasis on math/science preparation	75/3,500	$14.3 M
C. TRIO: Talent Search	Academic, financial, personal counseling Career exploration and aptitude assessment Information on postsecondary ed, financial aid Assistance in completing college admissions testing, applications, and financial aid applications	294/285,500	$65.5 M
D. Higher Education Equivalency Program (Children of Migrant Workers)	Residential (2–3 months) high school equivalency training (GED) Encouragement to pursue post-secondary ed. Or job training	20/800	$8.16 M
E. Fund for the Improvement of Postsecondary Education	Innovative programs, a small number of which are related to	58/unknown	$600,000

(Table continues)

Federal Programs	Program Activities	No. Programs/ No. Students Served	Funding
	improving postsecondary access for low-income/minority students		
F. Tech Prep	Programs linking secondary and postsecondary education preparing students for jobs in particular industry clusters	1,000/100,000	$90M
National Science Foundation			
A. Young Scholars Project for High Ability and High Potential High School Students	Summer and weekend classroom instruction, lab. research, and field experiences to prepare students for science careers Career awareness Followup tutoring, counseling	136/7,650	$1.1M
Young Scholars Early Alert Initiative	Same as above except targets students in grade 7–9+ Includes mentoring by scientists		
B. Summer Science Camps	Stimulate minority students' interest in math/science studies and careers Summer program for grade 7–9 students Instruction, mentoring, student support, career exploration	28/1,700	$2M
U.S. Department of Energy			
A. Pre Freshmen Enrichment Program (PREP)	Target population under represented in science based careers Math/science enrichment courses Test preparation Field trip Role models Hands-on research activities	52/4,000	$2.1M
U.S. Department of Health and Human Services			
A. Area Health Education Center (AHEQ)			
U.S. Department of Labor			
A. School-to-Work Demonstration Projects	School-to-work transition projects with postsecondary education or apprenticeship component. Target students who never considered going to college	15/1,000	$3.39M

TechPrep, which is a program of the U.S. Department of Education, focuses on improved articulation between secondary and postsecondary training programs. TechPrep emphasizes development of basic skills in math, language and science in preparation for various jobs in a particular industry cluster. TechPrep goals are accomplished primarily through curriculum development, staff training and articulation agreements between secondary and postsecondary programs.

The National Science Foundation (NSF) also funds programs involving systemic change, in this case to increase the numbers of minorities pursuing science related careers. These programs bring together public schools, colleges and universities, and the corporate sector to improve and enrich math and science learning opportunities for targeted groups. One example of such a program is the Alliance of States Supporting Indians in Science and Technology (ASSIST), a program initiated with a five-year, $4.6 million grant from NSF. This program involves 2,000 Indian students in 27 schools across eight states in activities designed to provide them with their first experience with science learning.

STATE PROGRAMS

It is difficult to obtain a complete picture of state funded programs facilitating college access. There is no comprehensive state by state listing of such programs. Programs are administered by different agencies in each state, and unless an inquiry reaches a knowledgeable individual, there is no one person who is familiar with all the programs. Efforts to survey states by telephone for this study produced piecemeal results (Table 9). Based on the survey, it appears that 19 states have at least one program to promote college going while 12 states have none. It was not possible to determine definitively whether the remaining 19 states have any programs.

Among state funded programs to promote college going, three kinds of programs were found. Twelve states fund academic preparation programs, similar to the federally funded Upward Bound program. Typically they include summer academic enrichment components, tutoring, academic advising, campus visits, and school year followup activities. Monies for academic preparation programs generally are awarded to colleges and universities which provide program services. Seven states fund telephone information hotlines and other kinds of information services. Some states contract with private non-profit organizations to provide these services, while others provide them through state agencies such as the Oklahoma Board of Regents. Four states offer some form of guaranteed tuition. Three of these programs are operated by independent non-profit organizations set up for this purpose. In the fourth funds are given to the state university system to administer. While the State Higher Education Executive Officers (SHEEO) recently compiled a listing of state tuition assistance plans, it is difficult to determine from this listing which of the plans involve early guarantees of tuition for disadvantaged students.

Table 9

State Funded Programs to Promote College-Going Among Low Income and Minority Students, 1993

Alabama	Unknown
Alaska	*Rural Alaska Honors Institute* summer enrichment and academic support program for Alaskan Natives.
Arizona	*Outreach/Minority Recruitment—House Bill 2108* academic enrichment, information
Arkansas	None
California	*California Student Opportunity & Access Program* information, counseling, tutoring, 50% state funded, community based, 6 sites *College Readiness Program* tutoring, mentoring, information, parent involvement, gr. 6–8, grants to 6 CSU campuses *Project AVID* San Diego tutoring, counseling, information
Colorado	Unknown
Connecticut	*College Awareness and Preparation Program (Conn CAP)* Academic enrichment-grants given to colleges for summer programs for H.S. students, early intervention
Delaware	None
District of Columbia	None

(Table continues)

Program access

Florida	*College Reach-Out Program (CROP)* academic enrichment, grants to college, $2M, 31 sites, 4,500 students
Georgia	*Project College Bound* 6 early intervention programs, 6 colleges get $55,000 each; summer enrichment $140,000
Hawaii	None
Idaho	None
Illinois	None
Indiana	*Indiana College Placement & Assessment Center* information by mail, phone and computer, publications, special events *Twenty-First Century Scholars and Parent Support Project* eighth graders, tuition guaranteed based on need and pledge
Iowa	Unknown
Kansas	None
Kentucky	*Kentucky Minority Preparation Program* information, tutoring, peer counseling, grants to college and universities
Louisiana	None
Maine	None
Maryland	*Transition from School to College Early Intervention Program* 8th grade, information, counseling, tutoring, grants to colleges and universities
Massachusetts	*McNair Pre-College* grants to college for academic enrichment—high school *Career and Learning Line* toll-free information hotline located at the Higher Education Information Center
Michigan	*King/Parker/Chavez Program to Improve Minority Participation in H.E.* summer enrichment, tuition guarantee, state gives grants to colleges and universities
Minnesota	Unknown
Mississippi	Unknown
Missouri	Unknown
Montana	None
Nebraska	Unknown
Nevada	Unknown
New Hampshire	None
New Jersey	*College Bound Program* summer academic enrichment, counseling, urban and minority, grants to colleges
New Mexico	Unknown

New York	*Liberty Partnership Program* grants to college, coalition among schools, colleges, target students 5–12 yrs. (gr. 7–9), tutoring, counseling, parent involvement, 53 program sites
North Carolina	Unknown
North Dakota	Unknown
Ohio	None
Oklahoma	*Oklahoma Student Aid Information and Regional Services* toll free hotline, information database
Oregon	Unknown
Pennsylvania	Unknown
Rhode Island	*RI Children's Crusade for Higher Education* mentoring, pledge, guaranteed tuition for 3rd graders, tutoring
South Carolina	*Higher Ed. Awareness Program Partnership* 8th graders, video, campus visits, in school awareness
South Dakota	Unknown
Tennessee	Unknown
Texas	Unknown
Utah	Unknown
Vermont	*Vermont Outreach Program* information, counseling, app. assistance, beginning in 7th grade through high school
Virginia	Unknown
Washington	None
West Virginia	Unknown
Wisconsin	*Wisconsin Educational Opportunity Program* comprehensive programs of information and counseling, early identification, early scholarship commitment
Wyoming	Unknown

Program access

One of the oldest of the state funded information and counseling programs is the California Student Opportunity Program (CAL-SOAP). Established by the California state legislature in 1981, this program involves consortia of colleges and universities, public school districts, and community agencies which provide at least half the funding while the state provides the other half. Located in six California cities, CAL-SOAP targets low income and minority students. In addition to information and counseling, services include tutoring by college students from similar backgrounds to the students served. Although CAL-SOAP has been underfunded by the state in recent years, it continues to thrive because of the support provided by the local communities.

Program evaluation results

Given the number and variety of programs designed to promote college-going among disadvantaged students, it is surprising how little empirical data exists about program effectiveness in terms of college participation rates or

strategies that make the most difference. Most of the evidence offered by programs as indicators of success consists of year end summaries of college placement rates, numbers of students receiving financial aid, and numbers of students taking admissions tests. Because of limited resources, most programs do not follow up to determine the college retention and graduation of the students they serve. In addition, little is known about the extent to which the college success of students can be attributed to program services as opposed to other factors.

WHAT WE DO KNOW

While studies evaluating programs to promote college going may not be entirely reliable, they do provide positive indications that the programs are successful in increasing postsecondary enrollment among low-income and minority students.

A. Multi-service resource centers

An external evaluation of Boston's Higher Education Information Center found that help provided with the college admissions and financial aid processes had a positive impact on college going. Forty percent of the people assisted by the Center indicated they would not have completed admission and financial aid processes without the Center's help. Knowledge of financial aid and educational programs increased substantially for two-thirds of the visitors. Less than seven percent said that the Center's assistance made no difference.

A longitudinal study of students contacted initially by the Indiana College Placement and Assessment Center in ninth grade and followed through their first year of college also produced positive results. The study found that the number of Indiana residents enrolled as undergraduates at Indiana public institutions during this period grew by 12 percent. This finding is particularly significant given that during the same period the pool of traditionally aged entering freshman in Indiana declined. The study also found an increased rate of participation by people of color in the Indiana's student financial aid program. In addition, there was a 50 percent increase in the number of aid applications from first time filers.

B. Last dollar scholarship programs

Follow-up studies of the last dollar scholarship programs in both Boston and Cleveland found that students receiving last dollar awards had much higher college retention rates than similar students nationally who presumably did not receive such awards. In Boston, 85 percent of the ACCESS scholars were still enrolled in college four years later as compared with less than 50 percent of similar students nationally, while Cleveland found that 80 percent of their scholarship recipients graduated from college. The Cleveland Scholarship Program recipients indicated that the help they received through the program was one of the most important factors in their attending and graduating from college.

Neither Boston nor Cleveland evaluated what happened to students who received financial aid advising but not last dollar scholarships. Also, there was no control group of similar students who did not receive services, making it difficult to draw a firm conclusion attributing the students' college success to these programs.

C. Guaranteed tuition programs

Only a few of these programs have been in existence long enough for students to enroll in college. In the case of the first I Have A Dream Program, 34 of the 61 original students (55.7 percent) enrolled at least part-time in college. Another nine graduated from high school or received GED's. Looking at the younger students served by these programs, there is evidence that participation increases the school attendance and test scores. A study of I Have A Dream in Washington D.C. found that the program had positive effects on students' educational aspirations and academic performance.

The pay-for-grades programs have less favorable outcomes. Early results show that many students in the participating cities did not meet the requirements to receive funds. In one city, one-third of the students in grades 7–12 failed to earn at least one C, the minimum requirement to qualify for the program. Only four percent of students in another city, where all A and B grades were required, qualified. These findings suggest that a modest financial incentive related grades is not influential in improving student achievement.

D. Educational awareness programs

The only program to be studied extensively is Career Beginnings. Results of this study indicate that over 95 percent of participants graduated from high school, more than 75 percent entered college, and most were continuing to progress toward degree completion. The evaluators felt that this accomplishment was impressive when measured against the disadvantages that the students in the program faced in terms of access to academic preparation for college and family resources. The graduation rate of Career Beginnings is similar to the rates reported by model programs described in a directory of school/college partnerships (*Reaching for College*) published by the U.S. Department of Education. These programs reported college going rates ranging from 85 to 95 percent.

There are few studies of the effectiveness of educational awareness programs for younger students. A study by the Higher Education Information Center of eighth graders found that students participating in early awareness programs were significantly more likely to plan to take college preparatory courses in high school than students who did not participate. It also found that Latino students involved in early awareness activities were more apt to aspire to careers requiring postsecondary education than similar students who did not participate, and that early awareness participants were more likely to perceive their teachers as wanting them to go to college than were students who did not participate.

E. Academic preparation program

The most significant study of the effectiveness of academic preparation programs was the national study of Upward Bound completed in 1979. This study followed 3,710 Upward Bound twelfth graders from 54 programs and a comparison group of similar non-participants for four years. The study produced positive findings:

- 91 percent of Upward Bound graduates entered postsecondary institutions, much higher than the average for the comparison group.
- Upward Bound graduates were twice as likely to enroll in four year colleges as students in the control groups.
- Upward Bound graduates took greater advantage of financial aid and support services while in college than comparable non-participants.
- Four years after high school graduation Upward Bound participants were four times more likely to have earned Bachelor's Degrees as compared to non-participants.

There have been many smaller studies of Upward Bound programs, usually conducted by researchers on the campuses where the programs are located. Most of these studies are not scientific and lacking in terms of empirical design; consequently, their findings are not considered reliable.

Problems

There are various problems with the evaluation studies of programs promoting college access. Most prominent is the lack of comparison groups. With the exception of the Upward Bound study, none has used a control group which would allow a systematic comparison of students receiving specific services with similar students who do not. Without control groups it is difficult to identify a particular strategy and to be confident of its effectiveness. Programs also do not have base-line data, would be another way to determine the effectiveness of the program in assisting the students served as compared with students attending the same school before the program existed. Few studies produce evidence of what the programs are doing that actually increases college-going. There also has been no systematic comparison across a variety of program strategies in order to identify those which are most effective. Finally, there is no indication of whether students already achieving at a certain grade level are more likely to go to college than those with lower grades whether or not they participate in an academic preparation program.

National studies

Three national evaluation studies are currently underway that should add considerably to existing evidence regarding the effectiveness of programs to promote college going. Two of the studies are being overseen by the U.S. Department of Education. A national longitudinal study of the effectiveness of the Upward Bound program is now beginning its second year, and preliminary results will be available within the next six months. The Department of Education also has conducted preliminary studies in preparation for a national evaluation of the Talent Search program. In addition to these studies, the Baltimore Community Foundation has recently launched an evaluation of financial aid advising and last dollar scholarship programs funded by the Ford Foundation

Coordinating/intermediary organizations

Various national organizations and networks have played significant roles in facilitating college going for low income and minority students. These organizations are listed in Table 10 and Appendix B. Some are associations of professional educators, while others are research and think tank organizations.

Among the professional associations, the National Council of Educational Opportunities Associations (NCEOA) is the only one focusing exclusively on promoting postsecondary access and achievement for low-income and minority populations. The NCEOA membership consists of TRIO program personnel from across the U.S. This organization, which was formed in 1980, consists of 10 regional associations to which TRIO professionals belong. In addition to providing professional development activities, NCEOA has played a prominent role in increasing federal appropriations for TRIO.

The National Association of College Admissions Counselors (NACAC) and the National Association of Student Financial Aid Administrators (NASFAA) consist of professionals working in those fields. Each organization has produced at least one significant research report regarding the access of low-income and minority students to higher education. NACAC also has published a handbook of parent workshops for use by teachers and counselors. Neither organization has made ensuring access to higher education for disadvantaged its major priority as the NCEOA has, although both are committed to working actively toward this goal.

The College Board and the American Association of Higher Education (AABE) also have imitated programs to promote college going among disadvantaged students in recent years. The College Board's efforts are focused on its Equity 2,000 project, while AAHE's programs are part of its newly established School/College Trust.

Two think tank organizations involved with educational access issues are the Institute for Higher Education Policy Initiatives and the Education Development Center (EDC). The Institute for Higher Education Policy is a non-profit research organization in Washington, DC that has completed numerous studies on financial aid and college access.

Table 10
Coordinating/Intermediary Organizations

Established National Organizations
American Association of Higher Education
The College Board
Education Development Center
The Education Resources Institute (TERI)
Institute for Higher Education Policy
National Association of College Admissions Counselors
National Association of Student Financial Aid Administrators
National Council of Educational Opportunity Associations
National Networks
College Access Network
ConnectED
National Association of Pre-college Directors
(program to prepare students for college study in science and engineering)

One organization on the list, The Education Resources Institute (TERI), is included because of its involvement as sponsor of the Higher Education Information Center in Boston and the coordinating agency for a recently established national network of professionals working in education information and awareness programs called **ConnectED** which is described below. TERI also administers national alternative loan programs to help students and families with undergraduate and graduate education costs.

In addition to the established organizations concerned with college access, there are three national networks. Two of these networks are broad based groups of professionals working in programs to promote college-going: the College Access Network and **ConnectED**. The College Access Network is a loosely constructed group consisting primarily

of last dollar scholarships programs and people interested in such programs. Currently, this network includes 43 individuals representing approximately 30 programs. ConnectED is a newly developed network that emerged from a national invitational conference of the same name held in Philadelphia in June, 1993, with support from the Lilly Endowment and the Pew Charitable Trusts. This network includes 150 professionals from programs across the U.S. to promote college-going access, including many of those listed in Appendix A. The other network listed is the National Association of Pre-college Directors. Established in 1988, this group consists of the directors of programs to prepare students for college study in science and engineering. Currently, the association has 24 member programs.

The role of community foundations and local education funds in programs to promote college going varies from city to city. These organizations have played a major role in a few cities, but a minimal role in most. Where community foundations and local education funds have been involved, they have initiated programs and provided substantial funding for start-up costs and to endow last dollar scholarship programs. In some cases, such as the last dollar scholarship programs in Providence (RI) and Boston, the public education foundations actually manage the day-to-day operations of these programs. For the most part, the role of the public education funds in promoting college-going has been indirect, a by-product of the support they provide for curriculum development, teacher training and other school system initiatives.

There are both national directories and regional directories listing school to college access programs (Table 11). These directories provide a wealth of information on the range of programs to facilitate college going. While there is some overlap among these directories, many programs are listed in only one.

Although, only four regional directories were identified for this study, there undoubtedly are more. These directories list a wide range of programs, including tutoring and cultural enrichment programs as well as programs which specifically promote college-going.

Professional literature

The professional literature on school to college transition programs is somewhat limited. It consists primarily of annotated listings of programs, articles describing model programs, evaluation studies, and reports commissioned by Congressional leaders and foundations. A bibliography of selected articles and other materials is found in Appendix C. The directories and evaluations studies listed in the bibliography have been discussed already. Three of the other references listed synthesize information about programs: Michael Nettles' literature review of Upward Bound and Talent Search evaluation research;

Table 11

Directories of School to College Access Programs

National
National TRIO Directory of Funded Programs, 1991–92, National Council of Educational Opportunity Associations. Washington, DC, 1992
What Works: School College Partnerships to Improve Poor and Minority Student Achievement, American Association of Higher Education, Washington, DC, 1992
Reaching for College, Volume 1: Directory of College-School Partnerships, U.S. Department of Education, Washington, DC, 1992
A Sampler of Early Higher Education Awareness Programs, Higher Education Information Center, The Education Resources Institute (TERI), Boston, MA, 1987 ConnectED Showcase of Exemplary Programs, Expanded List, The Education Resources Institute (TERI), Boston, MA, 1993
NASFAA Early Awareness Project: Pilot Project Reports and Compendium of Early Awareness Programs in the United States, National Association of Student Financial Aid Administrators, Washington, DC, 1988

(Table continues)

Programs to Promote College Attendance That Combine Services and Financial Aid, RAND Institute on Education and Training, Santa Monica, CA, 1993

Directory of Guaranteed Tuition Projects, U.S. General Accounting Office, Washington, DC, 1990

National Directory of School-College Partnerships: Current Models and Practices, American Association of Higher Education, Washington, DC, 1991

Regional

1992–93 Arizona Consortium of Outreach Providers, Education Planning and Information Center, Southwest Student Services Corp., 1992

1989–90 Education Resource Centers: Financial Aid Resource Center Project, Illinois Student Assistance Commission, Chicago, IL, 1989

1993 Guide to Academic Enrichment Programs for Philadelphia's High School Students, Philadelphia Schools Collaborative, Philadelphia, PA, 1993

1993 Need a Little Help: A Resource Guide to Pre-College Preparation, Counseling and Tutoring Programs for Middle and High School Students in Boston, Higher Education Information Center, The Education Resources Institute (TERI), Boston, MA, 1993

Program access

Certainty of Opportunity, a report of a national symposium on early awareness programs, and *A Shared Responsibility*, a report on school college partnerships designed to facilitate postsecondary participation of minority youth. Another study worth noting is a synthesis of the findings of focus groups and site visits on pre-college guidance offerings in secondary schools titled *Frontiers of Possibility*. The best study on last dollar scholarships programs and tuition guarantee programs is *Promising Practices*, prepared by the U.S. General Accounting office.

The professional literature on programs to promote college-going offers little in the way of theory or new concepts. This is a weakness that needs to be addressed in the future.

Inadequate financial aid resources: a persistent barrier to access

Despite the best efforts of programs to facilitate college access, none can be successful in achieving this goal without adequate financial aid resources to enable the students served to pay for college. Studies of college retention consistently show a positive relationship between college retention and financial aid. Students who receive financial aid are much more likely to complete college degrees than students who don't.

Over the last ten years, college costs have increased at two - three times the rate of inflation while family incomes and financial aid have not kept up with inflation. There also has been a shift from grants to loans as the primary source of federal aid, a factor which some people believe has discouraged low-income students from pursuing postsecondary education. In the early 1980's, need based grant aid made up 80 percent of a student's financial aid package, while loans made up 20 percent. Today grants and loans both make up 49 percent of a student's financial aid package. The shift from grants to loans as the major source of federal financial aid is a result of two factors. Because of the federal deficit, Congress has been unwilling to appropriate additional money for the Pell Grant program or other grant aid. While the reauthorization of the Higher Education Act of 1992 increased the Pell Grant ceiling to $3,700, that same year because of inadequate funding, the maximum Pell Grant awards decreased from $2,400 to $2,300. In addition, there has been a change in the underlying philosophy of federal student aid programs. In the early days of federal student aid, society was seen as the primary beneficiary of students going to college, and so Congress was willing to invest grant aid in their education. In the 1990's, however, the individual is seen as the primary beneficiary of higher education, and so he/she is expected to pay for education by borrowing.

There also have been significant decreases in some state funded student aid programs. Cuts in state scholarship programs have come at the same time that states have raised their tuition costs and fees substantially. The result is that it is harder for low-income students to afford even a lower cost public college education than has previously been the case.

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In addition to problems associated with increased college costs and the erosion of publicly funded financial aid, a growing number of colleges and universities have instituted policies limiting the access of qualified low-income students to campus based aid. Need blind admissions policies which allow students to be admitted to a college regardless of their financial need are disappearing. Instead more and more colleges and universities are considering the ability of students to pay college costs with their own funds in determining whether or not to admit them. Students in the bottom quartile of qualified applicants are the most likely to be denied admission by this policy. A second policy, known as "admit/deny", involves admitting all qualified students, but meeting the full financial need of the better qualified students while denying institutional aid to the academically less qualified students. A third policy which negatively impacts the access of low-income students is preferential packaging. This policy involves awarding the most desirable students more attractive financial aid packages than are awarded to less desirable students. Desirable is defined as students who are academically outstanding or have other special talents.

Because of the erosion of publicly funded financial aid and institutional policies restricting the access of needy students to campus-based aid, it is increasingly difficult for programs promoting college-going to assure students that lack of financial resources will not be an obstacle to their enrolling in postsecondary education. Ultimately, the purpose of programs to promote college-going will be defeated if adequate financial aid is not available for the students participating to meet college costs.

Promising practices

Several of the reports on efforts to promote postsecondary access (*A Shared Responsibility, Certainty of Opportunity, What Works*) have drawn conclusions of features of effective programs. These conclusions include the following:

1. Begin serving students as early as possible.
2. Provide sustained services to participants over an extended period of time.
3. Emphasize academic preparation for college.
4. Provide information on college going, the courses needed to prepare for college, admission testing, and assistance with college selection and the admission and financial aid application processes.
5. Have high expectations for students and provide them with encouragement and understanding to achieve these expectations.
6. Provide academic and social support to enable students to perform at high levels.
7. Involve parents to the extent possible at every juncture.

These reports also recommend that a range of programs and services be available in order to address the needs of different students. Students who already are academically successful still need information, social support and assistance with application processes. Students with potential who are not performing at high levels or who lack access to college preparatory course work need sustained academic preparation. Varied strategies to promote college going provide greater flexibility to respond to diverse student needs.

While many of the programs discussed in this paper involve promising approaches to promoting college going, three types of programs are particularly noteworthy.

The academic preparation programs are among the most significant because they provide students with instruction, campus residential experiences, and social support that they would not receive otherwise. While such programs serve relatively small numbers of students, they have contributed significantly to increasing the numbers of minorities graduating from four-year colleges and universities. These programs also have produced minority leaders across a broad spectrum of occupational needs. Graduates of the federally funded Upward Bound program, for instance, include members of the U.S. Congress, an astronaut, several judges, and the chief of the Denver, CO fire department. Such individuals not only serve as role models for minority youth, but also, as professionals, play important roles in eliminating barriers to equal opportunities for all.

The broad-based, multi-faceted centers reach much larger numbers of students and parents than do other programs. They address the needs of students from elementary schools through high school, making students aware of career opportunities, the importance of postsecondary education for future goals, and the preparation necessary to achieve such goals. Broad-based centers also play pivotal coordinating roles among programs to promote college-going in their locality. For example, they disseminate information about the academic preparation programs, tutoring, and

other opportunities for students to prepare for college as exemplified by the directories listed in Table 11. Multi-faceted centers also provide leadership in planning citywide and statewide activities to increase college awareness, such as Indiana's Super Sunday, a day in February when financial aid clinics are held at 22 locations statewide.

Multi-faceted centers often serve as a primary resource for other programs in their locality promoting college going. Their comprehensive information resource collections and toll free 800 numbers are used frequently by smaller programs. They also coordinate in-service training for staff from other programs on issues such as financial aid and career counseling. Such in-service training not only better equips staff to work effectively with students, but also ensures that the information students receive is consistent across programs. This is particularly important in relation to financial aid.

The other group of programs making a particularly significant contribution to promoting college going are the last dollar scholarship programs. These programs reach much larger numbers of students than do the guaranteed tuition programs. Unlike most guaranteed tuition programs, last dollar scholarship programs are open to all students interested in furthering their education. Because of the increasing difficulties that students have securing adequate financial aid, the last dollar scholarship programs and the financial aid counseling they provide are critical to students being able to pursue college opportunities. The fact that the retention rates of students receiving last dollar scholarships are substantially higher than the rates of other students also underscores the value of last dollar programs.

One need that none of the programs addresses specifically is the need for greater communication among professionals across programs that promote college going. The **ConnectED** conference in Philadelphia in June 1992 provided a unique opportunity for people working on similar issues to exchange ideas and assist each other with problems. The enthusiastic response of conference participants and their interest in continuing the **ConnectED** network suggest that other similar opportunities are needed.

List of appendices

Appendix A1. Information/Resource—Multi-Service—National, Statewide, Regional, Citywide
A2. Multi-Service, Restricted Focus
A3. Last Dollar Scholarship and Financial Aid Advising
A4. Early Commitment of Guaranteed Tuition
A5. Educational Awareness
A6. Academic Preparation/Pre-college Counseling
A7. Systemic Change to Facilitate College Access

Appendix B. Coordinating/Intermediary Organizations

Appendix C. Bibliography

Program/Sponsor	*S=Services* *G=Geography/Population Served* *F=Funding Sources*
Type of program: information resource—multi-service—national, statewide, regional, citywide	
Higher Education information Center The Education Resources Institute (TERI) Boston, MA	S: information: walk in/telephone, printed, workshops, toll-free 800 number, counseling: center and school-based assistance, Outreach, early awareness activities, special events G: Greater Boston, Massachusetts, grade 6–adult, 110,000 people/yr. - Private F: Federal, state, city, Boston area colleges, student loan agencies, small corporate and foundation grants
Indiana College Placement and Assessment Center Bloomington, IN Indiana Commission for Postsecondary Education Public	S: Information: toll-free 800 number, printed, application assistance, special events, computer network, outreach and promotion G: Statewide, 300,000 people/yr., grades 9–12 F: State, student loan agency

College Access Program/Philadelphia Scholars Fund Philadelphia Schools Collaborative Philadelphia, PA Private	S: Information: walk-in, printed, workshops, counseling: center and school-based, application assistance, outreach, last dollar scholarships G: Philadelphia, gr. 9–12, 3–5,000 people/yr. F: Major foundation grants, scholarship endowment fund
Oklahoma Student Aid and Referral Service Oklahoma City, OK Public	S: Information: toll-free 800 number, printed G: Statewide F: State
College Planning Network Seattle, WA Private	S: Information: printed, workshops, outreach G: Seattle area/ Washington and Oregon F: Fees for service, (organizations only) individual and corporate contributions
Education Planning and Information Center Mesa, AZ Private	S: Information: printed, walk-in, workshops, counseling, application assistance, special events, toll-free 800 number, Outreach (mobile van) G: Statewide, gr. 9–adult F: Student loan agency
Educational Planning Center Nebraska Higher Education Loan Programs Omaha, NE Private	S: information: walk-in, printed, workshops, counseling, tutoring, application assistance, special events, early awareness G: Statewide, gr. 1–12 F: Student loan agency
California Student Opportunity and Access Program(CalSOAP) Sacramento, CA Private	S: information: walk-in, printed, workshops, counseling, tutoring and skill building, application assistance G: 6 cities across the state, gr. 8–12 F: State, city, area colleges
Vermont Outreach Programs Vermont Student Assistance Corp. Burlington, VT Public	S: Information: printed, toll-free 800 number, workshops, counseling, community and school-based, application assistance, outreach G: Statewide, gr. 7–adult F: Federal, state student loan agency
Wisconsin Educational Opportunity Programs Wisconsin Department of Public Instruction Madison, WI Public	S: Information, counseling, application assistance, early awareness, outreach, scholarships G: K–12 statewide F: State
New Hampshire Higher Education Resource Center New Hampshire Higher Education Assistance Foundation Concord, NH Private	S: Information: printed, toll-free 800 number G: Statewide, gr. 9–adult F: Student loan agency
Higher Education Center of St. Louis St. Louis, MO Private	S: Early awareness information, counseling, application assistance, workshops G: St. Louis, gr. 7–adult F: Federal
Type of program: Multi-service, restricted focus	
Hispanic Student Success Program San Antonio, TX Private	S: College counseling workshops, academic enrichment, tutoring, leadership development, summer program, campus tours G: San Antonio Latino youth, gr. 4–14 F: Pew, Ford Foundation

(Table continues)

Program access

Unlimited Minds, Inc. Albany, NY Private	S: Counseling, college readiness workshops, leadership development, tutoring, mentoring G: Albany, NY. African-American gr. 9–12 F: Individual contributions, small grants, in-kind contributions
Southwest College Horizons Placitas, NM Private	S: Counseling, workshops, application assistance G: Rural New Mexico, gr. 9–12 F: Sliding scale fees
College Horizons Sacramento, CA Private	S: Workshops, application assistance G: Sacramento, gr. 11–12 F: Individual and corporate contributions
College Information Center Cincinnati Youth Collaborative Cincinnati, OH Private	S: Counseling, application assistance, early awareness G: Cincinnati, gr. 7–12 F: Federal, corporate
Lake Educational Assistance Foundation Mentor, OH Private	S: Financial aid advising, early awareness, financial aid application assistance G: Lake County, Ohio gr. 9–12 F: Public
Options Center for Educational and Career Choice Goddard-Riverside Community Center and Hudson Guild Education Center New York, NY Private	S: Counseling, workshops, application assistance, campus visits, resource collection outside, Chelsea, and Forest Hills, gr. 9–12 G: New York City F: Foundations, state, cities, and individual contributions
College Bound Los Angeles, CA Private	S: Early awareness workshops, application assistance, counseling G: Los Angeles, African American, gr. 7–16, 200 students F: Fees, individual church contributions, in-kind contributions
FACTS(Financial Aid for Colleges & Technical Schools) New York City Public Schools New York, NY Public	S: Financial aid information, counseling, application assistance G: New York City, public h.s. gr. 12 F: School volunteers, city, college work study students
North Alabama Center for Excellence Huntsville, AL Private	S: Early awareness information, counseling, application assistance, workshops G: Rural Northern Alabama, gr. 7–adult F: Federal
Asian American Communities for Education Japanese Youth Council San Francisco, CA Private	S: Early awareness information, counseling, application assistance, workshops, tutoring G: San Francisco, 6 Asian Language groups, gr. 7–adult F: Federal, city
Association for Loan Free Education Indianapolis, IN Private	S: Early awareness information, counseling, application assistance, workshops G: Indianapolis, gr. 7–adult F: Federal
The ASPIRA Association, Inc Washington, DC Private	S: Information: counseling, application assistance, leadership development, academic enrichment, support G: 7 cities: Bridgeport, CT; Miami, FL; Chicago, IL, Newark, NJ; New York, NY, Philadelphia, PA; San Juan, PR. Target Latino youth gr.-12, 17,000 people/yr. F: Federal, major foundation, corporate
LULAC National Educational Service Centers Washington, DC Private	S: Information: counseling, application assistance, tutoring, early awareness, academic enrichment, scholarships G: In 16 cities, 10 states, gr. 3–12. Target Latino youth F: Federal, United Way

Type of program: last dollar scholarship and financial aid advising	
Crosby Scholars Program Winston-Salem Foundation Winston Salem, NC Private	S: Financial aid advising and application assistance, scholarships G: Winston-Salem gr. 12 F: Foundation, corporate
Cleveland Scholarship Program Cleveland, OH Private	S: Financial aid advising, workshops, application assistance, scholarships, renewable, follow-up counseling, mentoring, community outreach. G: Cleveland, gr. 12–16 F: Foundations, corporations, endowment, individual, annual fund drive, state
Philadelphia Scholars Fund Philadelphia Schools Collaborative Philadelphia, PA Private	S: Financial aid & college, Financial aid advice, application assistance through College Access Program, deposits, application fees, scholarships, renewable G: Philadelphia, School District 1, V, gr. 12 F: U. Pennsylvania Foundation, corporate, individual, endowment, annual fund drive
CollegeBound Foundation Baltimore, MD Private	S: Early Awareness, financial aid. advising, application assistance, workshops, scholarships, app. fees G: Baltimore, gr. 11–12 F: Foundation, corporate, annual fund drive, endowment
Scholarship Fund of Alexandria Alexandria Public Schools Alexandria, VA Private/public	S: Financial aid advising, application assistance, resource center, news letter, scholarships, renewable G: Alexandria, VA gr. 10–12 F: Foundation, corporate, endowment, individual
ACCESS Boston Plan for Excellence in the Public Schools Boston, MA Private	S: Financial aid advising, application assistance, workshops, scholarships, renewable, followup counseling (gr. 13–16), newsletter G: Boston, gr. 11–16 F: Foundation, corporate, endowment
I KNOW I CAN Program Columbus Public School Columbus, OH Private/public	S: Financial aid advising, financial aid application assistance, workshops, early awareness, scholarships renewable G: Columbus, gr. 4–12 F: Foundation, corporation, individual, city, state
College Assistance Program of Dade County Miami, FL Private	S: Financial aid advising, application assistance, scholarships renewable G: Miami, FL, gr. 11–12 F: Foundation, corporation, annual fund drive
Tidewater Scholarship Foundation Norfolk, VA Private	S: Financial aid advising, application assistance, scholarships G: Norfolk, VA, gr. 12 F: Foundation, corporation, annual fund drive
Richmond Area Scholarship Program Richmond, VA Private	S: F.A. advising, app. assistance, scholarships G: Richmond, gr. 11–12 F: Annual fund drive, corporation, individual
Detroit Compact Detroit, MI Public/private	S: Financial aid advising, application assistance, scholarships, early awareness G: Detroit, gr. 9–12 F: Corporation, foundation
Providence Last Dollar Scholarship Program Public Education Fund Providence, RI Private	S: Financial aid advising, application assistance, scholarships, followup counseling G: Providence, gr. 12–16 F: Foundation

(Table continues)

Program access

Type of program: early commitment of guaranteed tuition	
I Have A Dream Foundation New York, NY Private	S: Academic, psychological support, cultural enrichment, parental involvement, mentoring. application assistance, scholarships G: 140 chapters across U.S. beginning in gr. 48, depending on city, 30–60 students per city F: Varies from city to city, individual, annual fund drives
Rhode Island Children's Crusade Providence, RI Public/private	S: Tutoring, mentoring, scholarships to RI colleges for income eligible G: Statewide, RI, beginning in gr. 3, pledge required F: State, foundation
Twenty-First Century Scholars Program Bloomington, IN Public/private	S: Parent support, mentors, scholarships to Indiana colleges, information through ICPAC G: Statewide Indiana, beginning in gr. 8, pledge required F: State
Say Yes to Education (George/Diane Weiss) Graduate School of Education University of Pennsylvania Philadelphia, PA Private	S: Scholarships G: Philadelphia, 112 gr. 6 students F: Individual
Educational Opportunity Program (Robert O. Bonnell, Jr.) Baltimore, MD Private	S: Mentors, scholarships G: Baltimore, 54 students in one h.s. F: Individual
ScholarshipBuilder 2,000 Merrill Lynch Foundation Private	S: Academic, psychological Support, mentors, cultural enrichment, scholarships G: 10 cities, one elementary school each 25 students per school, selected in gr. 1 F: Corporate
King Parks/Chavez Initiative/ Wade McCree Incentive Scholarship Program Michigan Department of Education Lansing, MI Public	S: Summer mentoring program on campus, scholarships to Michigan State University, cultural, recreational activities, pledge required G: Beginning gr. 8 F: State, university
The Carver Promise University of Richmond Richmond, VA Private	S: Mentoring by students at 4 participating colleges, scholarship to a participating college, tutoring cultural environment G: Richmond, VA, I elementary school, gr. 3 (all students) F: Universities and colleges
College Opportunity Program Xavier University Cincinnati, OH Private	S: Tutoring, mentoring, scholarships to Xavier U. G: Cincinnati, 1 elementary school for all students gr. 6 F: University
Syracuse Challenge Program Syracuse University Syracuse, NY Private	S: Tutoring, mentoring, scholarships to Syracuse G: Syracuse, all students in gr. 8 F: Corporation
College Bound Program Boston College Chestnut Hill, MA Private	S: Summer program on campus, academic, social, cultural enrichment, scholarships to Boston College G: Boston 2 classroom grade 8, 60 students F: College, foundation
Cleveland Scholarship in Escrow Cleveland, OH Initiative for Education	S: Tuition, only for grades: $40-A, $20-B, $10-C G: Cleveland all students beginning in gr. 7Cleveland F: Corporation, foundations

Greater Cleveland Roundtable Cleveland, OH Private	
Type of program: educational awareness	
Career Beginnings Center for Corporate and Education Initiatives Boston, MA Private	S: Mentoring, academic support, counseling, career and college planning workshops G: National network of 17 colleges in 10 states, gr. 11–12 up to 100 students per college F: Foundation, sponsoring colleges
New York Early Awareness of Student Financial Aid New York Higher Education Assistance Services Corp. Albany, NY Public	S: Early awareness, curriculum incorporated, into the Home and Career Skills, course required for all students G: Statewide, all students, gr. 6–8 F: State
College Readiness Program Columbus Public Schools Columbus, OH Public	S: Early awareness, campus visits, mentors, parent workshops G: Columbus, gr. 6–7, selected students F: Public schools, Capital University
I'm Going to College California Association of Student Financial Aid Administrators (CASFAA) Private	S: Classroom activities re college and career, campus visits, parent workshops G: San Jose, CA, gr. 4 at one school (60 students) F: CASFAA
College Knowledge Club Educational Opportunity Center of DC College Board Washington, DC Private	S: Early awareness, campus visits, workshops, parent meetings G: Washington, DC, 5 jr. high schools gr. 8–9 F: Corporation
CSS Early Awareness Initiative College Board New York, NY Private	S: Information: affordability of colleges and financial aid assistance to schools, colleges, and universities in planning and implementing early awareness activities G: National—interested gr. 6–9 schools F: Foundation
University Outreach Texas A&M University, University of Texas, University of Houston, University of North Texas Austin, TX Public	S: Summer programs, information, counseling, academic support, mentoring, campus visits, cultural enrichment, motivational activities G: 6 Texas cities, African American and Hispanic students, gr. 6–10 F: Universities
Paving the Way Forth Worth Independent School District Fort Worth, TX Public	S: Early awareness workshops for parents and students, campus visits, in school promotional campaign G: Fort Worth, TX, gr. 6–9 F: Public schools
Creating Higher Aspirations and Motivation Program Glassboro State College Camdon, NJ Public/private	S: Counseling, workshops, summer enrichment G: Camdon, NJ, gr. 10 12 at risk students F: State, public schools, foundations
Project for An Informed Choice Pennsylvania Association of Colleges and Universities (PACU) Harrisburg, PA Private	S: Early awareness, promotional campaign, assistance to college, universities and public schools with planning early awareness activities G: 5–6 Pennsylvania cities, gr. 6–9 F: Foundations, state, student loan agency, corporation, PACU

(Table continues)

Program access

Gulf County College Counseling Project Partners for Educational Excellence Middlebury, VT Private	S: Workshops re financial aid app. assistance, training teachers to do college counseling, parent meetings counseling, college resource centers, campus visits, scholarships allocated on students participation in college activities G: Gulf County, FL, 2 high schools, gr. 9–12 F: Foundation
Exploring Higher Education Lewis Fox Middle School Hartford, CT Public	S: Early awareness, campus visits, career fair, classroom projects G: Hartford, CT, 50 students, gr. 7 F: University of CT
Kids to College Association of Independent Colleges and Universities and Universities in Massachusetts (AICUM) Boston, MA Private	S: Classroom activities, Day on Campus, workshops, parent meeting G: Boston, Cambridge, Chelsea, MA, 23 classrooms paired with 23 colleges, gr. 6 F: Corporation, AICUM, colleges and universities, Higher Education Information Center
Centers for Excellence Florida Endowment Fund Tampa, FL Private	S: Information: academic support, motivational activities, academic competitions, involvement of African American churches G: 35 cities across state, African American gr. 9–12 F: Foundation, state
Black Achievers Program YMCA of Greater Lexington Lexington, KY Private	S: Mentoring, career awareness, academic support, F.A. information and application assistance G: Lexington, KY, African American students gr. 7–12 F: Foundation, state
Partners in Excellence Middlebury, VT Private	S: Replication of Gulf County, college counseling, project-pairing colleges with high schools smaller cities G: 9 cities in 9 states, 1 h.s. in each city F: Foundations
Minneapolis Minorities in New Directions Program(MIND) Minneapolis Public Schools Minneapolis, MN Public	S: Academic support, motivational activities, early awareness G: Minneapolis, African American students, gr. 7–9 F: City
Nevada Young Scientists Camps University of Nevada System Reno, NV Public	S: Campus bound workshops, summer camp, encouragement of pursue math and science careers G: Statewide, selected communities and minorities, gr. 6–8 F: University of Nevada
Paving the Way Ohio College Association Columbus, OH Private	S: Parent workshops, conducted by college reps, re paying for college G: Statewide, selected middle schools paired with colleges parents gr. 6–8 F: Ohio College Association
HORIZONS Mon Valley Education Consortium McKeesport, PA Private	S: Campus visits, early awareness, career and college fairs, motivational activities, financial aid planning G: gr. 7–12 F: Colleges and universities
Project Early Options Dallas Independent School District Dallas, TX Public	S: College planning workshops, enrollment in summer school, community culture G: Dallas public school students, gr. 10–12 F: Foundations
Preparing for a Choice San Antonio Public Schools c/o Trinity University	S: Information, workshops on financial aid, the college planning process G: San Antonio students and parents, gr. 8

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San Antonio, TX Private	F: Colleges and universities
Parents and Counselors Together National Association of College Admissions Counselors Alexandria, VA Private	S: A handbook of workshops for parents re college planning and financial aid G: National, any interested school or parents of students gr. 6–9 F: Foundation
CHOICES: Increasing Your Options US WEST Foundation Seattle, WA Private	S: Early awareness workshops and motivational activities, training for partners to conduct workshops, check room follow-up activities G: National, interested schools or students gr. 8–10 F: U.S. West Foundation
College Bound West Virginia Education Foundation Charleston, WV Private	S: Campus visits, early awareness activities, information, promote school/ business partnerships to create scholarships G: Statewide, targeted students in gr. 4–12 F: Foundation, corporation
SUNY's Best Academic Alliance State University of New York New York, NY Public	S: Counseling, mentoring, early awareness activities, teacher training G: New York City, 5 high schools gr. 9–12 F: SUNY
Mother-Daughter Program University of Texas at El Paso & Austin El Paso, TX Public	S: Career Exploration, academic support, counseling, Saturday morning workshops G: Austin, El Paso, selected Hispanic mothers & daughters F: Universities
Student College Interview Sessions Southeastern Regional Office National Scholarship Service and Fund for Negro Students Atlanta GA Private	S: Student college interview sessions, college fairs with minority recruiters, workshops on admission & financial aid application processes G: 20 cities across US, African-American students gr. 10–12 F: fees paid by participating colleges and universities
Type of program: academic preparation/pre-college counseling	
Rural Alaska Honors Institute University of Alaska/Fairbanks Fairbanks, AK Public	S: Summer campus enrichment program, academic support, counseling in Alaskan Native schools students, gr. 11–12, high achievers G: Statewide—95 rural h F: State, local communities
Minority Access to Teacher Education Benedict College Columbia, SC Private	S: Summer program to encourage student to pursue teaching, counseling, full scholarship to Benedict College G: Statewide, 21 high schools, African American students, gr. 11–12 F: Benedict College .
Mathematics Engineering & Science Achievement (MESA) University of California at Berkeley Berkeley, CA Private	S: Summer academic program on campus, Saturday workshop, tutoring, study group, advising G: Statewide, elementary, middle & h.s. African-American & Latino students interested in math and science, gr. 4-12, replicated in Colorado, Arizona, and Washington F: Foundations, corporations
University Preparatory Program California State University (CSU) at Los Angeles Los Angeles, CA Public	S: Tutoring, mentoring. summer and Saturday academic on campus counseling, motivational activities G: Los Angeles, one high school, Hispanic students gr. 9–12 F: CSU
College Access Program Fairfield University	S: Summer academic program on campus, workshops, college, financial aid application assistance

(Table continues)

Program access

Fairfield, CT Private	G: 8 high schools in Connecticut and I high school in Puerto Rico, 30 minority students, gr. 11–12 F: Foundations, state
High School Students Advancement Program Connecticut College New London, CT Private	S: Summer academic program on campus, counseling, mentoring, academic support, follow-up during school year G: High school in 7 cities in Connecticut, MA and NY. 100 minority students in gr. 9–12 F: Foundations, corporations
Multicultural Student Services Center George Washington University Washington, DC Private	S: College courses for h. s. students, summer enrichment program. mentoring, college tuition assistance for George Washington U. G: Washington, DC, selected minority students, gr. 7–12, academically talented F: GWU, foundations, DC Public Schools, federal
Chicago Area Health and Medical Careers Program Illinois Institute of Technology Chicago, IL Private	S: Academic summer program, mentoring, workshops G: Chicago, minority students, gr. 7–12, academically talented interested in health careers F: State, federal, foundations
Early Outreach University of Illinois at Chicago Chicago, IL Public	S: Career exploration, internships, tutoring, counseling, Saturday academic programs, scholarships G: Chicago, minorities, gr. 7–12, academic high achievers, interested in health careers F: Chicago Public Schools, corporations, U. Illinois
Future Academic Scholars' Track (FAST) Program Indiana University-Purdue University Fort Wayne, IN Public	S: Career exploration, academic summer and Saturday programs, skill building, tutoring, counseling, mentoring, parent workshops G: Fort Wayne area, 4 school systems, minority students, gr. 6–12, average achievers F: University, foundations
Johns Hopkins University/Dunbar High School Health Professions Program Johns Hopkins University Baltimore, MD Private	S: Academic summer program, career internships, tutoring, counseling, teacher training, parent workshops G: Baltimore, 1 high school, gr. 9–12, minorities with interest in health careers F: City, Johns Hopkins U., foundations
Pre-College Academic Program St. Peter's College Jersey City, NJ Public	S: Summer and Saturday academic programs, tutoring, counseling parent workshops G: Jersey City, minority student, gr. 9–12, middle or high achieving F: St. Peter's College, state, foundations
Science Technology Entry Program(STEP) State University of New York-New Paltz New Paltz, NY Public	S: Tutoring, counseling, Saturday academic program, career exploration, motivational activities G: Hudson River Valley, 8 jr. & sr. h.s. minority students gr. 9–12, talented in math/science F: State
Love of Learning Program Davidson College Davidson, NC Private	S: Summer on campus academic program, academic support, cultural enrichment, parent workshop G: Charlotte, N.C., African American students, gr. 9–12, average achievers F: Corporation
Project SCOPE(Summer Collegiate Orientation Program and Enrichment) College of Mt. St. Joseph Cincinnati, OH Private	S: Summer academic program on campus, counseling, cultural activities G: Cincinnati, African American students gr. 10–12, average achievers F: Foundation, corporation, Mt. St. Joseph College
Wright STEPP Wright State University	S: Summer academic program, pre-engineering, parent workshops, scholarships to Wright SU Engineering School

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Dayton, OH Public	G: Dayton, OH, 4 h. s. and 3 middle schools, minority students, gr. 7–10, interested in math/science F. Corporation
University of Rhode Island/ Providence School Department Partnership University of Rhode Island Kingston, RI Public	S: Guaranteed admission for 9th graders at participating h.s., summer academic program, school year club, special events during school year, tutoring, motivational workshops G: Providence, 5 elem. schools, 1 middle school, 1 h.s., gr. 5–12, minority, average achievers F: Public schools, foundations, federal
Project Challenge The Citadel Charleston, SC Public	S: Summer academic program, academic and psychological counseling, tutoring, parent involvement G: Charleston, SC, 1 h.s., minority students, gr. 9–12 F: The Citadel Foundation
College Partnership Program Fairfax County Public Schools Falls Church, VA Public	S: College orientation, academic counseling, career exploration, tutoring, mentoring, motivational activities G: Fairfax county, all high schools, minority students gr. 9–12, average achievers F: Public schools, foundations
Early Identification Program George Mason University Fairfax, VA Public	S: Academic counseling, summer academic program, Saturday workshops, application assistance, tutoring G: 3 northern Virginia counties, minority students, gr. 9–12, under achievers F: Corporations, public schools
Kenan Project Virginia Union University Richmond, VA Private	S: Summer academic program, campus tours, tutoring, motivational workshops, academic enrichment, G: Richmond, VA, 2 public h.s. gr. 9–12, under achievers; additional Kenan projects in NC, SC, LA, FL, MS F: Kenan Foundation
Early Scholars Outreach Program University of Washington at Seattle Seattle, WA Public	S: Campus overnights, parent workshops, tutoring, summer academic program G: Statewide 7 middle schools, selected minority students gr. 6–8 F: State,. foundation, federal, (FIPSE)
Help Yourself Program Beloit College Beloit, WI Private	S: Academic summer program, tutoring, counseling, early awareness activities, scholarship to Beloit G: Beloit, WI, 20 public schools, minority students gr. 6–8 F: State, foundation
Successful Talented Aspiring Resourceful Students(STARS) University of Wisconsin, Parkside Parkside, WI Public	S: Early awareness activities, summer academic program, academic support, leadership development G: Rautic and Kerosha, WI, minority students, K–12 F: Public schools, U. Wisconsin, foundations
Connecticut PreEngineering Program Science Museum of Connecticut West Hartford, CT Private	S: Tutoring, field trips, summer enrichment program, motivational activities G: Hartford, Bridgeport, New Haven CT, minority students gr. 9–12 interested in math/science concern F: Foundation, corporation
Health Careers Unlimited Health Careers Opportunity Program Lowell, MA Private	S: Summer academic program, academic support, career and personal counseling G: Lowell, MA, h.s. students gr. 9–12 F: Federal

(Table continues)

Program access

Boston Area Health Education and Careers Boston City Hospital Boston, MA Public	S: Summer academic program, career and personal counseling, school year follow up G: Boston, MA h.s. minority students, gr. 10–12, interest in health careers F: Federal, city
Center for Pre-College Programs New Jersey Institute of Technology (NJIT) Newark, NJ Private	S: Summer academic programs, Saturday programs, academic support G: Newark, NJ area, state wide F: Federal, state, corporation, NJIT
Urban Scholars Program U. Massachusetts at Boston Boston, MA Public	S: Summer academic program, academic support, counseling, tutoring G: Boston, 4 high schools, and 2 middle schools, high achievers, minority students, gr. 7–12 F: Foundations, corporations, federal, state
Access to Success & Bridge Programs University of Missouri St.. Louis St. Louis, MO Public	S: Saturday enrichment program, academic support, motivational activities, summer enrichment program G: St. Louis, gr. 6–8, interest in math/science F: Foundation, corporation
FOCUS Dickinson College Carlisle, PA Private	S: Summer enrichment program, academic support G: Statewide,. selected minority students, gr. 10–12 F: Foundation, corporation
Bridge Program Wabash College Crawfordsville, IN Private	S: Summer academic program, academic support G: Indianapolis, 1 high school, gr. 9–12 F: College, foundations
SuperScholars/EXCEL Xavier University New Orleans, LA Private	S: Summer academic program, academic support G: New Orleans, African-American students, gr. 11–12 F: College, foundations
Project CAUSA University of Puerto Rico Rio Piedras, PR Public	S: Saturday & summer academic programs, tutoring, career exploration, counseling G: Puerto Rico, student gr. 9–12, high achievers, interest in math/science careers F: Corporation, foundations
Achieving A College Education South Mountain Community College Phoenix, AZ Public	S: Academic support, summer academic program counseling, college courses in high school, skill building, parent workshops G: Phoenix, high school, gr. 11–12 F: Foundations, corporations, college public school
Scientific Knowledge for Indian Learning and Leadership(SKILL) South Dakota School of Mines and Technology Rapid City, SD Private	S: Summer enrichment, academic support, career exploration G: South Dakota, American Indian students, gr. 9–12 F: Federal
INROADS Pre-College Component INROADS, Inc. St. Louis, MO Private	S: Career exploration, tutoring, counseling, enrichment, summer internships G: National: 38 cities, African-American studies, gr. 11–16, interest in science and engineering careers F: Foundations, corporations
Balfour Academy Northeastern University Boston, MA Private	S: Summer academic program, tutoring, academic support G: Boston, minority students, gr. 7–12 F: University, foundations

Step to College San Francisco State University San Francisco, CA Public	S: College counseling, academic support, college courses taken in h.s., campus visits G: San Francisco, 10 high schools gr. 9–12 F: SFSU, foundations, corporations

Type of program: systemic change to facilitate college access

Community Compacts for Student Success American Association of Higher Education Washington, DC Private	S: Restructuring schools to increase number of minority students moving from secondary to higher education G: National 10 cities, gr. 7–14, minority students F: Foundations, school districts, colleges and universities
Alliance of States Supporting Indians in Science and Technology (ASSIST) Montana State University Bozeman, MT Public	S: Improve science and math education for American Indian students, teacher training, curriculum development, academic preparation and support G: Regional, 7 states, American Indian students gr. 7–12, interest in science/math careers F: Federal
Project STEP University of California, Irvine Irvine, CA Public	S: Education reform, teacher training, curriculum development, tutoring, parent workshops G: Santa Ana public schools, gr. K–12 F: Federal (FIPSE), foundation, colleges and universities
American Indian Science & Engineering Society Boulder, CO Private	S: Range of programs to encourage development of American Indian scientists and engineers including pre-college, college level G: National, American Indian gr. 7–16 F: Federal, foundation, corporation, individual, fees
Think Tank Maricopa County Community College District Tempe, AZ Public	S: Summer academic program, teacher inservice workshops, scholarships for Maricopa CC, Saturday enrichment, parent workshops G: Phoenix, AZ and surrounding cities, minority students gr. 7–12, teachers K–12 F: Foundations, community college
National Center for Urban Partnerships Bronx Community College Bronx, NY Private	S: Secondary postsecondary partnerships in 16 cities across the U.S. G. high and college students in the cities served F: Foundation
Project PRDAE Arizona State University Phoenix, AZ Public	S: MESA, workshops, curriculum development, counseling, teacher training, I Have a Dream Scholarship aid G: Statewide, minority students, grades 7–12 F: State, federal, corporation, foundation
The Partnership Program Butte Community College Oroville, CA Public	S: Career counseling, curriculum development, teacher training, summer academic program, 2+2 program G: Oroville, CA 11 h.s., gr. 10–12 F: College, school district
Biomedical Science Preparation Program University of Alabama Tuscaloosa, AL Public	S: Accelerated h.s. curriculum, tutoring, special activities at U. Alabama, teacher training G: Rural Alabama, 34 high schools, students gr. 912, interested in math/science, health careers F: State, local school systems, foundations
Equity 2000 The College Board New York, NY Private	S: Algebra for all 9th graders, teacher & counselor training; support services, enrichment activities, curriculum development G: 6 cities across U.S. F: Foundations, local school systems

Program access

Appendix B

COORDINATING/INTERMEDIARY ORGANIZATIONS

Established national organizations

American Association of Higher Education
One Dupont Circle
Washington, DC 20036

The College Board
45 Columbus Avenue
New York, NY 100236992

Education Development Center
55 Chapel Street
Newton, MA 02158

The Education Resources Institute (TERI)
330 Stuart Street, Suite 500
Boston, MA 02116

The Institute for Higher Education Policy
1320 19th Street, NW, Suite 400
Washington, DC 20036

National Association of College Admissions Counselors
1631 Alexandria
Alexandria, VA 223142818

National Association of Student
Financial Aid Administrators
1920 L Street, NW, Suite 200
Washington, DC 20036

National Council of Educational Opportunity
Associations (NCEOA)
1025 Vermont Avenue, NW
Washington, DC 20005

National networks

College Access Network
College Board Foundation
204 E. Lombard Street, 4th Floor
Baltimore, NM 21202

ConnectED
c/o Higher Education Information Center
330 Stuart Street, Suite 500
Boston, MA 02116

National Association of Pre-college Directors
(program to prepare student for college study in science and engineering)
Current address unknown

Bibliography

California Postsecondary Education Commission. 1989. *Evaluation of the California Student Opportunity and Access Program (CaI-SOAP).* Sacramento, CA: California Postsecondary Education Commission.

California Postsecondary Education Commission. 1987. *First Progress Report on the Effectiveness of Intersegmental Student Preparation Programs.* Sacramento, CA: California Postsecondary Education Commission.

Cave, George and Quint, Janet. 1990. *Career Beginnings Impact Evaluation: Findings from a Program for Disadvantaged High School Students.* New York, NY: Manpower Demonstration Research Corporation.

The Center for Human Resources. 1990. *Future Options Education.* Waltham, MA: Brandeis University.

College Readiness Program. 1988. *Evaluation Report 1986–87.* Los Angeles, CA: California State University.

Commission on Pre-college Guidance and Counseling. 1986. *Keeping the Options Open: Final Report.* New York: College Entrance Examination Board.

Dalton, H.F., Erdmann, D.G. 1991. *The Chance to Dream: A Community Success Story* (Gulf County College Counseling Project). Mt. Kisco, NY: Plan for Social Excellence.

Dalton, H.F. 1993. *Helping People Discover Education Opportunities.* Boston, MA: The Higher Education Information Center.

Davis, Jerry Sheehan. 1988. *"What Junior High School Students Are Willing To Do for Postsecondary Activities."* A Report to the Staff of the Pennsylvania Association. Harrisburg, PA: Pennsylvania Higher Education Assistance Agency.

Davis, Jerry Sheehan. 1989. *"The Role of Parents and Their Preferences in Junior High School Students' Postsecondary Plans."* A Special Report to the Staff of the Pennsylvania Association of Colleges and Universities Project for An Informed Choice. Harrisburg, PA: Pennsylvania Higher Education Assistance Agency.

Florida Institute of Education. 1990. *Florida's Pre-collegiate Program, 1983–89: A Retrospective Evaluation.* Jacksonville, FL: University of North Florida.

Franklin, P.L. 1985. *Helping Disadvantaged Youth and Adults Enter College: All Assessment of Two Federal Programs.* Washington, DC: College Entrance Examination Board.

Glaser, K.E. 1987. "Educational Opportunity Programs: A Cost Benefit Analysis. *NCEOA Journal,* Fall 1987:4–10.

Hart, P.J. and Jacobi, M. 1992. *From Gatekeeper to Advocate.* New York, NY: College Entrance Examination Board.

Higgens, C., Furano, K., Toso, C., Branch, A. 1991. *I Have a Dream in Washington, DC:* Initial Report. Philadelphia: Public/Private Ventures.

Lee, V.E., and R.B. Ekstrom. 1987. "Student Access to Guidance Counseling in High School. *American Educational Research Journal* 24:287–310.

Mayer, D. 1991. *Do Early Educational Awareness Programs Increase the Chances of Eighth Graders Reaching Higher Education?* Boston: Higher Education Information Center of the Education Resources Institute.

McMullan, Bernard J., Jennifer L., Wolf, Wendy C. 1991. *College-School Partnerships to Improve Minority Access to College: Initiatives Addressing Teacher Renewal, Curricular Revision and School Reform.* Bala Cynwyd, PA: Center for Assessment and Policy Development.

McMullan, B., Smith Garrett, C., Sidler, J., Watts, M., Wolf, W., 1992. *A Shared Responsibility: College/School Partnerships Serving Minority Youth.* Bala Cynwyd, PA: Center for Assessment and Policy Development.

National Association of Student Financial Aid Administrators (NASFAA) and American Council on Education (ACE). 1989. *Certainty of Opportunity: A Report on the NASFAA CE Symposium on Early Awareness of Postsecondary Education.* Washington, D.C.: NASFAA.

National College Counseling Project. 1986. *Frontiers of Possibility.* Alexandria, VA: National Association of College Admissions Counselors (NACAC).

National Council of Educational Opportunity Associations (NCEOA). 1990. *Evaluations of Special Programs for Students from Disadvantaged Backgrounds Have Shown the Projects to be Effective.* Washington, DC: NCEOA.

Nettles, M. T. and Getz Feld, A.K. 1992. *A Literature Review of UpwardBound and Talent Search Evaluation Research.* Washington, DC: National Council of Education Opportunity Association.

Pelavin, S.H. and Kane, M. 1992. *Changing the Odds: Factors Increasing Access to College.* New York, NY: The College Board.

Pennsylvania Association of Colleges and Universities (PACU). 1990. *A Guide for Creating Early Awareness Programs.* Harrisburg, PA: PACU.

Quality Education for Minorities. 1990. *Education That Works: An Action Plan for the Education of Minorities.* Cambridge, MA: Massachusetts Institute of Technology.

United States General Accounting Office. 1990. Higher Education: Gaps in Parents' mid Students' Knowledge of School Costs and Federal Aid. Washington, DC.: GAO.

United States General Accounting Office. 1990. *Promising Practices': Private Programs Guaranteeing Student Aid for Higher Education*. Washington, DC: GAO.

Program access

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Program access

Missed Opportunities A New Look at Disadvantaged College Aspirants

Katheryn Volle and Alisa Federico
The Institute for Higher Education Policy

Executive summary

Expanding educational opportunity has become increasingly important as the benefits that accrue from a college degree have grown, In achieving this goal, national policy has been directed toward those who have limited financial means, and members of racial or ethnic groups who have been historically under represented in postsecondary education. This emphasis on low income and minority individuals continues to be one of the most important concerns of public investment in higher education, even as progress has been frustrated by the underfunding of student financial aid programs, rising tuition and other expenses, and poor elementary and secondary education. Despite the fact that a significant gap in educational attainment for low-income and minority students remains, a range of compounding factors makes the prospects for postsecondary access and success even more daunting. Recent data and information offer an improved understanding of what these compounding factors are, and how they impact educational opportunity.

Missed Opportunities: A New Look at Disadvantaged College Aspirants paints a more comprehensive portrait of the educationally disadvantaged than has previously emerged. Prepared by The Institute for Higher Education Policy and The Education Resources Institute (TERI), the report spotlights three important factors that hinder access to and success in postsecondary education. These factors-welfare participation, first-generation status, and parental divorce-exacerbate the obstacles that continue to confront low-income, minority, and other disadvantaged students. Information and analysis contained in this report are drawn from several sources, including the Census Bureau and the U.S. Department of Education. Additional data have been obtained from higher education institutions and other research organizations.

Major findings

In 1995-96, more than 47% of undergraduates in the U.S. had family incomes of less than $20,000. Almost 30% of all undergraduates were minorities—12% were Black, 10% were Hispanic, 6% were Asian/Pacific Islander, and 1% were American Indian/Alaskan Native. Nevertheless, significant gaps in educational attainment and achievement remain. Low-income and minority groups have lower high school graduation rates and are less likely to take the necessary steps to achieve a bachelor's degree. Furthermore, those minority and low-income students who do reach college have lower rates of degree attainment.

Recent data and information suggest that compounding factors-especially welfare participation, first-generation status, and parental divorce-create further barriers to educational opportunity. These factors necessitate a reexamination of the educationally disadvantaged in order to close the gap. These factors are highlighted below.

Welfare participation

The 1996 federal welfare reforms substantially transformed America's welfare programs. Aid to Families with Dependent Children (AFDC)-the primary component of welfare-was replaced with block grants to states under a new program entitled Temporary Assistance for Needy Families (TANF). The new law makes several important changes, including ending assistance after five cumulative years of receiving benefits, mandating a steady increase in welfare recipients' participation in work and work-related activities, and limiting vocational education to 12 months. In addition, states must determine whether vocational education includes longer-term programs in the pursuit of a certificate or degree.

Data on welfare recipients indicate:

- Welfare recipients are predominantly female, single, and minority. 90% are single mothers. Of these, 37% are White, 36% are Black, and 20% are Hispanic.

Program access

- Welfare recipients face many barriers to access in addition to the new legal limitations. Almost half—42%—do not have a high school diploma. Furthermore, single-parent status carries with it the additional burden of family responsibilities.
- State and institutional data indicate that the number of welfare recipients participating in postsecondary education has fallen since the 1996 reforms. For example, welfare student enrollment has fallen from 27,000 to 14,500 at the City University of New York (CUNY).
- Welfare recipients who do reach college are independent, live off-campus, and attend two-year institutions. 86% are independent and only 3% live on-campus. Most attend either public two-year institutions, 59%, or private two-year institutions such as private career schools, 20%.
- Independent welfare students have high financial need-of these students, 96% have a zero Expected Family Contribution (EFC), compared to 21% of non-welfare recipients. In addition, federal student aid is considered income when determining eligibility for welfare, and may therefore decrease benefits.

First-generation status

As states such as California and Texas have recently eliminated race-based preferences in college admissions decisions, alternative strategies for enhancing campus diversity—including first-generation status-have been discussed at the campus level. First generation students—those whose parents' highest level of education is a high school diploma or less—face many barriers to college access, including limited knowledge of postsecondary admissions and financial aid processes, lack of support from family and friends, and poor academic preparation for college.

Data on first-generation students indicate:

- First-generation students are less likely to complete the necessary steps to enroll in a four-year institution. Of first-generation students, only 36% aspire to a bachelor's degree or higher, 45% take the SAT or ACT, and only 26% apply to a four-year institution. By comparison, 78% of students for whom at least one parent has a bachelor's degree aspire to a bachelor's degree or higher, 82% take the SAT or ACL and 71% apply to a four-year institution.
- First-generation students are more likely to delay enrollment in postsecondary education, which inhibits degree completion. Only 29% of first-generation students enroll in any postsecondary institution immediately after high school graduation, compared to 73% of students whose parents have a bachelor's degree.
- 45% of all undergraduates are first-generation students. They are more likely to enroll on a part-time basis—53%, versus 38% of students whose parents have a bachelor's degree. First generation students are also concentrated in two-year institutions. 53% percent attend public two-year institutions and 8% attend private two-year institutions.
- First-generation students also face barriers in attaining college degrees. Only 44% attain a degree within five years, compared to 56% of students whose parents have a bachelor's degree.

Parental divorce

Divorce in the U.S. has had profound effects on the college-going experiences of children. Of particular concern is the ability of divorced parents to finance their children's postsecondary education, which often depends upon court settlements, state laws and obligations, and the decreased socioeconomic resources of custodial parents, especially those who do not remarry. The overall proportion of children under 18 living in single, divorced parent households has been rising steadily, from less than 4% in 1970 to approximately 10% in 1995. These figures do not reflect the number of children whose custodial parent has remarried.

Data on children of divorce indicate:

- Children with divorced parents more often fail to take the necessary steps to enroll in a four-year institution. Less than half of children with divorced parents aspire to a bachelor's degree or higher, 55% take college entrance exams, and only 40% apply to a four-year institution. In comparison, 59% of students with married parents aspire to a bachelor's degree or higher, 67% take college entrance exams, and 51% apply to a four-year institution. The disparities between students with divorced and married parents persist across different income levels.
- Dependent children of divorce who do enroll in college have different attendance patterns. They attend on a part-time basis more frequently than do students whose parents are married-34%, versus 26%. They also are less likely to attend private four-year institutions—15%, compared to 20% of undergraduates with

married parents—and are more likely to attend public two-year institutions, 41% versus 35%.

- The average family income of dependent students with divorced parents is lower than that of students with married parents, $27,170 versus $52,294. Consequently, they are more likely to have low EFCs. 46% of students with divorced parents have EFCs of $3,000 or less, while only 27% of students with married parents do.
- Dependent undergraduates with divorced parents face difficulties with the financial aid process. For example, some states and institutions require non-custodial parents to pay a share of college expenses, while others do not.
- Children of divorce are also at risk of failing to complete a postsecondary degree. Only 23% of students with divorced parents receive a bachelor's degree within five years, compared to 35% of those whose parents are married.

Examining the intersection of these different factors of educational disadvantage reveals that considerable overlap exists. For example, many welfare recipients are first-generation students who have divorced parents. Minorities are often affected by more than one of these factors, compounding the barriers they face to participation in higher education. Equally as important, a significant percentage of all of these individuals have comparatively low incomes.

Recommendations

This new understanding of disadvantaged individuals suggests that current policies and programs may fall short of meeting their specific needs. To meet the needs associated with the compounding factors identified in this report, several steps should be taken. These steps must acknowledge that financial assistance is necessary for all disadvantaged students to enroll and succeed in postsecondary education, but not sufficient to guarantee educational o opportunity. Recommendations to address these non-monetary barriers include:

- Increase investment in early intervention and pre-college programs;
- Renew efforts to increase the availability of college awareness information;
- Increase the availability of support services for enrolled college students;
- Promote greater consistency and clarity in state policies concerning parental responsibilities to pay for college;
- Lessen the restrictions on participation in postsecondary education for welfare recipients; and
- Simplify the forms and processes for applying for college admissions and financial aid.

Introduction

Expanding educational opportunity has be come increasingly important as the benefits that accrue from a college degree have grown. In achieving this goal, national policy has been directed toward those who have limited financial means, and members of racial or ethnic groups who have been historically under represented in postsecondary education. These disadvantaged groups comprise a substantial proportion of both the general population and post-secondary students. For example, in 1995-96, more than 47% of undergraduates in the U.S. had family incomes of less than $20,000. In addition, almost 30% of all undergraduates were minorities—12% were Black, 10% were Hispanic, 6% were Asian/Pacific Islander, and 1% were American Indian/Alaskan Native.

This emphasis on low-income and minority individuals continues to be one of the most important concerns of public investment in higher education, even as progress has been frustrated by the underfunding of student financial aid programs, rising tuition and other expenses, and poor elementary and secondary education. Despite the fact that a significant gap in educational attainment for low income and minority students remains, a range of compounding factors makes the prospects for postsecondary access and success even more daunting. Recent data and information offer an improved understanding of what these compounding factors are, and how they impact educational opportunity.

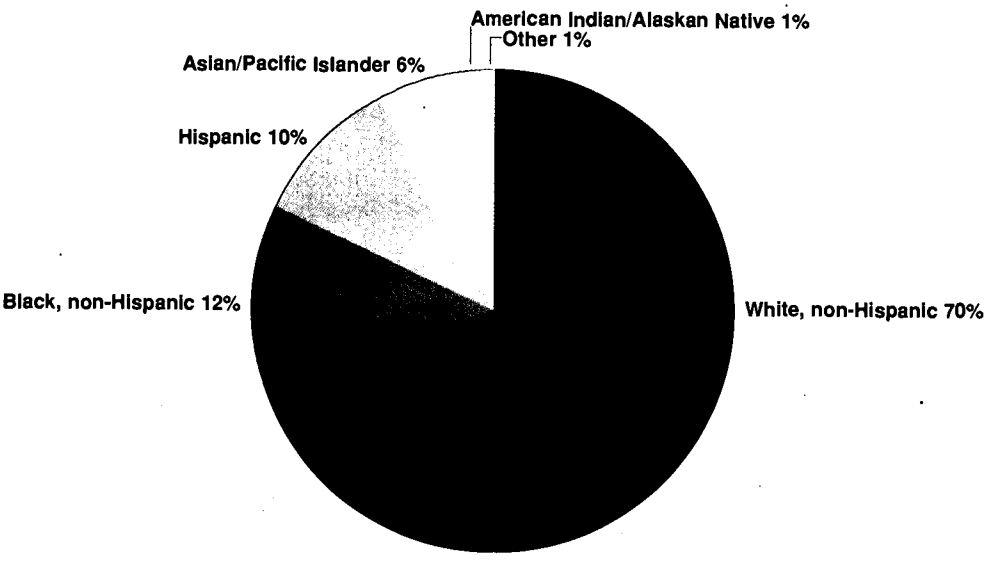
Missed Opportunities: A New Look at Disadvantaged College Aspirants paints a more comprehensive portrait of the educationally disadvantaged than has previously emerged. Prepared by The institute for Higher Education Policy and The Education Resources Institute (TERI), the report spotlights three important factors that hinder access to and success in postsecondary education. These factors—welfare participation, first-generation status, and parental divorce—exacerbate the obstacles that continue to confront low-income, minority, and other disadvantaged students.

The factors examined in this report are not "new" in any historical sense, but the barriers they present to educational opportunity have recently become more serious or distinct. They include:

- ***Welfare participation:*** In addition to financial, family, and other burdens, the ability of welfare recipients to pursue postsecondary education has been jeopardized by changes in eligibility requirements as a result of recent reforms. In particular, this affects adult recipients and independent students who cannot rely on parents or other sources of support.
- ***First-generation status:*** Students whose parents did not attend college lack knowledge of postsecondary education in general and of the admissions and financial aid processes in particular. Fewer first-generation students tend to pursue college preparatory courses or take college entrance exams. They also complete degrees at lower rates.
- ***Parental divorce:*** The myriad effects of high divorce rates have influenced the educational progress of a substantial proportion of Americans, especially dependents who still rely on parental support. An important characteristic of this group is the diminished level of resources—both economic and social—of custodial parents.

Figure 1

Race/ethnicity of undergraduates, 1995–96



Source: NPSAS: 96, Data Analysis System, National Center for Education Statistics, U.S. Department of Education.

These factors are not mutually exclusive. For example, welfare recipients fall completely within the sphere of low-income and a high proportion are also minorities. First-generation students are a large cohort, but have significant concentrations in low income and minority groups. Parental divorce affects Americans of all socioeconomic levels and racial backgrounds, but is often associated with a decline in family income.

Why must the educationally disadvantaged be reexamined? The need-based federal financial aid structure has attempted to increase the participation of low-income and minority groups by reducing the financial obstacles to postsecondary education. Those disadvantaged students who do reach college often receive financial aid, which is crucial to their access and persistence. However, the factors that compound their barriers to access and educational success-such as welfare participation, first-generation status, and parental divorce-are frequently associated with lower postsecondary aspirations, poor academic preparation, and a lack of educational experience. These factors also highlight the variation within the educationally disadvantaged population.

This new understanding of disadvantaged individuals suggests that current policies and programs may fall short of meeting their specific needs. Addressing the diversity of barriers to access, while at the same time encouraging higher levels of educational attainment in the future, will be essential to America's continuing prosperity. This report

therefore suggests specific ways in which public policies can be modified to more adequately address the needs of all disadvantaged college aspirants.

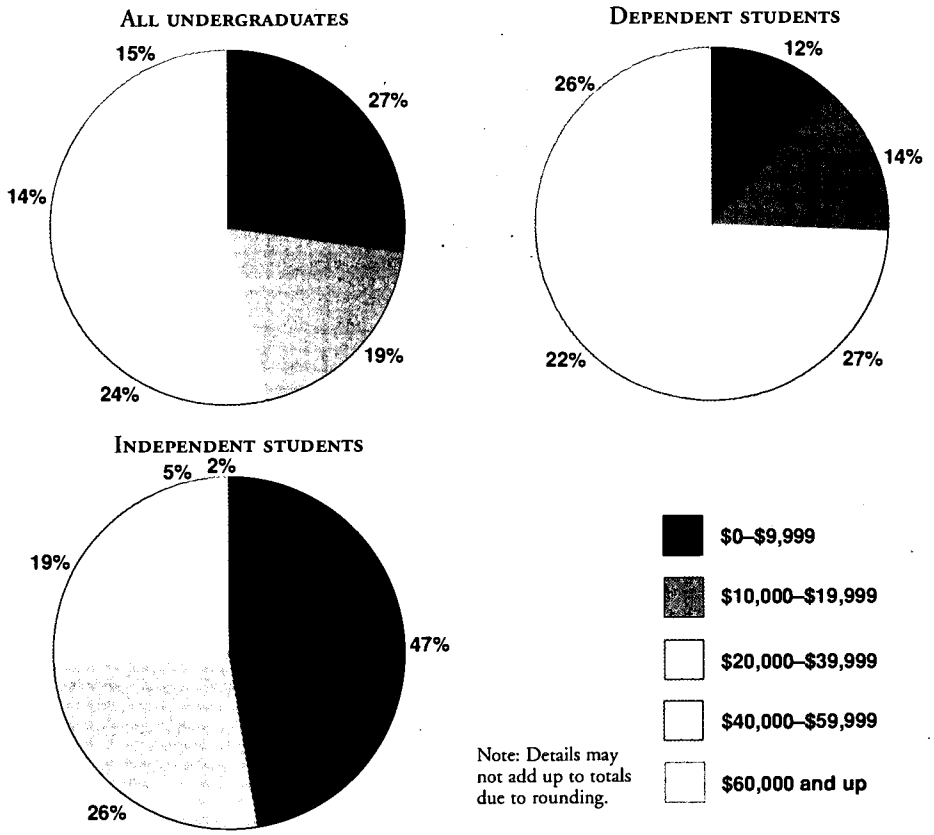
Information and analyses contained in this report are drawn from several sources, including the Census Bureau and the U.S. Department of Education. Additional data have been obtained from higher education institutions and other research organizations, including the Urban Institute, the American Association of Community Colleges (AACC), and the National Association of State Universities and Land-Grant Colleges (NASULGC).

This report analyzes several comprehensive data sets collected by the Department of Education, which contain important information on the educational status and attainment of students. The National Education Longitudinal Study (NELS:88/94) gathered trend data on student aspirations, test scores, employment, family background, and enrollment in postsecondary institutions, beginning with an eighth grade cohort in 19 88 and continuing with three follow-ups in 1990, 1992, and 1994. The National Postsecondary Student Aid Study (NPSAS:90 and NPSAS:96) provided data on all types of postsecondary students, including financial aid, student characteristics, tuition and other costs, and attendance patterns for the academic year. Beginning Postsecondary Students (BPS: 90/94) and follow-ups in 1992 and 1994 tracked NPSAS:90 students during their postsecondary education and their transition into graduate school or the labor force. Baccalaureate and Beyond (B&B:93/94) and the first follow-up in 1994 collected information on students who completed a bachelor's degree in 1992-93, including their job search activities and their education and employment experiences after graduation.

THE BROADER CONTEXT

This reports analysis of the factors that compound the barriers to educational opportunity must be seen in the broader context of educational disadvantage. Low-income and minority status continue to be the factors most significantly related to the educational aspirations and progress of individuals. For example, only 41% of Hispanics,

Figure 2
Family income of undergraduates, 1995–96



Source: NPSAS:96, Data Analysis System, National Center for Education Statistics, U.S. Department of Education.

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40% of Blacks, and 29% of American Indian/Alaskan Native students were enrolled in any postsecondary institution immediately after high school graduation, compared to 56% of White students. Even more dramatically, only 28% of children in the lowest income category were enrolled in any postsecondary institution immediately following high school graduation, compared to 83% of children from the highest income category.[1]

Furthermore, those minority and low-income students who do reach college have lower rates of degree attainment. Although 27% of White first-time freshmen in 1990 earned a bachelor's degree within five years, only 17% of Black students, 18% of Hispanic students, and 16% of American Indian/Alaskan Native students did so.[2] Large disparities in degree attainment exist across different levels of family income as well. For example, by 1994, 21% of unmarried 18 to 24 year olds from the bottom family income quartile who enrolled in college were estimated to have completed a bachelor's degree by age 24, compared to 96% of students in the top quartile.[3]

The fact that these groups continue to have lower rates of educational attainment is especially significant because of the strengthening relationship between education and socioeconomic status. Individual income is closely linked with the level of education achieved. In 1995, high school graduates earned $21,431, while bachelor's degree recipients made 73% more—$36,980.[4] Obtaining a postsecondary degree is therefore an important factor in lifting individuals out of poverty into better paying jobs and higher living standards. In fact, in 1994 high school dropouts ages 25 to 34 were more than twice as likely to have ever received AFDC or other public assistance than individuals who had earned a high school diploma or GED14% compared to 6%. Even more telling is that less than 1% of bachelor's degree recipients have ever received public assistance.[5]

Welfare participation

The nation's welfare policy has been a topic of public debate in the past few years and subsequently has undergone significant change, directly affecting the lives of those who receive welfare benefits. Eligibility requirements have changed dramatically, decreasing recipients' ability to pursue postsecondary education—an effective means of moving individuals and families off welfare permanently. These changes include requiring welfare recipients to participate in work or work-related activities—without explicitly stating what types of postsecondary education are allowable, if at all—and limiting the percentage of welfare recipients who are engaged in educational activities. In addition to these new legal barriers to access, welfare recipients face other obstacles such as low economic resources, lack of day-care facilities, and other family responsibilities.

Policy changes

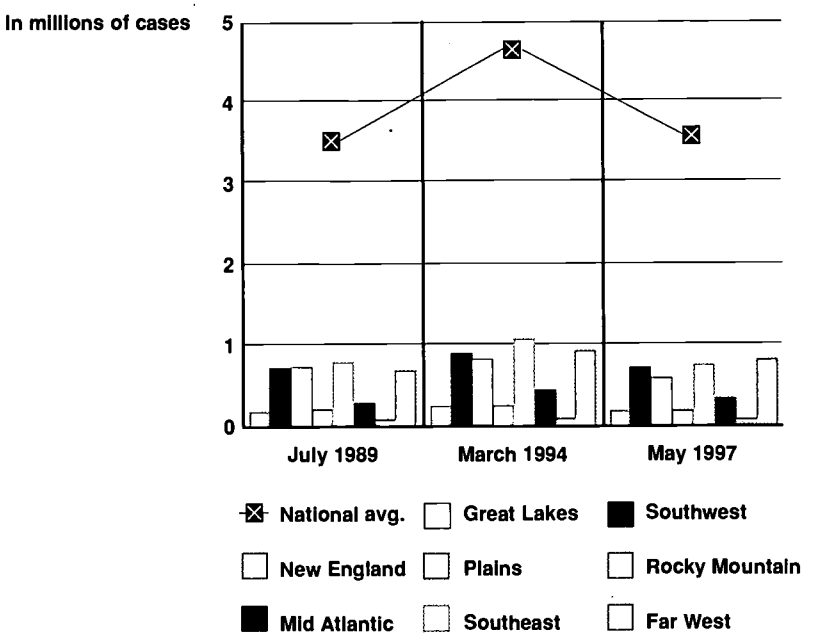
The Personal Responsibility and Work Opportunity Reconciliation Act of 1996—more commonly referred to as the welfare reform of 1996—has substantially transformed America's welfare programs. Aid to Families with Dependent Children (AFDC) the primary component of welfare—was replaced under the law with block grants to states under a new program entitled Temporary Assistance for Needy Families (TANF).

AFDC provided monetary assistance to low-income families through a federal matching formula based on a state's per capita income. As part of the 1988 Family Support Act, the job Opportunities and Basic Skills (JOBS) program was created in order to help welfare recipients become self-sufficient. Each state's JOBS program provided participants with skills training, job readiness activities, development and placement programs, and educational activities such as basic and remedial education and language courses. Furthermore, each state was required to offer at least two other components, including job search programs, on-the-job training, work supplementation programs, or work experience programs. Under the JOBS program, welfare recipients could enroll in postsecondary education with few restrictions.

The new welfare program makes the following changes:

- ends assistance after five cumulative years of receiving benefits;
- eliminates the JOBS program and mandates a steady increase in welfare recipients' participation in work and work-related activities;
- requires recipients to work after receiving benefits for two years; and
- although vocational education is considered a work-related activity, limits participation to 12 months.

Figure 3
National and regional trends in welfare caseloads



Source: "The Relationship of the Decline in Welfare Cases to the New Law: How Will We Know If It Is Working?" The Rockefeller Institute, 1997.

In order for states to qualify for full TANF grants, 25% of all welfare recipients must be working or in work-related activities in Fiscal Year (FY) 1997. Participation rates must increase by 5% each year until a 50% rate is achieved by FY 2002.

As part of these sweeping changes in national welfare policy, vocational education has not been explicitly defined by the federal government. The new system leaves it to the discretion of the individual states to determine whether vocational education includes longer-term programs in the pursuit of a certificate or degree. Three states—Vermont, New Hampshire, and South Dakota—have said that they will continue to permit welfare recipients to participate in associate's and bachelor's degree programs as part of the work requirements .[6] However, the majority of states do not include the pursuit of a degree in their definition of vocational education. States such as Wisconsin—which is generally credited with providing the model for national welfare reform—currently deny benefits to anyone who enrolls in postsecondary education. Essentially, this policy requires recipients to choose between receiving welfare benefits and attending college.

Regardless of whether or not a state defines postsecondary education as a work-related activity, the number of welfare recipients who can participate is effectively limited. With the passage of the Balanced Budget Act of 1997, only 30% of the work participation rate may be comprised of participants in educational activities. This new provision acts as a further disincentive to states to allow welfare recipients to participate in postsecondary education. However, teen parents without a high school diploma are excluded from the 30% cap until FY 2000.[7]

General trends

In 1993, AFDC recipients comprised approximately 5% of the resident U.S. population, while recipients of all public assistance programs-including Social Security, Medicaid, Food Stamps, Supplemental Security Income, legal services, job training, Medicare, and unemployment compensation-represented 8 %.[8] Monthly welfare caseloads reached their peak in March 1994 with 4,639,628 recipients, an increase of 32% from July of 1989. However, welfare cases have since decreased by 23% to 3,557,425 in May 1997.[9] It is unclear how much the decline in cases is due to legislative changes or an upswing in the economy

According to a 1996 Urban Institute report on the general profile of the welfare population, approximately 19% of all AFDC cases involved only children, such as orphans and children with disabilities. In general, adult welfare

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recipients are disproportionately female, single, and minority. Of adults on welfare, 90% were single mothers—36% have been divorced, widowed, or separated and 54% have never been married—and the remaining 10% were married. The largest percentage—35%-of mothers on welfare were ages 30 to 39, 30% were age 24 or younger, and 22% were 25 to 29 years old. Thirty-seven percent of welfare mothers were White, 36% were Black, 20% were Hispanic, and more than 6% were other.[10]

Barriers to access

There are many factors that have a negative impact on welfare recipients' ability to attend college beyond the recently enacted changes in welfare laws. Many recipients:

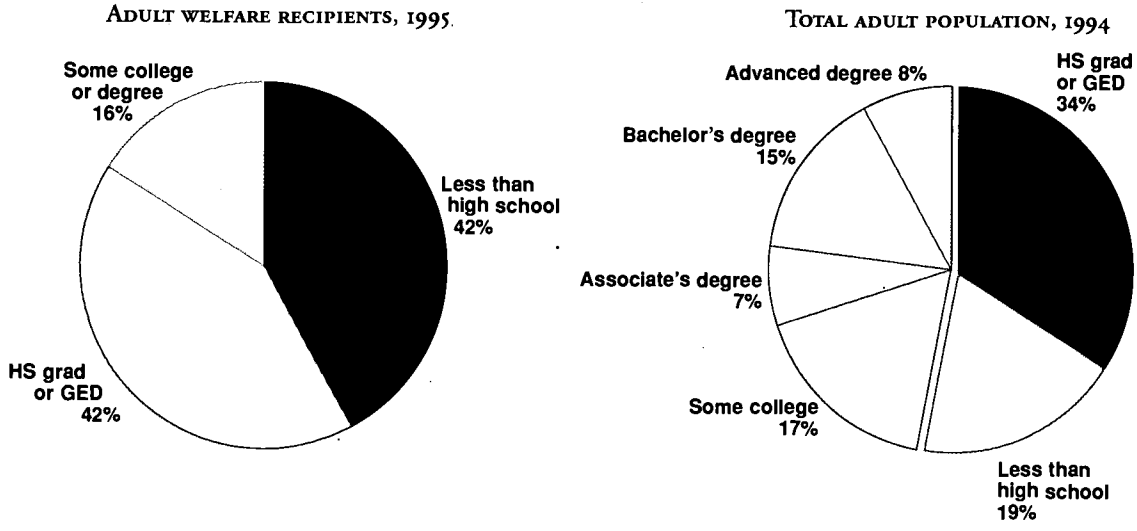
- lack the academic preparation needed to succeed;
- do not fully understand the economic and social benefits of postsecondary education;
- lack support from their friends and family;
- have family responsibilities to maintain; and
- lack the financial resources necessary to attend college.

Forty-two percent of all adult welfare recipients had less than a high school education, compared to only 19% of the U.S. population age 25 or older. Another 42% of welfare recipients had a high school diploma or equivalent—while 34% of the general population had a high school diploma or equivalent. Only 16% of welfare recipients had some level of postsecondary education, compared to 47% of the population. The absence of a high school diploma or equivalent means that almost half of all welfare recipients require basic education before they can even pursue a postsecondary education.[11]

A substantial proportion of welfare recipients are single parents, primarily single mothers. Single-parent status carries with it the additional burdens of family responsibilities, including providing emotional support to their children, discipline, and household maintenance. Single parents have less economic resources and have less time to devote to their children.

Figure 4

Education levels of welfare recipients versus the general population

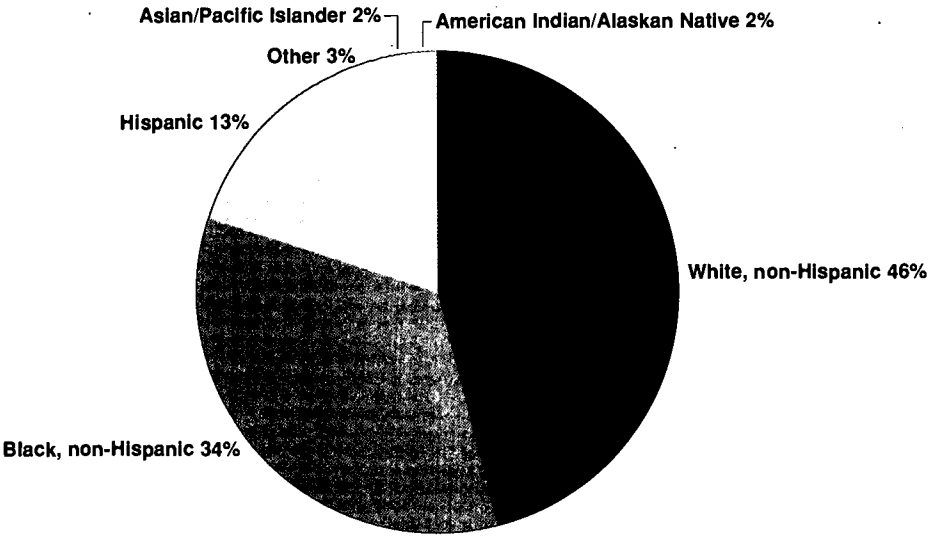


Source: "A General Profile of the Welfare Population," The Urban Institute, 1996. and *Statistical Abstract of the United States: 1995*, U.S. Bureau of the Census, 1995.

In many states, federal student aid is considered income when determining eligibility for welfare benefits, and consequently decreases, if not eliminates, the amount of welfare benefits for which families qualify. This occurs despite the fact that such aid may not be used for general living expenses. According to the federal student aid regulations, in order to receive federal financial aid a student must certify "that he or she will use any funds received...solely for educational expenses connected with attendance at the institution at which the student is enrolled." Some states, such as California, Iowa, Kansas, and Nebraska, do not count student aid as income. Prior

to the 1996 welfare reform, these states had already received waivers from the federal government allowing them to alter their programs.[12]

Figure 5
Race/ethnicity of student welfare recipients, 1995–96



Source: NPSAS:96, Data Analysis System, National Center for Education Statistics, U.S. Department of Education.

The college-going rate of welfare recipients

National data regarding the effects of welfare reform on participation in postsecondary education are not available due to the reform's recent enactment. However, state and institutional data indicate that the number of welfare recipients participating in postsecondary education has fallen. Welfare student enrollment has fallen by 46% from 27,000 to 14,500 at the City University of New York, and has decreased by 85%, from 1,600 to 244, at the Milwaukee Area Technical College. Meanwhile, over the last decade, the number of welfare recipients enrolled in two-year degree programs in Oregon has decreased from 50% to 5%. [13]

According to a recent survey by the American Association of Community Colleges (AACC), 48% of community colleges already have welfare-to-work programs—institutional programs aimed at welfare recipients that teach them specific skills and help place them in jobs. For example, Medgar Evers College of the City University of New York currently offers a certificate in practical nursing, an 18-month program specifically designed for welfare mothers.[14] Fifty-four percent of institutions that do not have such programs are planning to create them in the future. [15]

Student population trends

Little information exists on welfare recipients who attended a postsecondary institution prior to the reform. However, data from the National Postsecondary Student Aid Study (NPSAS:96) indicate whether or not students or their families received AFDC in 1994 or 1995. These data show that less than 4% of undergraduate students in 1995–96 received welfare benefits.

Both children and adult welfare recipients have the same problems in gaining access to postsecondary education in terms of financing their education. Welfare recipients, by definition, have low-income and consequently lack the economic resources to pay for college. However, the 1996 welfare reform changes affect adult, or independent, welfare recipients more directly, given the restrictions on their participation. Because the overwhelming majority of both welfare recipients and welfare students were independent adults—86% of recipients enrolled were independent—this analysis focuses on them.

Eighty-nine percent of welfare students were female. By comparison, 59% of non-recipient students were female. Welfare students tended to live off-campus—either in their own residence, 76%, or with parents and relatives, 21%—and only 3% lived on campus. Welfare recipients typically attended public two-year institutions, 59%,

compared to 56% of non-recipients. However, attendance patterns differed in the private two-year institutions, including private career schools-20% of welfare students attended these schools, versus only 7% of non-recipient students. Welfare students were less likely to enroll in four-year institutions. Fourteen percent of welfare students attended public four-year institutions, while 25% of non-recipient students enrolled in public four-year institutions. Seven percent of welfare students attended private four-year institutions, compared to 12% of students who did not receive benefits.

The majority of students on welfare attended on a full-time basis for at least part of the year, 63%, compared to 33% of independent students who did not receive welfare benefits. Forty-six percent of students who received welfare were White, 34% were Black, 13% were Hispanic, 2% were Asian/Pacific Islander, 2% were American Indian/ Alaskan Native, and 3% were other. [16]

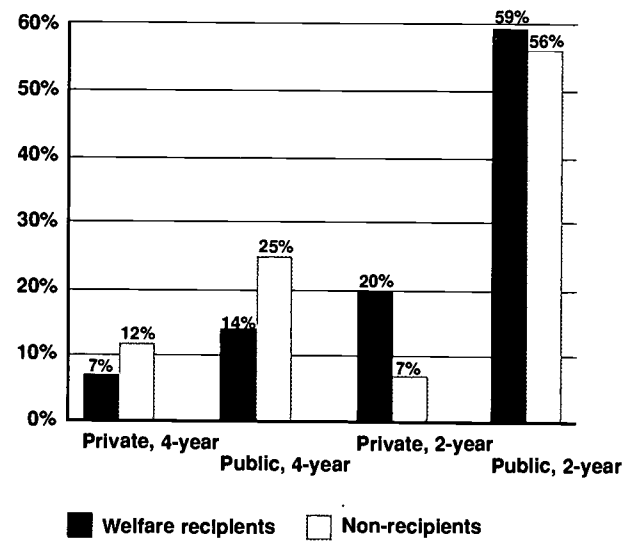
FINANCIAL AID COMPARISONS

Independent welfare students were more likely than non-recipients to have received student aid: 94% versus 54% received any aid. Eighty-five percent received federal Title IV aid, 29% got state aid, and 22% were awarded institutional aid. Welfare students were more likely to receive both grants, 89%, and loans, 38%, than students who did not receive welfare benefits, 44% and 22%, respectively. Furthermore, welfare students also were awarded larger average grant awards, $2,467, compared to $1,768 for non-recipients. However, students on welfare received smaller average aid amounts in the form of loans, $3,797, compared to students who did not receive welfare benefits, $4,664. [17]

Overwhelmingly, students who received welfare were more likely to have zero Expected Family Contributions (EFCs) than students who did not receive welfare. EFC is the amount of money a student's family is expected to contribute toward the cost of education, and is calculated according to a federally mandated formula. While 96% of welfare students had zero EFCs, only 21 %of non-recipient students did so. Only 3% of welfare students had EFCs between $1 and $3,000 and less than 1% had EFCs greater than $3,000, while 22% of non-recipient students had EFCs between $1 and $3,000 and 57% had EFCs greater than $3,000.

Figure 6

Student welfare recipients by type of institution attended, 1995–96



Source: NPSAS:96, Data Analysis System, National Center for Education Statistics, U.S. Department of Education.

EDUCATIONAL ATTAINMENT

Given the fact that welfare recipients comprise less than 4% of the undergraduate population, it is not surprising that little evidence exists concerning the postsecondary attainment of these students. However, it is possible to identify obstacles that affect a welfare student's ability to succeed in postsecondary education. The same obstacles that inhibit their access continue to affect their ability to earn a degree, including limited financial resources and family responsi-

bilities. Additional obstacles include a lack of available day-care services for children, and new mandatory work requirements to remain eligible for benefits.

Anecdotal evidence demonstrating the educational successes of welfare recipients has been compiled by welfare reform advocates. Examples include welfare mothers who attended college that now have degrees and jobs that pay enough to enable them to break their dependence on public assistance. [18]

First-generation status

As states such as California and Texas have recently eliminated race-based preferences in college admissions decisions, campus level discussions regarding alternative strategies to enhance diversity have increased. In the wake of these recent policy changes in affirmative action practices, the first-generation status of students has been given increasing attention due to the similar challenges they face.

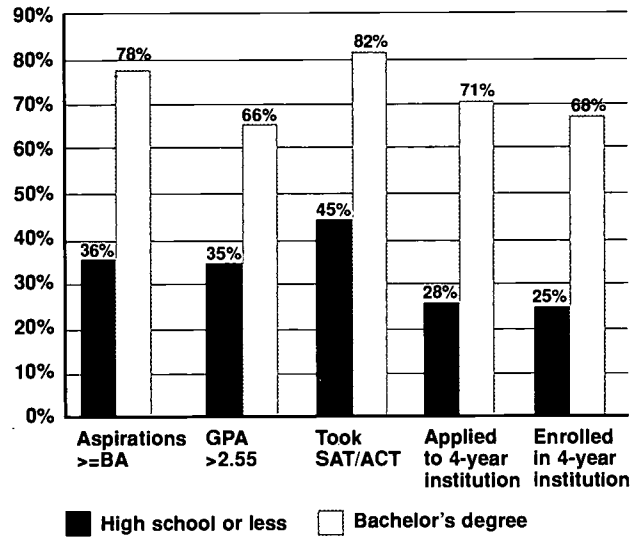
First-generation students are those for whom both parents' highest level of education is a high school diploma or less." Students whose parents did not attend college face significant barriers to attaining a postsecondary education. They lack knowledge of postsecondary education in general and of the admissions and financial aid processes in particular. First-generation students also are less prepared academically, and more often fail to pursue college preparatory courses and take college entrance exams. They also frequently delay enrollment in postsecondary education.

GENERAL TRENDS

National data are not available to precisely determine how many children in the U.S. are "first-generation" and the percentage of the population they encompass. However, the educational attainment of the general population can be examined. In 1994, 54% of adults over 25 years of age had the equivalent of a high school diploma or less, while 24% had some college experience or an associate's degree, 15% had a bachelor's degree, and over 7% held an advanced degree.[20]

Figure 7

Pipeline steps taken by 1988 eighth graders by parent's education level



Source: NPSAS:96, Data Analysis System, National Center for Education Statistics, U.S. Department of Education.

THE COLLEGE-GOING RATE OF FIRST-GENERATION STUDENTS

First-generation students face many barriers to college access. They may have less direct knowledge of the economic and social benefits of postsecondary education because their parents did not attend college. Some parents may expect their children to work full-time immediately following high school and may not support their decision to attend college. Students whose parents never attended college may find it difficult to choose between fulfilling family expectations and obligations and the pursuit of a degree." These students may also lack knowledge of the college admissions and financial aid process and need help filling out applications. Their parents are unlikely to be able to

assist them, due to their own lack of experience. In addition, first-generation students may face barriers to higher education that result from poor preparation for college.

Analysis of the National Education Longitudinal Study (NELS:88/94) of eighth graders in 1988 reveals the differences in high school experiences and subsequent postsecondary enrollment by tracking students from the eighth grade through two years after completion of high school. Approximately 31 % of eighth graders had parents whose highest level of education was high school or less, compared to 41 % whose parents have some college or vocational school experience, 15% whose parents have a bachelor's degree, and 13% whose parents have an advanced degree.

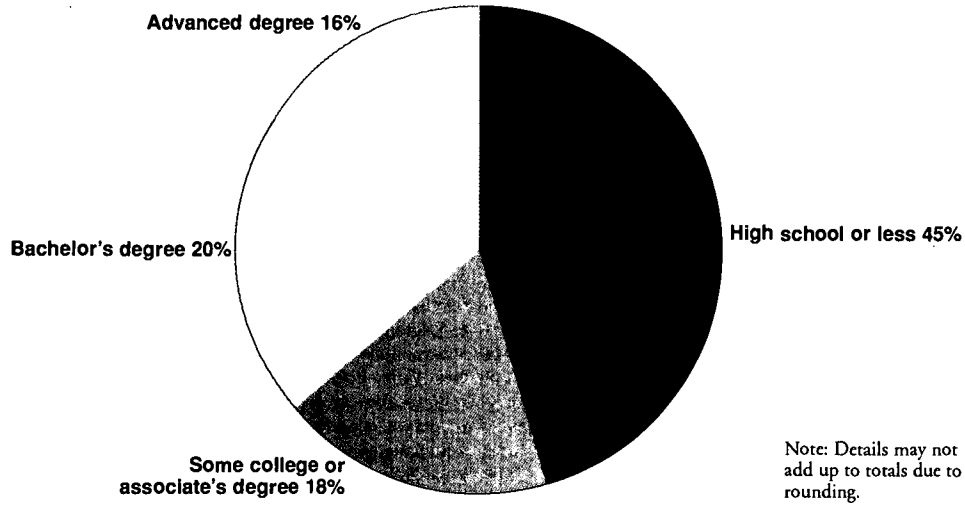
First-generation students did not complete as many of the "pipeline" steps necessary for enrollment in a four-year institution, as defined in the NELS:88/94 study: aspiring to a bachelor's degree, being prepared academically, taking entrance exams, applying to a four-year college, and enrolling at a four-year institution. Forty percent of first-generation students failed to take any of the five pipeline steps, compared to only 7% of students whose parents have a bachelor's degree. Accordingly, only 14% of first-generation students took all the necessary pipeline steps, compared to 56% of those whose parents have a bachelor's degree.

The aspirations of first-generation students were significantly different than those of students whose parents have a bachelor's degree. During their sophomore year of high school, only 36% of first generation students expected to earn a bachelor's or advanced degree, compared to 78% of students whose parents have a bachelor's degree. Thirty-nine percent of first-generation students expected to go to a trade school or obtain some college education, versus 18% of students whose parents have a bachelor's degree. The remaining 25% of first-generation students and 4% of students whose parents have a bachelor's degree only expected to earn a high school diploma or less.

Only 35% of first-generation students had cumulative high school grade point averages (GPAs) above 2.55 on a 4.0 scale, compared to 66% of those whose parents have a bachelor's degree. First generation students also were less likely to take the SAT or ACT college entrance exams, 45%, compared to 82% of students whose parents have a bachelor's degree.

Figure 8

Enrollment in postsecondary education by parents' education level, 1995–96



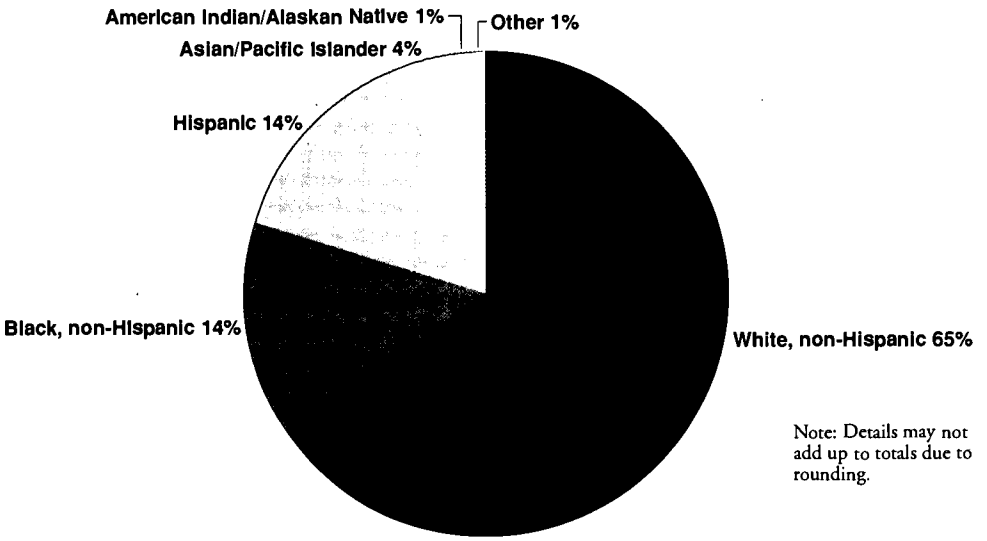
Source: NPSAS:96, Data Analysis System, National Center for Education Statistics, U.S. Department of Education.

First-generation students were less likely to graduate from high school and apply to a postsecondary institution. Of first-generation students, 78% earned a high school diploma within four years, compared to 97% of students whose parents have a bachelor's degree. Fifty percent of first-generation students applied to at least one postsecondary institution, compared to the slightly more than 76% of students whose parents have a bachelor's degree. Not only did first-generation students apply less often, but they also were less likely to have applied to a four-year college:

only 26%, compared to 71% of students whose parents have a bachelor's degree. Consequently only 25% of first-generation students enrolled in a four-year institution, compared to 68% of students whose parents have a bachelor's degree.

First-generation students were significantly more likely to delay enrollment, a factor proven to inhibit attaining a bachelor's degree. 12 Only 29% of first-generation students were enrolled in a postsecondary institution immediately after high school graduation, compared to 73% of students whose parents have a bachelor's degree. Those first-generation students who do enroll also are less likely to enroll on a continuous basis—not dropping out for any period of time—than those students whose parents have a bachelor's degree, 55% compared to 72%.[21]

Figure 9
Race/ethnicity of first-generation students, 1995–96



Source: NPSAS:96, Data Analysis System, National Center for Education Statistics, U.S. Department of Education.

Early intervention programs

Because first-generation students lack adequate preparation for college, it is important to educate them at an early age about the economic and social benefits of postsecondary education, and then provide them with assistance in the admissions and financial aid processes. Early intervention programs provide first-generation students with the knowledge and skills necessary to enroll in postsecondary education.

Several strategies to address these issues exist. Some of the best known programs are the federal TRIO programs, which are designed to help students overcome socioeconomic, academic, and cultural barriers to obtaining post-secondary education. Upward Bound helps students by offering them instruction on college campuses after school, on Saturdays, and during the summertime. Upward Bound not only increases students' academic preparation for college, but also introduces them to the college environment. Each Upward Bound program's participants must be two-thirds low-income and first-generation, with the remaining one-third either low-income or first-generation students.[24] Participants range between 13 and 19 years of age.

The Talent Search program provides young people with general information about colleges, assists them in the admissions process—including entrance examinations-and provides assistance in filling out financial aid forms and searching for other sources of financial aid. Talent Search programs target students ages 11 to 27, and each program's enrollment is required to be at least two-thirds low-income and first-generation students.[25]

Student population trends

First-generation students comprised 45% of all undergraduate students in 1995–96, according to NPSAS:96 data.[26] More than 18% of the student population had parents with some college or an associate's degree, 20% had parents

Program access

who have a bachelor's degree, and 16% had parents with an advanced degree. Sixty-five percent of first-generation students were White, 14% were Black, another 14% were Hispanic, more than 4% were Asian/Pacific Islander, 1% were American Indian/Alaskan Native, and less than 1% were other. Almost 65% of first-generation students were independent, compared to 37% of students whose parents have a bachelor's degree.

First-generation students were less likely to have attended college on a full-time basis and live on-campus. Only 47% of first-generation students attended full-time for at least part of the year, compared to 62% of students whose parents have a bachelor's degree. The majority of first-generation students, 53%, enrolled part-time for at least part of the year, compared to 38% of students whose parents held a bachelor's degree. Sixty-four percent of first-generation students lived off-campus in their own residence, 26% lived with parents or relatives, and only 10% lived on-campus.

First-generation students were more concentrated in two-year institutions: 53% of first-generation students attended public two-year colleges and universities and 8% attended private two-year institutions. Only 40% of students whose parents have a bachelor's degree enrolled in public two-year colleges and 4% enrolled in private two-year institutions. Twenty-five percent of first-generation students attended public four-year colleges and only slightly more than 13% enrolled in private four-year institutions, compared to 40% and 16% of students whose parents have a bachelor's degree, respectively In addition, first-generation students had lower average family incomes than their counterparts whose parents have a bachelor's degree—$26,645, compared to $39,783.[27] These income levels may explain their enrollment and attendance patterns.

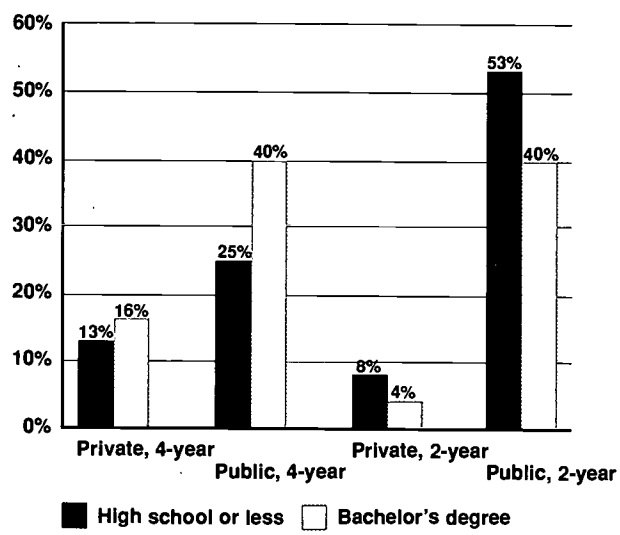
FINANCIAL AID COMPARISONS

Sixty-three percent of first-generation students received aid in 1995–96, with an average amount of $4,329. A lower proportion of students whose parents have a bachelor's degree received aid—49%but those who did were awarded a higher average amount—$5,507. This difference in award amount is primarily due to the concentration of first-generation students at lower-cost institutions, compared to students whose parents have a bachelor's degree. Sixty-six percent of all first-generation students attended institutions with tuition and fees of $2,000 or less, and only 5% attended institutions with tuition and fees greater than $10,000. Slightly more than 54% of students whose parents have a bachelor's degree enrolled in institutions with tuition and fees of $2,000 or less, and 11% enrolled in colleges with tuition and fees greater than $ 10,000.

Forty-four percent of first-generation students received federal Title IV aid, 15% were awarded state aid, and 16% got institutional aid. In comparison, 33% of students whose parents have a bachelor's degree received federal Title IV

Figure 10

First-generation students by type of institutions attended, 1995–96



Note: Details may not add up to totals due to rounding.

Source: NPSAS:96, Data Analysis System, National Center for Education Statistics, U.S. Department of Education.

aid, 10% were awarded state aid, and 19% got institutional aid. More first-generation students were awarded grants than loans, 52% versus 29%. Thirty-seven percent of students whose parents have a bachelor's degree received grants and 28% received loans. The average grant amount awarded to first-generation students was $2,382 and the average loan was $4,286. Students whose parents have a bachelor's degree were given greater amounts of both types of aid, on average, with $3,116 in grants and $4,734 in loans.

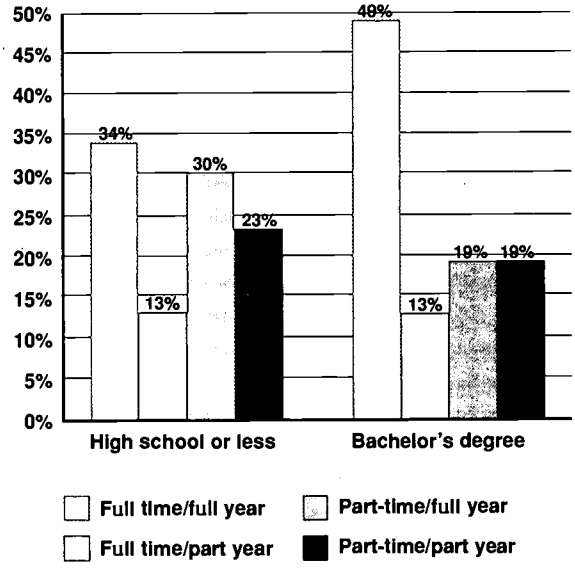
First-generation students were almost twice as likely to have an EFC of zero than those students whose parents have a bachelor's degree, 24% compared to 13%. Twenty-three percent of first-generation students had EFCs ranging from $1 to $3,000 and 53% had EFCs greater than $3,000, while 22% of students whose parents have a bachelor's degree had EFCs between $1 and $3,000, and slightly less than 66% had EFCs greater than $3,000.[28]

Educational attainment

Many of the same barriers that first-generation students face in getting into college continue to affect their progress toward a degree. They may lack support from family and friends, or feel uncomfortable in the college environment, and may not know who to turn to for help.[29] Furthermore, they may require additional help from the institutions they attend, including general support, guidance, and academic assistance. Student Support Services, a federal TRIO program, helps students remain in college by providing tutoring, counseling, and instruction. Students who participate receive better grades, earn a greater number of credits, and do not drop out of college as often as similar students who do not participate in the program .[30]

Figure 11

Attendance patterns by parents' education levels, 1995–96



Source: NPSAS:96, Data Analysis System, National Center for Education Statistics, U.S. Department of Education.

The Beginning Postsecondary Students Longitudinal Study (BPS: 90/94) tracks the experiences of students who were first-time freshmen in 1989–90 for approximately five years. The data show that first generation students were less likely to attain a degree than students from families with higher educational levels. Only 44% of first-generation students had attained a degree within five years, while 56% of students whose parents have a bachelor's degree had attained degrees.

First-generation students also were less likely to obtain a bachelor's degree than students whose parents have a bachelor's degree. Only 15% of first-generation students obtained a bachelor's degree, another 29% earned an associate's degree or certificate. This is significantly different than students whose parents have a bachelor's degree—36% Received a bachelor's degree, and 20% earned an associate's degree or certificate.[31]

Parental divorce

The high rate of divorce in the United States has had profound effects on the lives of individuals and the nation as a whole. While many of these effects have been broadly explored in the social science research field, the impact of divorce on students' access to and success in higher education has received limited attention. Of particular concern is the ability of divorced parents to finance their children's postsecondary education, which often depends upon court settlements, state laws and obligations, and the decreased socioeconomic resources of custodial parents, especially those who do not remarry. Divorce also can inhibit a child's college aspirations when high school grades, test scores, and participation in college preparatory activities suffer.

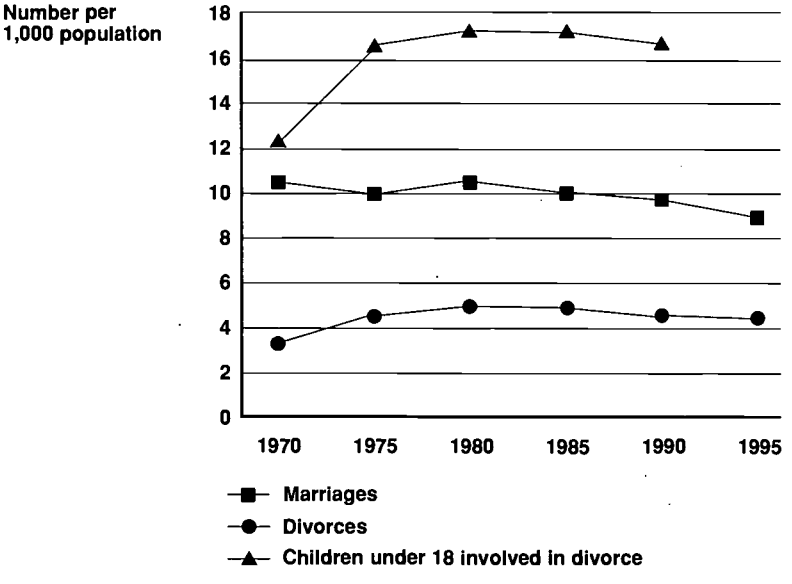
General trends

A significant proportion of young adults in America now come from families of divorce. The number of both divorces and children involved in divorce rose rapidly between 1965 and 1975. The divorce rate peaked in the late 1970s, but has remained high—about 5 in 1,000 people divorced in 1994, whereas 9 out of 1,000 married. By 1995, this had translated to 9% of adults over 18 years old who were divorced. [32]

By 1990, almost 1.1 million children under 18 years of age were involved in divorce annually approximately 17 in 1,000, up from 13 per 1,000 in 1970. As a result, the overall proportion of children under 18 living in single divorced parent households has been rising steadily, from less than 4% in 1970 to approximately 10% in 1995. This percentage does not include children of divorce whose custodial parent has since remarried, suggesting that the proportion of children who have experienced divorce may be significantly higher. Mothers account for the vast majority of single parents in general, and single divorced parents in particular. In 1995, for example, almost 84% of children under 18 living with a single divorced parent were living with their mothers.[33]

Figure 12

Marriages and divorces, 1970–94



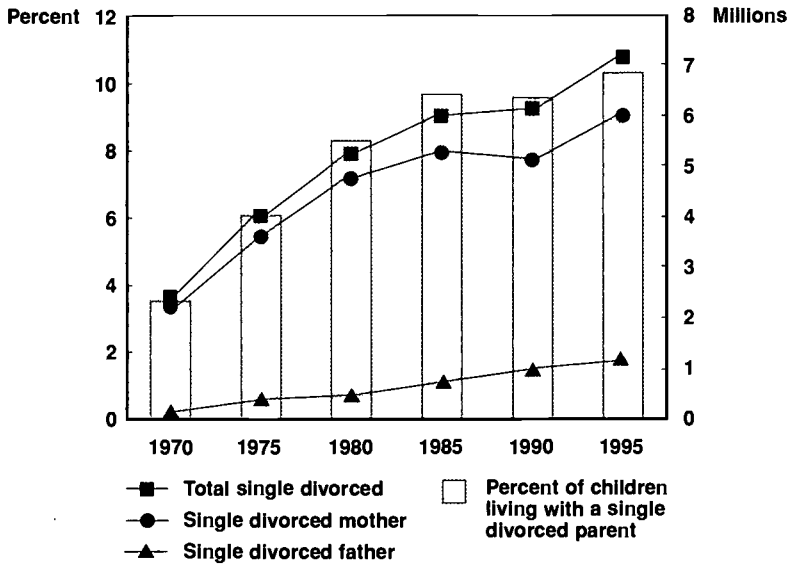
Source: *Statistical Abstract of the United States: 1996*, U.S. Bureau of the Census, 1996.

Relationship with single-parent families

The concern about divorce is inextricably tied to the growth of single-parent families, as the two groups share many similar characteristics. A child living in a one-parent family in 1994 was about as likely to be living with a divorced parent as with a parent who had never been married-37% compared to 36%.[34]

Due to difficulties with data, many studies use single-parent status as a proxy for divorce, focusing on any student who did not live with two parents while in high school.[35] According to several of these studies, family structure is related to educational outcomes.[36] Children living in single-parent families are more likely to experience problems in elementary school, and are less likely to participate in early literacy activities than children in two-parent families.

Figure 13
Living arrangements of children under 18, 1970–95



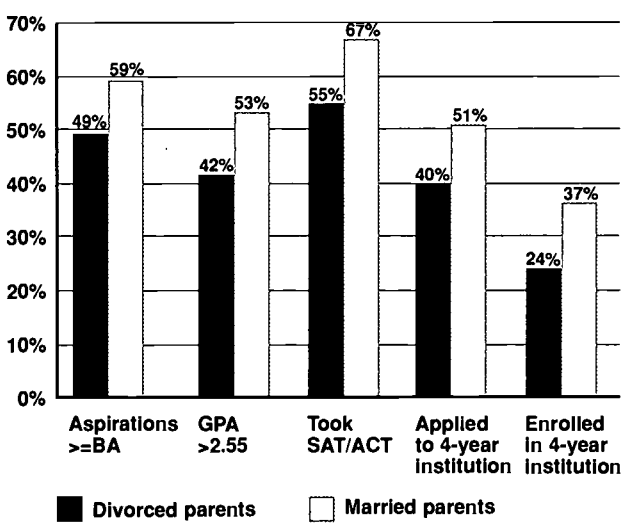
Source: "Current Population Survey" reports, U.S. Bureau of the Census.

Students from both single-parent and remarried families are more likely to drop out of school, score lower on standardized tests, and receive lower grades than students from intact families.[37]

THE COLLEGE-GOING RATE OF CHILDREN OF DIVORCE

Using data from NELS:88/94, the educational aspirations and progress of 1988 eighth graders from families of divorce can be tracked through 1994. Approximately 12% of the eighth graders had divorced parents, while 78% had married parents (the remainder had parents who were separated, single, or widowed). Seventy-three percent of those whose parents were divorced had family incomes under $35,000 in 1991, compared to 39% of children whose parents were married. Of those children whose parents were divorced, almost 74% were White, 16% were Black, 8% were Hispanic, 2% were American Indian/Alaskan Native, and only 1%were Asian/Pacific Islander.

Figure 14
Pipeline steps taken by 1988 eighth graders by parent's marital status



Source: NELS:88/94, Data Analysis System, National Center for Education Statistics, U.S. Department of Education.

Program access

Program access

Children of divorced parents often face barriers to higher education that result from poor preparation for college. Like first-generation students, they frequently fail to take the necessary pipeline steps to four-year enrollment. Thirty percent of the eighth graders with divorced parents failed to take any of these steps, compared to 20% of those with married parents. At the other end of the scale, only 24% of children of divorce took all five of these steps, versus 36% of children with married parents.

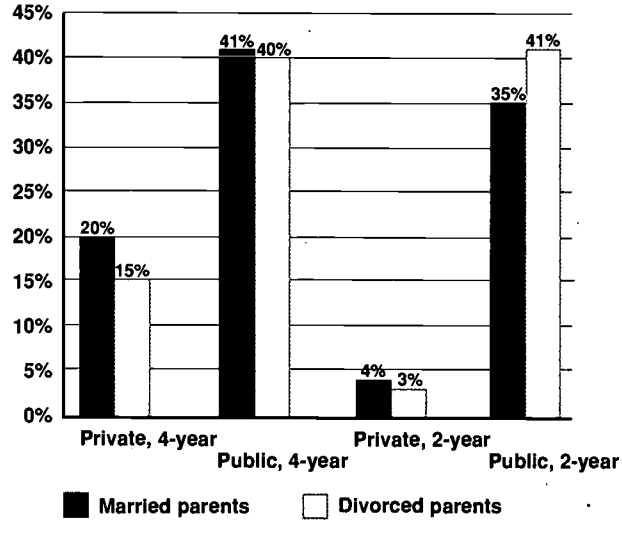
Children of divorce had lower rates of performance in each of the five steps. In their sophomore year of high school, only 49% of children with divorced parents aspired to a bachelor's degree or higher, compared to 59% of children with married parents. Children of divorce had lower cumulative GPAs than did children with married parents—42% had above a 2.55 on a 4.0 scale, versus 53%. Fifty-five percent of children with divorced parents took the SAT or ACT exam, while 67% of children with married parents did so. In addition, over 43% of children of divorce did not apply to any postsecondary institutions, compared to 36% of children with married parents.

Partly due to lower levels of preparation, children of divorce are less likely to enroll at postsecondary institutions, and at four-year institutions in particular. Children of divorce were less likely to apply to four-year institutions than children with married parents—40% versus 51%. They were also less likely to be accepted by a four-year institution—33% compared to 46% of children with married parents. Consequently, only 24% of these eighth graders enrolled at a four-year institution immediately after high school graduation, versus 37% of those with married parents. Of those students whose parents were divorced, 44% enrolled at any postsecondary institution immediately following high school graduation, while 57% of students whose parents were married did so. These figures reflect the greater tendency of students with divorced parents to undergo delayed, part-time, or non-continuous enrollment: 45% of those who enrolled at a postsecondary institution experienced at least one of these situations within two years of high school graduation, compared to 38% of students with married parents.

It is important to recognize that family income is closely related to both parental marital status and college preparation. As family income levels increase, greater percentages of children of divorce meet the pipeline conditions. For example, 50% of children of divorce with family incomes of under $20,000 aspired to a bachelor's degree or higher, compared to 66% of those with family incomes between $50,000 and $74,999. However, differences between children with divorced parents and those with married parents generally appear within income categories as well as between them. Thus, 61 % of children with married parents in the under $20,000 category aspired to a bachelors degree or higher, as did 72% of those with family incomes between $50,000 and $74,999.[38] This suggests that differences in family income levels cannot explain all of the disparities in college preparation between children with divorced parents and those with married parents.

Figure 15

Students with divorced parents by type of institution attended, 1995–96



Note: Details may not add up to totals due to rounding.

Source: NPSAS:96, Data Analysis System, National Center for Education Statistics, U.S. Department of Education.

Student population trends

Children of divorce who do enroll at postsecondary institutions often have different attendance patterns than do children with married parents. This can be seen by examining recent data on the dependent undergraduate population. Students whose parents were divorced made up 11% of all dependent undergraduates in 1989–90 and 18% in 1995–96, suggesting that the overall proportion of postsecondary students with divorced parents has increased in recent years. Students whose parents were married comprised 82% and 72% of dependent undergraduates in those years. However, this distribution varied by the type of institution attended. Children of divorce made up higher proportions of the student population at community colleges and lower proportions at more selective institutions.[39]

Only 15% of students with divorced parents attended private four-year institutions in 1995–96, while 41% attended public two-year institutions. The corresponding figures for undergraduates with married parents are 20% and 35%. Both groups attended public four-year institutions at comparable rates—40% of students with divorced parents and 41% of those with married parents. A similar percentage of both groups, slightly under 4%, enrolled at private two-year institutions. Similarly, undergraduates with divorced parents attend less expensive institutions on average. In 1995–96, 54% attended institutions where tuition and fees were $2,000 or less, compared to 45% of students with married parents. At the other end of the scale, only 10% of students with divorced parents attended institutions that had tuition and fees of more than $ 10,000, versus 16% of students with married parents.

In addition, the attendance status of dependent students with divorced parents differs from that of students with married parents. in 1995–96, 66% of students of divorce attended postsecondary institutions full-time for at least part of the year, compared to slightly more than 73% of undergraduates with married parents. Comparatively more students with divorced parents attended school part-time: 34% versus 26% of students with married parents.

Financial aid comparisons

Dependent undergraduates with divorced parents may also exhibit financial aid patterns that are different from those of students with married parents. This is due to several reasons, including:

- Some states and institutions require noncustodial parents to pay a share of college expenses, while others do not.
- Divorced parents, especially those who do not remarry, generally have lower income levels than do married parents, and therefore may qualify for aid more frequently
- Children of divorced parents, on average, attend less costly institutions and are therefore eligible for lower amounts of aid.

Differing state obligations for non-custodial parents

A divorced parent's financial obligation to a college-age child depends on where he or she lives. A few states—including Colorado, Illinois, Iowa, Massachusetts, and Washington—have laws explicitly permitting courts to order non-custodial parents to pay college expenses or broader support for children over 18 years old. In other states, including New Jersey and New York, state courts have historically had the discretion to require parents to pay for college if they have the financial means. in most other states, such as California, Maryland, Michigan, North Carolina, and Texas, there are no statutes that deal directly with the obligations of divorced parents to pay college expenses. However, some of these states allow for support beyond the age of majority-the legal age at which parents are no longer obligated to financially support a child if it is based on a voluntary agreement between the divorcing parties.

According to a 1988 report by the California State Senate Office of Research, states in which postminority college support may be awarded, through either statutory provisions or case law, had higher "college bound" rates for all graduating seniors than those that did not require such support—an average of 33% compared to an average of 23%.[40] Nevertheless, the obligation of non-custodial parents to pay college expenses remains a contentious issue, largely because married couples have no legal responsibility to pay college tuition for their children. Several recent court cases and legislative actions have come down on different sides of the issue:

- In October 1995, the Supreme Court of Pennsylvania upheld a lower court's decision to throw out a state law that required divorced parents to help pay for their children's higher education. The Court stated that the law was unfair because it did not grant children with married parents the same right to a college education.
- In March 1996, an appeals court in New Jersey ruled that a divorced father could stop paying for his

daughter's college tuition, despite the fact that divorced parents with the financial means are routinely required to help cover college costs in New Jersey. In addition, the New Jersey Legislature is considering freeing non-custodial parents from such obligations by law.

- In May 1996, Governor Roy Romer of Colorado vetoed a bill that would have eliminated state judges' power to order divorced parents to help pay college costs. He argued that state law gives special status to divorced parents in many ways.
- In August 1997, the Iowa Court of Appeals ruled that divorced parents can be ordered to pay their children's college tuition. The three-judge panel wrote that the decision was intended to "safeguard children of divorced parents against the fiscal problems and other obstacles that often accompany divorce."[41]

Some states, such as New York, have attempted to resolve these issues by applying the obligation to provide child support until age 21 to all children, regardless of their parents' marital status.

The financial aid process

The calculation of divorced parents' obligation to pay college expenses also may depend on which institution the child attends. Many private colleges take both parents' incomes into account in distributing financial aid, whereas public universities generally ask only for information about the custodial parent. For example, to apply for financial aid, some private institutions require completion of the College Scholarship Services' Financial Aid PROFILE form, which often includes a separate statement for the non-custodial parent. Other institutions do not require the separate form under certain conditions-if the divorce occurred more than three years ago, for example .41 In certain cases, custodial parents may even be responsible for collecting the amount due from the non-custodial parent, regardless of the latter's willingness to support the child essentially requiring the custodial parent to contribute more than he or she can personally afford. Such additional financial responsibilities may limit the financial aid for which a prospective student qualifies, or may burden the student's family to an unfair extent.

However, the form required to qualify for federal grants and loans—the Free Application for Federal Student Aid (FAFSA)—requires income information only from the custodial parent and, if he or she has remarried, the step-parent. Eliminating the non-custodial parent's income from the financial aid equation could help children of divorce whose non-custodial parents refuse to contribute money for college qualify for federal aid. However, in some cases it may also enable non-custodial parents who have the financial means to refrain from paying their share of college expenses. This may shift financial aid away from the neediest students.

Lower income/family EFC of custodial parents

The average family income of dependent undergraduates with divorced parents was significantly lower than that of their married-parent counterparts—$27,170 compared to $52,294. In addition, greater percentages of dependent students with divorced parents were concentrated in the lowest categories of family income than were students with married parents. For example, 8% of students with divorced parents had family incomes of less than $10,000 and 13% were between $10,000 and $19,999, compared to 3% and 5% for students with married parents.[43]

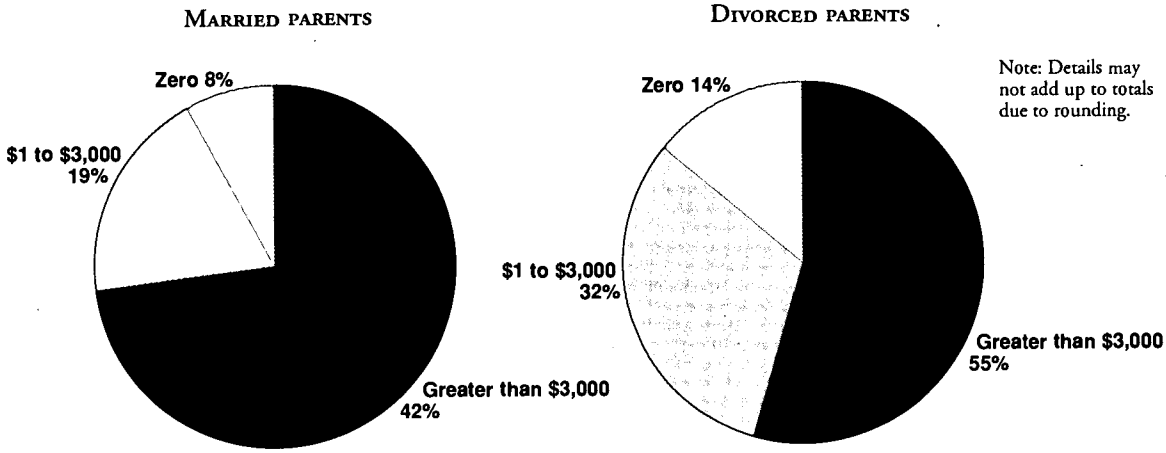
At the same time, dependent students with divorced parents were more likely to have zero or low EFCs than married-parent students. In 1995-96, almost 14% of students with divorced parents had zero EFCs, 32% had EFCs of $1 to $3,000, and slightly less than 55% had EFCs above $3,000. Eight percent of students with married parents had zero EFCs, 19% had EFCs between $1 and $3,000, and 73% had EFCs above $3,000.

Patterns of financial aid

Despite their lower family incomes and EFCs, the financial aid awarded to students whose parents are divorced does not differ substantially from that awarded to students whose parents are married. Approximately the same percentage of dependent undergraduates with divorced and married parents received aid from any source in 1995–96—52% and 51%—but students of divorce were awarded slightly lower amounts on average, $5,796 compared to $ 6,002. Similar percentages also received federal Title IV aid: 38% of students with divorced parents compared to 37% of students with married parents. Slightly more students with divorced parents got state aid, 17%, than students with married parents, 12%, whereas a smaller percentage received institutional aid—19%, compared to 23%. Students with divorced parents received grants more frequently than students with married parents—44% versus 37%. However, those that did receive grants had lower average amounts, $3,322, compared to $3,716 for married-parent students. Loan figures for the two groups were more similar: 29% of students whose parents were divorced received

an average of $4,602 in loans, whereas 31% of students with married parents received an average of $4,654 in loans.[44]

Figure 16
Expected family contribution of dependent students by parent's marital status, 1995–96



Source: NPSAS:96, Data Analysis System, National Center for Education Statistics, U.S. Department of Education.

Educational attainment

Various barriers appear to put children of divorce at risk of failing to complete a postsecondary degree. They range from the motivational and psychological problems that may accompany marital disruptions, to the decline of economic and social resources experienced by families that go through divorce.

Divorce disrupts children's lives, causing a barrage of emotions that may affect their school performance in various ways. Recent research indicates that the effects of parental divorce may linger through adolescent/young adult development, and may influence the decisions older children make concerning their future, leading to a fear of commitment, self-esteem problems, and vocational or educational delays.[45] Parental divorce experienced during college may also cause older students to drop out, disassociate themselves from family or academic life, or otherwise damage their academic progress. However, much debate exists regarding these effects, and opposing claims have been made that family atmosphere, rather than family composition, is more influential on educational progress.

Parental divorce also diminishes the economic and social resources available to children, which in turn has negative consequences for their educational attainment.[46] The loss of resources is due to not only the increased responsibilities of the custodial parent, but also the higher financial burdens due to loss of income. Children of divorced parents therefore may receive less time and attention from their parents, and may live in poorer communities with lower-quality education systems.

Although little data is available, it appears that children of divorce are less likely to obtain postsecondary degrees than are children with married parents. According to BPS:90/94 data, only 23% of 1989–90 first-time dependent freshmen with divorced parents had received a bachelor's degree within five years, compared to 35% of students with married parents. Almost 25% of students with divorced parents had earned a certificate or associate's degree, while 52% had not yet attained a degree. The corresponding figures for students with married parents were 21 % and 44%. Prior to attaining a degree, students with divorced parents were less likely to be enrolled continuously—60%, compared to 71% of students with married parents.

In addition, a 1988 study found that educational attainment was lower for children of divorced parents than for children of still-married parents, after controlling for gender, age, and mother's education. The overall average gain in years of schooling by children over their mothers was 2.57 years. However, children whose parents divorced before they were 16 had lower gains in educational attainment, by about two-thirds of a year. For some respondents, two-thirds of a year meant the difference between completion and non-completion of a degree.[47]

Other studies have found lower levels of educational attainment for children from single-parent families in general. However, child support, whether through increased family income or through other positive effects, may help children overcome part of the educational disadvantage caused by divorce. According to one study, "a $ 1,000 change in average child support was associated with...a 3% increase in the likelihood of college entry."[48]

Conclusion

This report has reexamined what is meant by educationally "disadvantaged" and has described several factors that compound the barriers to higher education faced by disadvantaged individuals, especially low-income and minority populations. Many disadvantaged college aspirants are not academically prepared for college and are hampered by complexities in the admissions and financial aid processes or recent changes in government policy. The combined needs of the aspirants must be addressed in order to promote increased educational opportunity for all individuals with the interest and ability.

It is important to note that the three compounding factors described in this report are not a finite set. In addition to these factors, there are many others that inhibit participation in postsecondary education, including:

- Homelessness—the lack of a stable or permanent home frequently prevents children from graduating from high school;
- Immigrant status—language barriers and recent attempts to exclude immigrants from all forms of public aid both affect their pursuit of higher education;
- Remediation-funding and support for students taking remedial courses have recently come under fire, resulting in reduced opportunities for students who have not received adequate precollege academic preparation;
- Poor K–12 education—especially in the inner cities, substandard elementary and secondary school systems may restrict the future educational opportunities of graduates; and
- Disabilities—many prospective students have special needs that must be addressed before they can fully participate in postsecondary education.

Examining the intersection of the different aspects of educational disadvantage reveals that considerable overlap exists. This can be seen by looking at the undergraduate student population. For example, over 28% of welfare recipients had divorced parents, and 64% were first-generation students. Five percent of first-generation students were welfare recipients, and 21% had divorced parents. Divorce appears to affect students from all levels of parental education more equally-only 29% of dependent students with divorced parents were first generation-while 1% were welfare recipients.

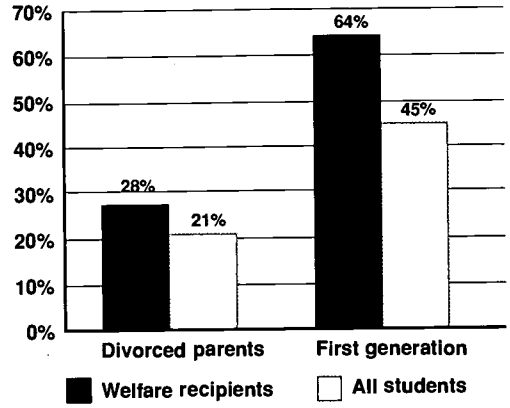
Minorities are often affected by more than one of these factors, compounding the barriers they face to participation in higher education. For example, divorce is more common among certain racial/ethnic groups than others—in 1995, 11% of Blacks over the age of 18 were divorced, compared to 9% of Whites and 8% of Hispanics.[49] Among first-generation undergraduates in 1995–96, 14% were Black and another 14% were Hispanic.[50] Minorities were even more heavily represented among adult welfare recipients, who were 37% White, 36% Black, and 20% Hispanic.[51]

Equally as important, a significant percentage of individuals in these groups have comparatively low incomes. Welfare recipients by definition represent one of the lowest income groups in society. In addition, the large majority of custodial parents are women, and women who get divorced usually suffer economically. A recent estimate by the Social Science Research Council found that women experienced a 27% decline in their standard of living in the first year of divorce.[52] However, divorced mothers tend to receive more child support than do other single mothers,[53] and therefore tend to fare better economically since child support can make a substantial difference in the economic situations of divorced parents.

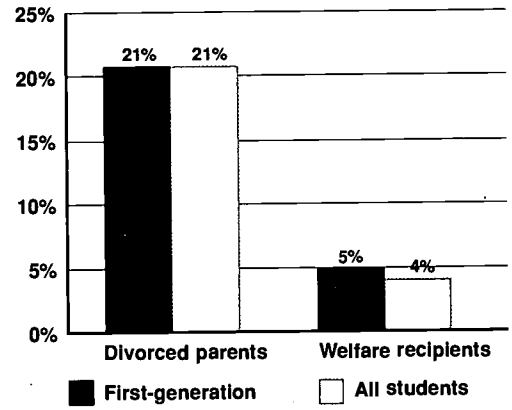
As earnings are closely related to the level of education achieved, first-generation students tend to have lower family incomes than those whose parents have earned postsecondary degrees. For example, in 1995 bachelor's degree recipients earned 73% more than high school graduates. This difference is reflected among undergraduates: first-generation students had an average family income of $26,645 in 1995–96, compared to $39,783 for those students whose parents have a bachelor's degree.[54]

Figure 17
Correlation among factors showing overlapping barriers

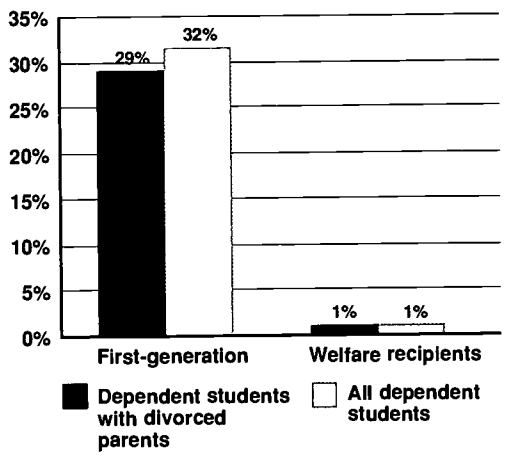
Characteristics of welfare recipients, 1995–96



Characteristics of first-generation students, 1995–96



Characteristics of students with divorced parents, 1995–96



Source: NPSAS:96, Data Analysis System, National Center for Education Statistics, U.S. Department of Education.

The overlap of all of these factors with the low-income population highlights the fact that need-based financial aid is essential for all disadvantaged students to enroll and succeed in postsecondary education. However, the analysis contained in this report suggests that non-monetary approaches are also required to address their specific needs. In many regards, student aid must be seen as necessary but not sufficient to guarantee educational opportunity.

Recommendations

Further steps should be taken to improve access to and success in postsecondary education for disadvantaged individuals. The following recommendations are offered to address the myriad needs of this burgeoning population:

Increase the investment in early intervention and pre-college programs.

Efforts such as those funded through the federal TRIO programs have made great progress in improving the awareness of and preparation for college among disadvantaged students, particularly for the groups discussed in this report. For example, Upward Bound participants are four times more likely to complete an undergraduate degree than students from similar backgrounds who did not participate. However, current programs cannot meet the demand for the services they offer: less than 5% of the 11 million eligible individuals are actually served by TRIO programs." By expanding the investment in these programs, the needs of more students can be met, and some of the obstacles to postsecondary education lessened or removed. Greater funding from federal and state governments, institutions, and private foundations—working alone and as partners—can broaden the reach of existing programs and enable the creation of new programs and strategies to address these pre-college needs.

Renew efforts to increase the availability of college awareness information.

Federal initiatives to create software and national databases to educate students and families about the costs of college and the availability of financial aid have largely diminished in the last few years. While the advent of the Internet and the emergence of privately funded programs have provided greater opportunities for dissemination of this vital information, more work needs to be done to ensure that those in greatest need of this knowledge—who often do not have access to technology, college counseling, or other beneficial tools-are reached. State and city-level initiatives in Indiana, Vermont, and Boston serve as valuable models.

Increase the availability of support services for enrolled college students.

Just as the number of programs targeted to precollege students must be increased, there also must be growth in those that continue to address disadvantaged students' needs after they enroll in postsecondary education. Activities such as mentoring, tutoring, counseling, and time management and study skills training are necessary in order for students to be able to successfully persist to a degree. Programs such as TRIO's Student Support Services, and individual institutional efforts-in combination with financial aid-have been successful in increasing student performance and persistence. According to a recent evaluation of the program, students in Student Support Services are more than twice as likely to remain in college than students with similar backgrounds who did not participate in the program.[56] Greater funding should be provided for these programs, and more institutions should be encouraged to start programs of their own to help their students.

Promote greater consistency and clarity in state policies concerning parental responsibilities to pay for college.

Across the nation, state policies on the responsibilities of divorced parents regarding paying for their children's further education are often vague. While these requirements are clearly articulated in some jurisdictions through state law and judicial decisions, other states lack any laws governing these issues. Steps should be taken to achieve coherent policies, including addressing the lack of uniformity in defining the age of majority. Less variation in state definitions might also encourage fewer discrepancies in data required for financial aid at the institutional level.

Lessen the restrictions on participation in postsecondary education for welfare recipients.

Under the recently enacted welfare reform, recipients are limited to 12 months of participation in vocational education. Many states define vocational education in a way that excludes pursuit of a postsecondary degree. By extending the time limit, recipients-who by their participation in education are taking an important step toward breaking the cycle of poverty-can enroll in longer programs. If the pursuit of a postsecondary degree programs were considered vocational education, recipients could meet work participation rate requirements and lessen their future need for public assistance at the same time.

Furthermore, for those students enrolled in postsecondary education and receiving student aid, work-study awards should be counted towards fulfilling work and/or community service requirements, as some states currently allow. Receiving student financial aid should not result in a reduction in welfare benefits.

Simplify the forms and processes for applying for college admissions and financial aid.
A key factor preventing disadvantaged students from applying to higher education or for student aid is their unfamiliarity with application procedures. The documentation required in addition to the applications themselves can burden students from certain groups, and place them in a less than advantageous position in the increasingly competitive process of gaining entrance to college. A less complex, less intimidating process would encourage more of these students to apply. More user-friendly forms would greatly facilitate the process for disadvantaged students.

Notes

[1] U.S. Department of Education, National Center for Educational Statistics, National Education Longitudinal Study of 1988 (NELS:88/94), Data Analysis System.

[2] U.S. Department of Education, National Center for Education Statistics, Beginning Postsecondary Students (BPS:90/94), Data Analysis System.

[3] Thomas G. Mortenson, 'Educational Attainment by Family Income, 1970 to 1994," *Postsecondary Education Opportunity*, Number 41, November 1995.

[4] U.S. Department of Commerce, Bureau of the Census, "Current Population Survey" reports (website).

[5] U.S. Department of Education, National Center for Education Statistics, *The Condition of Education: 1996* (Washington, DC: Government Printing Office, 1997). For simplification, 9 to 11 years of education completed is considered a high school dropout, 12 years of education completed is considered a high school diploma or GED, and 16 years or more is considered the equivalent of obtaining a bachelor's degree or higher.

[6] Peter Schmidt, "States Seek Ways to Help Welfare Recipients Get Their Degrees," *The Chronicle of Higher Education*, November 29, 1996.

[7] Ashley Giglio, "Welfare Reform," American Association of Community Colleges (AACC), background paper, 1997.

[8] U.S. Department of Commerce, Bureau of the Census, *Statistical Abstract of the United States: 1995* (Washington, DC: Government Printing Office, 1995).

[9] Thomas L. Gais, Donald L. Boyd, and Elizabeth L. Davis, 'The Relationship of the Decline in Welfare Cases to the New Welfare Law: How Will We Know If It Is Working?" Rockefeller Reports, August 1997 (Rockefeller Institute website).

[10] Demetra Nightingale, 'A General Profile of the Welfare Population," Report from The Urban Institute, 1996 (Urban Institute website).

[11] *Ibid.*; *Statistical Abstract of the United States: 1995*. Note welfare figures are for 1995 and general population are for 1994.

[12] U.S. Department of Health and Human Services, "State Welfare Demonstrations, " HHS Fact Sheet, August 22, 1996.

[13] Ginger Thompson, "Welfare Reform Slamming Shut Door to College," *The Chicago Tribune*, November 8, 1997.

[14] W. Ann Reynolds, "For Students on Welfare, Degrees Pay Dividends," *The Chronicle of Higher Education*, March 21, 1997.

[15] American Association of Community Colleges (AACC), 'Welfare Survey," 1997, unpublished (website).

[16] U.S. Department of Education, National Postsecondary Student Aid Study, 1996 (NPSAS:96), Data Analysis System.

[17] *Ibid.*

[18] Roselyn Hiebert, "Success Stories of Students on Welfare," National Association of State Universities and Land Grant Colleges (NASULGC), 1997 (website).

[19] Children whose parents have some college experience but have not earned a degree are not included in this category of students.

[20] *Statistical Abstract of the United States: 1995*

[21] Howard B. London, "Transformations: Cultural Challenges Faced by First Generation Students," in L. Steven Zwerling and Howard B. London, eds., *First-Generation Students: Confronting the Cultural Issues*, New Directions for Community Colleges, Number 80 (San Francisco, CA: Jossey-Bass, 1992).

[22] U.S. Department of Education, Office of Educational Research and Improvement, *Educational Attainment of 1980 High School Sophomores by 1992* (Washington, DC: Governmental Printing Office, 1995).

[23] NELS:88/94.

[24] The federal TRIO programs include students whose parents have some college experience but have not attained a degree in their definition of first-generation.

[25] James B. Stedman, *Federal TRIO Programs and the National Early Intervention Scholarship and Partnership Program*, Congressional Research Service Report for Congress (Washington, DC: Governmental Printing Office, 1997).

[26] In addition, 32% of the dependent and 58% of the independent student population were first-generation students, according to NPSAS:96 data.

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[27] NPSAS:96.

[28] *Ibid.*

[29] Eduardo J. Padron, "The Challenge of First-Generation Students: A Miami Dade Perspective," and Richard C. Richardson and Elizabeth Fisk Skinner, "Helping First-Generation Minority Students Achieve Degrees," in L. Steven Zwerling and Howard B. London, eds., First- Generation Students: Confronting the Cultural Issues, New Directions for Community Colleges, Number 80 (San Francisco, CA: Jossey Bass, 1992).

[30] National Council of Educational Opportunity Associations (NCEOA), "TRIO Program Effectiveness: Survey Results and Findings," Seminar on Relations with the Department of Education Reference Guide, Washington, DC, March 1997.

[31] BPS:90/94.

[32] U.S. Department of Commerce, Bureau of the Census, *Statistical Abstract of the United States: 1996* (Washington, DC: Government Printing Office 1996).

[33] *Ibid.*; Bureau of the Census, "Current Population Survey" reports.

[34] U.S. Department of Commerce, Bureau of the Census, "Population Profile" reports (Census Bureau website).

[35] It is important to note that single parents who have never been married may have substantially different demographic characteristics than divorced parents-in particular, lower income and education levels. Nevertheless, such studies may point out some of the problems children of divorce face. They are mentioned in this paper where research restricted to children of divorce remains limited. Other data limitations should also be noted. For example, the category "divorced" frequently does not include custodial parents who have remarried. In addition, the current income levels of divorced parents do not reflect the changes in income level that may have occurred as a result of the divorce.

[36] See, for example, U.S. Department of Education, National Center for Education Statistics, *Characteristics of At Risk Students in NELS:88* (Washington, DC: Government Printing Office, 1992); U.S. Department of Education, National Center for Education Statistics, 'Findings from The Condition of Education 1997: The Social Context of Education," July 1997 (NCES website); David W. Grissmer, Sheila Nataraj Kirby, Mark Berends, and Stephanie Williamson, "Student Achievement and the Changing American Family: An Executive Summary," The RAND Institute on Education and Training, 1994; Herbert Zimiles and Valerie E. Lee "Adolescent Family Structure and Educational Progress," *Developmental Psychology*, 1991, Volume 27, Number 2.

[37] However, the research is divided as to whether the differences in student performance are due to single-parent status itself or to the closely related variable of low-income status.

[38] Several of the NELS:88/94 pipeline variables were measured according to parental marital status within five 1991 income categories: under $20,000, $20,000–34,999, $35,000–49,999, $50,000–74,999, and $75,000 and above. These variables included student aspirations, student enrollment in October 1992, whether students took the ACT or SAT exams, and whether they applied to a four-year institution. A relationship in which children of divorce performed worse than children with married parents appeared in most cases. A major exception occurred in the $20,000–34,999 category, in which this relationship was reversed. No relationship could be determined in the $75,000 and above category due to low sample size. Regression analysis would be necessary to more accurately determine the relative influences of family income and parent marital status on these variables.

[39] Data on dependent undergraduates from NPSAS:96 and U.S. Department of Education, National Center for Education Statistics, National Postsecondary Student Aid Study, 1990 (NPSAS:90), Data Analysis System.

[40] Sara L. McCarthy and Michael Canul, "Divorced from College? A Special Report to Senator Diane Watson," California State Senate, Office of Research, August 1988.

[41] Julianne Basinger, "Iowa Court Says Divorced Parents Should Pay Children's Tuition," *The Chronicle of Higher Education*, August 15, 1997.

[42] University of Chicago website.

[43] NPSAS:96.

[44] *Ibid.*

[45] Susan R. Boes, "The Relationships Among Parental Marital Status, Selected Interpersonal Variables, and the Career Development of a College Population," paper presented at the Georgia Educational Research Association 20th Annual Meeting, Atlanta, GA, November 2–3, 1995.

[46] Verna M. Keith and Barbara Finlay, "The Impact of Parental Divorce on Children's Educational Attainment, Marital Timing, and Likelihood of Divorce," *Journal of Marriage and the Family*, 1988, Volume 50.

[47] *Ibid.* The study examined only White children.

[48] See, for example, Virginia W. Knox and Mary Jo Bane, "Child Support and Schooling," in Irwin Garfinkel, Sara S. McLanahan and Philip K. Robins, eds., *Child Support and Child Well-Being* (Washington, DC: The Urban Institute Press, 1994). Note that the provision of child support may be related to the quality of local school system, the parents' attitude toward the importance of schooling, additional emotional support from the non-custodial parent, and other variables.

[49] *Statistical Abstract of the United States: 1996.*

[50] NPSAS:96

[51] Nightingale, 1996.

[52] From a study by Richard R. Peterson, cited in "Scholars Reassess Economic Consequences of Divorce for Women," *The Chronicle of Higher Education*, April 19, 1996.
[53] Knox and Bane, 1994.
[54] NPSAS:96.
[55] NCEOA, 1997.
[56] *Ibid.*

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3

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Family and High School Experience Influences on the Postsecondary Educational Plans of Ninth-Grade Students

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The objectives of this study were to review the current literature on status attainment and student college choice and to develop and test a structural model of predisposition to attend college. Family and student background characteristics, parents' educational expectations for students, level of student involvement in school, and student achievement were cited as influences on students' predisposition toward postsecondary education and were the chief components of the model. Data from 2,497 ninth-grade students and their parents were used to test the model using LISREL. Parents expectations exerted the strongest influence throughout the model. Parents' education, student gender, high school GPA, and high school experiences also contributed significantly in explaining students' aspirations.

The topic of student college choice has attracted increasing attention from educational researchers as well as institutional, state, and federal policymakers. Growing interest has been fueled by the emergence of federal and state governments as a significant source of student financial aid, the declining pool of high school graduates, and a decline in the postsecondary participation rates of Black high school students. As a result of these trends, policymakers, as well as researchers, have sought to understand the factors that shape the decision to attend a postsecondary educational institution.

Federal, state, and local officials have a vested interest in understanding the factors that shape aggregate student enrollments so that policies affecting financial aid access and equity, and manpower training objectives can be implemented effectively. Institutional decision makers are interested in the phenomenon of student college choice in order to develop intervention strategies designed to attract desired numbers of students.

The term *student college choice* has been used to describe a range of postsecondary educational decisions including (a) the decision of students to continue their education at the postsecondary level and (b) the decision to enroll in a specific postsecondary institution.

Several models of student college choice have been developed to explain this process. Hossler, Braxton, and Coopersmith (1989) identify four types of college choice models: econometric, consumer, sociological, and combined. Each type of model postulates that a specific set of factors determines outcomes of college choice. Econometric models assume that individual students will enroll in a postsecondary educational institution if the perceived benefits of attendance are greater than those of noncollege alternatives. Econometric models indicate that the following factors are related to the college choice process: expected costs (direct and indirect), expected future earnings, student background characteristics, high school characteristics, and college characteristics. Several econometric models of college choice have been developed that employ these factors to predict the likelihood of college attendance (Bishop, 1977; Fuller, Manski, & Wise, 1982; Kohn, Manski, & Mundel, 1976; Manski, & Wise, 1983; Nolfi et al., 1978).

Consumer models of college choice employ a marketing perspective. Young and Reyes (1987) developed a consumer model that suggested the students estimated a minimal degree of costs and risks associated with college enrollment. Kotler and Fox (1985) also saw college choice from the perspective of risks and costs. Their model included four stages: (a) need arousal, or the development of an initial interest in college, (b) information gathering, (c) decision

evaluation, or the narrowing down of choices to a particular set, and (d) decision execution, or the choice of one postsecondary educational institution (PSI) over another. Young and Reyes (1987) suggested that nonmonetary costs and risks such as parental and peer expectations were more influential in the need arousal and information gathering stages than were monetary costs.

Sociological models are derivatives of status attainment research. They focus on factors that influence aspirations for college attendance. The status attainment process is concerned with the role played by various factors in the allocation of individual positions or occupations of varying degrees of prestige or status (see, for example, Sewell & Shah, 1978; Sewell, Haller, & Portes, 1969; Sewell & Hauser, 1975). Typically, family socioeconomic background and student academic ability are predicted to have a joint positive effect on aspirations for college. Parental educational expectations (Sewell & Shah, 1978), the influence of significant others and high school academic performance (Sewell, Haller, & Portes, 1969; Sewell & Hauser, 1975) were factors subsequently added as refinements to the basic model. Significant others included the students' parents, teachers, and peers.

While these models typically are examined independently of one another, there are many variables that overlap two or three types of models. It is possible to use elements from each of these models to form an integrated theory of college choice.

Purpose

This study had two purposes. First, a thorough integrative review of relevant research was used to develop a theoretical model of the predisposition stage of student college choice. Secondly, the model was tested using a sample of ninth-grade high school students and their parents. The model examined the relationship between (a) family and student background characteristics, (b) student high school experience factors, and (c) the postsecondary plans of ninth-grade students.

The remainder of this paper is organized as follows: A review of studies of student college choice as well as relevant status attainment research provides the framework for constructing a model of the predisposition stage of student college choice. Following the literature review, the analytic procedures and the empirical test of the model are presented. Finally, implications from this study are examined.

Literature review

Student college choice research

Although four types of student college choice models have been identified, this study uses the framework of a combined model: the Hossler-Gallagher Model (1987). This model outlines three stages in the process of student college choice:

1. Predisposition: students' decisions or aspirations to continue their formal education after high school.
2. Search: the process of considering types of postsecondary educational institutions to which to apply.
3. Choice: the selection of an institution to attend.

Most investigations of student college choice have either focused on the final choice stage or examined correlates of aggregate postsecondary student enrollments. Status attainment research has shed some light on the early phases of student college choice. The focus of these lines of inquiry, however, has been on advancing status attainment theory. As a result, there have been limits to the ability of status attainment research to explain the process of student college choice. Most college choice research has looked at the final stage-the actual choice stage. Almost entirely lacking in college choice research are causal studies that use large samples of high school students and attempt to understand the interaction of family and student background characteristics, student achievement, and student motivation upon the *predisposition stage* of student college choice.

Jackson (1986), Manski and Wise (1983), and Tierney (1980) used large samples to conduct structural studies of student college choice; however, two of these are dated and none of them looks specifically at the predisposition phase of college choice.

Predisposition

The predisposition stage of student college choice refers to the early phase of the process when students make the decision as to whether or not to continue their formal education after high school. A review of existing research on

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the correlates of postsecondary enrollments indicated that several family background and high school experience factors were related to a predisposition toward postsecondary education. These factors included the following: socioeconomic status, student achievement, ethnicity, gender, parental educational expectations and encouragement, high school quality, high school curriculum track, and student involvement in high school activities. Each of these factors was reviewed in detail and then used to build a causal model for this investigation.

Socioeconomic status. Socioeconomic status has been found to be positively associated with a predisposition to attend a postsecondary educational institution (Alexander et al., 1978; Corazzini et al., 1972; Ekstrom, 1985; Elsworth et al., 1982; Gilmour et al., 1978; Hause, 1969; Jackson, 1978; Perlman, 1973; Sewell et al., 1972; Tuttle, 1981; Yang, 1981). Elsworth et al. (1982) found that SES explained 9% of the variance in postsecondary participation rates among youth in Australia. Using data from the 1980 High School and Beyond Study (HSB), Tuttle (1981) reported that SES accounted for 7% of the explained variance in the postsecondary plans of high school students. Tuttle's results, however, revealed that the effect of SES was indirect, mediated by student ability. In addition, there is some evidence that the impact of SES on predisposition may differ for men and women (Marini & Greenberger, 1978; Stage & Hossler, 1989). In a multivariate analysis of the correlates of postsecondary participation In Australia, Ekstrom (1985) concluded that SES, along with sex, age, and home location, explained most of the variance in participation rates. In a qualitative study of the postsecondary plans of high school seniors in Pennsylvania, Gilmour et al. (1978) reported that as the family income and educational level of parents increased, students started to think about their postsecondary plans earlier.

SES, however, has not played an important role in explaining postsecondary participation rates in all studies. Jackson (1986) conducted a comparison of the postsecondary rates from the National Longitudinal Study of 1972 (NLS) and the HSB study. He used multiple regression techniques and found that SES, while significant, explained only 3% of the variance in postsecondary participation rates in the NLS sample and 4% of the variance in the HSB sample. This percentage is lower than that found by Tuttle (1981) using the same data base. The difference is most likely due to inclusion in the Jackson study of additional variables that were correlated with both SES and postsecondary participation. In a longitudinal study of 1,714 high school seniors, Yang (1981) employed multiple regression techniques and found that SES did not add to the amount of explained variance when parents' educational background and parental encouragement were also considered. Leslie et al., (1977) produced similar results in a study of 1,000 high school seniors in Pennsylvania that employed qualitative interview techniques and multiple regression analysis. Their results indicated that SES did not have a major impact on student plans to attend a PSI.

When structural modeling techniques were utilized, the evidence revealed that SES had a significant, although indirect, effect on postsecondary participation. Using conditional logit analysis, Manski and Wise (1983) examined the college choice decisions of 23,000 high school students who participated in the NLS study. They found that SES was associated with the likelihood of postsecondary enrollment (or predisposition), but the effect was not strong. In a path analytic study, Tuttle (1981), using HSB data, reported that SES had an indirect effect through student ability/achievement on the predisposition stage. These findings suggested that SES may not directly influence predisposition, but SES may directly influence student high school achievement, which in turn exerts a positive influence upon the predisposition stage. The work of Carpenter and Fleishman (1987) supported this line of thinking. They employed path analysis to study student college choice in Australia and reported that the effect of SES was indirect. They found that the effect of SES on predisposition was mediated through the educational expectations of parents and explained 15% of the variance in parental expectations for college attendance. Marini and Greenberger investigated the postsecondary aspirations of 2,495 high school juniors in Pennsylvania. In a structural analysis employing LISREL, SES explained 9% more of the variance in ambition for boys than girls. Conversely, SES explained 12% more of the variance in academic achievement for girls.

In total, the findings suggest that SES has an impact on predisposition, but the impact is not always direct. Instead, SES has a positive effect upon the academic success of students and the educational expectations, j perceive that others have for them.

Student ability. Trent and Medsker (1968) stated, "There is some question as to whether socioeconomic status or ability has the greater influence on the decision to attend college" (p. 3). The accumulated research shows that student ability is positively correlated with a predisposition toward postsecondary education (Bishop, 1977;

Carpenter & Fleishman, 1987; Hause, 1969; Jackson, 1978; Jackson, 1986; Manski & Wise, 1983; Mare, 1980; Peters, 1977; Rumberger, 1982; Tillery, 1973; Tuttle, 1981; Yang, 1981).

Only one study that was reviewed did not find a positive association between student ability and predisposition. Ellsworth (1982) reported that ability did not significantly add to the amount of variance explained by his path model. Manski and Wise (1983) found that high school GPA and SAT scores were the best predictors of who applied to college. Peters (1977) analyzed NLS data and concluded that high-ability high school students were eight times more likely to go to college than low-ability students. Tillery (1973) published similar findings. Jackson (1978) used data from the NLS to investigate the impact of financial aid on college choice. Using discriminant analysis, he found that academic standing improved his ability to predict college enrollment by 12%. In a follow-up study comparing analysis of NLS and HSB data, Jackson (1986) noted that academic test scores explained 6% of the variance in postsecondary participation rates for the NLS sample and 8% of the variance for the HSB sample. Grades explained 4% of the variance in postsecondary participation rates for the NLS sample and 8% of the variance for the HSB sample. Using multiple regression, Yang (1981) indicated that high school grades explained 15% of the variance in postsecondary aspirations. Grades also explained 12% of the variance in actual attendance rates of high school students (Yang, 1981).

The work of Carpenter and Fleishman (1987) also supported the importance of ability/achievement. In a path analytic study of Australian high school students, they found that academic achievement and ability had a direct effect on postsecondary participation. In addition, they reported that achievement interacted with students' self-assessments of their postsecondary potential. There was not a one-to-one correspondence between ability/achievement and postsecondary participation because some students did not assess themselves realistically. In another path analysis investigation, Tuttle (198 1) found that grades explained 6% of the variance in the predisposition toward postsecondary education among students in the HSB sample.

The cumulative weight of the results in these reviewed studies demonstrates that student ability and student achievement have a significant and direct impact upon the postsecondary plans of high school students. As ability and academic achievement rise, students are more likely to aspire to attend a PSI and they are more likely to follow through with those plans.

Parents' educational levels. A positive relationship between the level of parental education and predisposition has been found in several studies (Carpenter & Fleishman, 1987; Gilmour et al., 1978; Hossler & Stage, 1987; Jackson, 1986; Manski & Wise, 1983; Solomon & Taubman, 1973; Stage & Hossler, 1989; Trent & Medsker, 1967; Tuttle, 1981; Yang, 1981). Jackson (1986) examined NLS and HSB data and concluded that each year of parental education increased the likelihood of the student's attending a PSI by 6%. Carpenter and Fleishman (1987) reported a strong relationship between postsecondary enrollment and father's education.

Yang (1981) studied 1,714 rural high school seniors throughout their final year in high school and their first year in college. Both qualitative data and multivariate analytic techniques were used. Results revealed that the father's education exerted a stronger influence than the mother's upon the aspiration levels of the students, but the mother's education exerted more influence on actual attendance rates. Gilmour et al. (1978) reported that students with college-educated parents started thinking earlier about continuing their education after high school. However, Tuttle (1981) used path analysis to study HSB data and found that parental education was not significant in the correlation matrix.

Stage and Hossler (1989) analyzed a sample of Indiana high school students to determine the effects of parental education upon the postsecondary plans of Indiana ninth graders. The mother's level of education had a positive indirect effect upon the educational plans of both male and female students (mediated through parental encouragement). The father's level of education had both a positive direct and a positive indirect effect upon the postsecondary educational plans of male and female students (total effect was 7% for females and 8% for males). Manski and Wise (1983) produced similar findings. They compared the application probabilities of students whose parents had less than a high school education with the application probabilities of students whose parents had a college degree or more. In most income brackets, students whose parents had a college education were more than twice as likely to apply for college.

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The evidence suggests that level of parental education has a strong positive influence upon predisposition toward postsecondary education, more than either SES or student ability.

Parental expectations and encouragement. Several studies examined the impact of parental educational expectations and parental encouragement upon the postsecondary aspirations of their children. These two variables have both been employed as a measure of parental support and, although the variables are not identical, they are frequently used interchangeably. In studies reviewed for this investigation, investigators found both parental expectations and parental encouragement to be related to the likelihood of a student's attending a postsecondary educational institution (Carpenter & Fleishman, 1987; Conklin & Dailey, 1981; Ekstrom, 1985; Gilmour et al., 1978; Hossler & Stage, 1988; Murphy; *Parents, Programs, and Pennsylvania Students*, 1984; Russell, 1980; Stage & Hossler, 1989; Soper, 197 1; Tillery, 1973). Many descriptive studies reported positive relationships between parental expectations and the educational aspirations of high school students (Ekstrom, 1985; Parents, Programs, and Pennsylvania Students, 1984; Russell, 1980; Soper, 1971; Tillery, 1973). In one descriptive study of high school seniors and parents, Murphy (1981) noted that 43 % of all students and 50% of all parents said that the idea of attending a PSI was first initiated by parents.

Carpenter and Fleishman (1987) concluded that parental expectations did not directly influence predisposition; however, they did influence students' perceptions of subjective norms (perceptions of what students believed others thought they should do). This in turn was strongly related to postsecondary enrollment. Carpenter and Fleishman's results also demonstrated that as the level of parental educational expectations increased, student achievement also increased. Conklin and Dailey (1981) used multiple regression techniques to analyze a longitudinal sample of 2,700 students from southern New York State. The sample was studied during students' enrollment in tenth, eleventh, and twelfth grade. The researchers found that as the level of parental expectations increased, students were more likely to attend 4-year PSIs and more selective PSIs. Sewell and Shah (1978) presented a stronger case for the importance of parental expectations. Using data from the NLS study, they found that the educational expectations of parents explained 37% of the variance in postsecondary aspirations. Parental expectations explained more of the variance in aspiration than any other variable.

Parental expectations and encouragement appear to play an important role in the predisposition phase. Parental level of education, combined with parents' educational aspirations for their children, may be the best predictor of student postsecondary plans. Carpenter and Fleishman's (1987) study found that as parental expectations increased, so did student achievement. This may indicate a reciprocal relationship among parental expectations, student achievement, and student predisposition. As students perform better in school, parents increase their educational expectations, which in turn provide further motivation for students to improve their performance.

Peer support and encouragement. Researchers also found a relationship. between predisposition and the level of support and encouragement from peers (Carpenter & Fleishman, 1987; Coleman, 1966; Falsey & Heyns, 1984; Jackson, 1986; Russell, 1980; Tillery, 1973). Falsey and Heyns (1984) argued that one of the positive benefits of attending private schools was that students established friendship patterns that resulted in more contact with other students planning to attend PSIs. These patterns increased the likelihood that they would attend college.

Russell (1980), in a study that surveyed 13,000 high school students in Manitoba and did not use inferential statistics, reported that the postsecondary aspirations of friends were cited as one of the most influential factors in determining students' postsecondary plans. Coleman (1966) and Tillery (1973) described similar findings. In his comparison of the NLS and HSB samples, Jackson (1986) found that the presence of college-going peers produced one of the strongest correlations when he attempted to isolate the most important determinants of postsecondary enrollment.

Hossler and Stage (1987) used correlational statistics to examine the relationship between postsecondary plans of Indiana ninth graders and those of their peers; they found that those students who were not planning to attend a PSI more frequently consulted with their peers about post-high school plans. This may suggest that students who are not planning to attend college are more likely to be influenced by their peers than those students who are planning to go to college. The results from these studies suggest that peers also influence the predisposition phase of student college choice. In total, however, the evidence indicates that peer support and encouragement are not strongly associated with predisposition.

Encouragement from high school counselors and teachers. Boyer (1986), in *College: The Undergraduate Experience*, asserted that high school counselors and teachers should work in concert with high school students so that the process of student college choice would be more informed. Investigations of the influence of encouragement from high school counselors and teachers on predisposition indicated that this encouragement has little influence upon the plans of students (Ekstrom, 1985; Falsey & Heyns, 1984; Lewis & Morrison, 1975; *Parents, Programs, and Pennsylvania Students*, 1984; Tillery, 1973). Ekstrom (1985), Hossler and Stage (1987), and Lewis and Morrison (1975) reported that low-income and minority students were more likely to consult with counselors. Even among minority students, however, the actual percentage of students that relied on counselors was below 50% (Hossler & Stage, 1987; Lewis & Morrison, 1975). Overall, it appears that counselors and teachers have very little influence upon the predisposition stage of most high school students.

Student career plans and aspirations. Research on the predisposition stage of student college choice indicated that the educational goals and career aspirations of high school students were positively related to eventual enrollment in a PSI (Carpenter & Fleishman, 1987; Dahl, 1982; Gilmour et al., 1978; Hilton, 1982; Jackson, 1978; *Parents, Programs, and Pennsylvania Students*, 1984; Peters, 1977; Trent & Medsker, 1967). Four separate studies reported that over 80% of all upper level high school students who indicated that they planned to enroll in a PSI followed through on their plans (Dahl, 1982; Hilton, 1982; Peters, 1977; Trent & Medsker, 1967). Structural analysis, however, demonstrated that student aspirations were influenced by many other variables (Carpenter & Fleishman, 1987; Corazzini et al., 1972). Thus, Student aspirations may be a good predictor of student outcomes, but aspirations may simply reflect the effects of other variables.

Ethnicity. Until the late 1960s, Black students and other minorities were less likely than white students to attend a PSI (Hossler, 1984). The number of Black students enrolled in postsecondary education tripled between 1966 and 1977 (Hossler, 1986). Through most of the 1980s, participation rates slowly fell. As a result, it is difficult to anticipate the impact of race on the predisposition phase of college choice. In attempting to assess the current impact of ethnicity on predisposition, this review has been limited to a sample of recent investigations.

In an analysis of HSB data, Ekstrom (1985) looked at the impact of race upon postsecondary participation rates. She found that the effects of race disappeared when SES was controlled. Tuttle (1981) also reported that minority students of average ability had a 6% higher probability of attendance when SES was controlled. Manski and Wise (1983) and Jackson (1986) found similar patterns among Black students using NLS and HSB data sets. In a study of the postsecondary plans of Indiana ninth-grade students, Hossler and Stage (1987) found that ninth-grade minority students reported thinking more about postsecondary education than White students, White students, however, were 4% more likely to indicate that they planned to attend as PSI.

Brown (1982) compared NLS and HSB data and found that the number of Black students aspiring to attend 2- and 4-year PSIs had increased between the 1972 NLS study and the 1980 HSB study. This finding is interesting because the actual postsecondary participation rates for Black students declined after 1977. Attempts to determine the impact of race on predisposition are difficult. Current research suggests that associations between race and predisposition are the result of other background variables such as SES or parents' educational level.

Gender. Similar to those of minority students, the college enrollment patterns of women have undergone a period of transition. Women had historically been under represented in PSIs. More recently, however, there are more women than men enrolled (Update, 1986). Recent studies on the role of gender in aspirations for postsecondary participation are contradictory. Two such studies employing correlational statistics and LISREL path analytic techniques examined the postsecondary plans of Indiana ninth grade students (Hossler & Stage, 1987; Stage & Hossler, 1989). The results showed that women thought more about going to a PSI, but received less family support.

Conversely, two Australian studies (Carpenter & Fleishman, 1987,Elsworth, 1982) reported that gender had no impact on postsecondary aspirations and participation. In a path analysis model, Tuttle (1981) deleted gender because it was not significant in the correlation matrix. These findings indicate that the role of gender on predisposition is unresolved. Some evidence suggests that women may receive less encouragement to attend a PSI; nevertheless, the large increase in enrollment rates among women would suggest that gender is currently not a major factor in the predisposition stage of student college choice.

Program necessity

Involvement in high school activities. Few studies have included this factor in analyzing postsecondary plans. When it has been included, the findings indicated that high school involvement in activities (described as involvement for the remainder of this study) exerted a unique influence on predisposition. Spady (1975) examined factors associated with the postsecondary plans of 299 male high school seniors. Using multivariate techniques, he found that involvement, athletics, and service activities increased the likelihood of post-high school educational attainment.

Otto (1976), drawing on the work of Spady, tested the hypothesis that involvement in extracurricular activities increased social integration that in turn raised student aspirations. With a sample of 442 17-year-old students, Otto's path model showed that extracurricular activities had an independent effect upon educational attainment. Hearn (1984) merged a data set from the Cooperative Institutional Research Program (CIRP) and SISFAP (Study A: The Impact of Student Financial Aid Programs)—an 11th and 12th Grade Freshman Longitudinal File. Using multiple regression, he found that some extracurricular activities had a negative effect on educational attainment while other activities had a positive effect. In total, these findings indicate that high school involvement may influence predisposition toward postsecondary education.

Family residence characteristics. Research on the effects of family residence characteristics (location) on postsecondary participation suggested that place of residence may influence predisposition (Anderson et al., 1972; Astin, 1980; Dahl, 1982; Lam & Hoffman, 1979; Willingham, 1970). Most of these studies focused on the impact of living in an urban or rural location and whether close proximity to a PSI affected postsecondary participation rates.

Using multiple regression techniques to analyze SCOPE (School to College: Opportunities for Postsecondary Education), which included postsecondary participation rates from four states, Anderson et al. (1972) found that the relationship between distance from a college and college attendance was complex and fluctuated in different states and among students of various ability levels. Overall, students who lived within 20 miles of a PSI were more likely to enroll. Care must be used in interpreting these findings, however, because the variance in the effects of PSI distance from home ranged from a low of no effect on high-ability men in Illinois to an increase in college-going rates of 22% for low-ability men in Illinois. Similar findings were reported by Astin (1980) and Willingham (1970).

Anderson et al. (1972) found that students who lived in urban areas were more likely to attend a PSI. Dahl (1982), who employed discriminant analysis in a longitudinal study of kentucky high school seniors, also noted that students who resided in urban areas were more likely to enroll in a PSI. In a study of the applicant pool at a single Canadian institution, the results of a discriminant analysis revealed that students who lived in rural areas were less likely to enroll (Lam & Hoffman, 1979).

Although the effect of residence characteristics was significant in each study, it did not have a strong or even moderate influence upon predisposition toward postsecondary education. When ability and SES were controlled, the effects of residence characteristics diminished.

School quality and academic track. The effects of high school quality and academic track upon postsecondary enrollment patterns were also investigated. Findings on the effects of school quality are contradictory. Alexander et al. (1978), Elsworth (1982), and Falsey and Heyns (1984) reported findings suggesting that high school quality does affect predisposition. The data in Falsey and Heyns' 1984 study were collected in private high schools. Their findings may not be generalizable to all types of high schools. Elsworth's 1982 study was conducted in Australia and may not be generalizable to the United States. Alexander et al. (1978) found that the social status of the high school is correlated with attendance at a PSI. Using multiple regression with a sample drawn from the NLS study, however, Kolstad (1979) concluded that, when SES and other background characteristics are held constant, high school quality is only weakly correlated with enrollment in PSIs.

Research on the effects of high school curriculum indicated that being in an academic track had a positive impact on the prediction phase (Jackson, 1986; Kolstad, 1979; *Parents, Programs, and Pennsylvania Students*, 1984; Peters, 1977). The Pennsylvania study, in fact, found that high school track was a better predictor of attendance in a PSI than grades. Jackson (1986) also found strong zero-order correlations between academic track and postsecondary enrollment. However, Kolstad (1979) reported that academic track did not exert much influence on postsecondary participation when background characteristics were controlled.

Unfortunately, there were no path analysis models to indicate whether other variables were causally linked with academic track. It appears that a student's academic track is correlated with the predisposition phase of student college choice, but the precise nature of the relationship between academic track and the decision to attend a PSI cannot be specified. Structural models might be expected to show that SES, ability, and parental encouragement exert a strong influence upon the academic track that students are enrolled in during high school.

When these factors are viewed collectively, those that were consistently found to be associated with predisposition included SES, student ability/ achievement, parental education, parental encouragement, and student involvement in high school activities. These factors were used to create a theoretical model that was tested; the results are presented in this paper. Because enrollment patterns among Black students and women have changed dramatically during the past two decades, ethnicity and gender were included in the model.

A structural model of students' predisposition to college

Although research on college choice has yielded information about the factors associated with predisposition, few structural models have been developed. The research on status attainment is more extensive and provides some conceptual leads for developing a model of the predisposition stage.

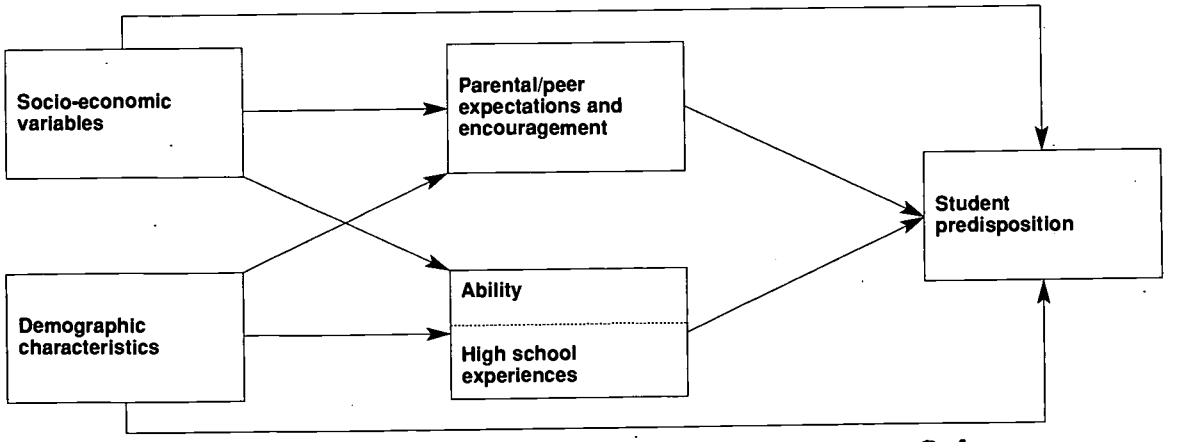
Much of the status attainment research postulates that social status mediated through educational attainment affects occupational status (Colclough & Horan, 1983). The Wisconsin status attainment model, first introduced by Sewell, Haller, and Portes (1969), used plans to attend college as an outcome measure in their model of status attainment.

The basic question raised by status attainment research was, "By what mechanisms are social origins translated into attainment outcomes?" (Sewell, Haller, & Ports, 1969, p. 83). Initially, status attainment models used socioeconomic factors to explain the status attainment process. Typically, family socioeconomic background and student academic ability were predicted to have joint positive effects on educational and occupational aspirations. However, starting with the work of Sewell, Haller, and Portes, sociopsychological variables were added to mediate the effects of social origin on educational and occupational attainment.

Despite these refinements to the original work of Blau and Duncan (1967), Rumberg (1983) noted that there was marked disagreement as to how family background influenced adult status attainment. Bowles (1972) argued that the effects of family background were largely direct. Others (Featherman & Hauser, 1976; Sewell, Haller, & Portes, 1969) asserted that the effects of family background were indirect. For example, parents from high status backgrounds might instill a favorable attitude toward education in their children or they might impart the value of forgoing present consumption and saving for education. Spady (1975) and Otto (1976) suggested that participation in extracurricular activities served as a mediating variable between social origins and attainment.

Drawing on the literature of college student choice as well as the work of sociologists who studied status attainment, we developed a theoretical model of predisposition to attend college, shown in Figure 1. As depicted in the model,

Figure 1
A theoretical model of high school students' predisposition to college



Program necessity

family background characteristics were posited to influence levels of significant others' expectations for the student, student achievement, and degree of student involvement in high school activities. Family background characteristics also were expected to affect the criterion variable, students' educational level plans, both directly as well as indirectly through parents' expectations and high school experience factors. Finally, parents' expectations and high school experience factors were Posited to have a direct influence on students' educational plans. The following questions guided the analysis:

1. What were the relationships among student background characteristics and students' high school experience factors?
2. What were the relationships between student background factors and students' educational level plans?
3. What were the relationships between high school experience factors and students' educational level plans?

Method

Sample

The sample for this study was drawn from all students attending 21 high schools within the state of Indiana. A cluster design was used to select schools to assure that the sample represented adequate numbers of ethnic minorities, students at all levels of socioeconomic status, and rural as well as metropolitan high schools. The sample was part of a data set collected by the Indiana College Placement and Assessment Center, the research and development arm of the state of Indiana, in its effort to increase postsecondary education participation rates.

In January of 1987, families of ninth-grade students in the targeted high schools were mailed a packet that contained two survey instruments, one for parents and one for students. A second survey was mailed a month later; once again there was one survey for students and one for parents. The four questionnaires sought information in the following categories: demographics, family background, high school experiences, and student parental expectations. Seventy-eight percent of the sample (3,834) responded to at least one of the two mailings. Fifty-one percent responded to both surveys.

A study was conducted to determine whether nonrespondents (those who had not responded to either mailing) differed from respondents. One hundred and twenty-five nonrespondents were surveyed by telephone. Results indicated that there were few significant difference between respondents and nonrespondents. Black students (the number of non-Black minority students in Indiana is small) were slightly more likely to have returned at least one of the two surveys. More importantly, nonrespondents were less likely to be planning to attend a postsecondary educational institution. Therefore, the results that follow may not be representative of students who are not committed to continuing their formal education beyond high school.

The data were analyzed using responses from those who had completed both surveys; the data included all students for whom none of the variables of interest were missing (2,497). After deleting respondents with missing data, 51% of the students in the total sample remained. A comparison of this subsample with the original data set revealed few differences. Parents' educational levels for the groups were virtually the same. For fathers, 24% in both groups had completed at least a bachelor's degree. For mothers, 17% of the original group and 18% of the subsample had completed a bachelor's degree. Seventy-one percent of the larger sample and 71% of the subsample had parents who were married. Both groups measured 1.23 for number of children enrolled in postsecondary education. Minorities were slightly under represented in the subsample, 9.6% compared with 10 % (although they were overrepresented in the total study). Finally, the sample was 49.3% female.

Aspirations for parents and students in both groups were similar. Sixty-eight percent of parents in the total sample and 69% in the subsample expected their children to earn at least a bachelor's degree. Sixty-three percent of students in the total sample and 64% in the subsample expected to earn at least a bachelor's degree.

Measurement of variables

The mother's education and the father's education were measured using the same 7-category scale ranging from completion of grade school to postgraduate degree. Family income was measured on a 10-category scale ranging from less than $10,000 to over $50,000. Both parents' expectations for students and students' aspirations were measured using a 6-item scale ranging from high school diploma (or uncertain) to professional degree. High school

achievement was measured by a self-reported 5-category scale ranging from A+ to A- through F. High school activities were measured by totaling responses from a series of activity items to which students responded on a 4-point scale ranging from very active to not active. Variables are described in detail in the Appendix.

Analysis

To test the structural model of predisposition to college, the maximum likelihood estimation technique, LISREL VII Goreskog & Sorbom, 1989), was employed. LISREL, a structural equations technique similar to path analysis, was used to examine relationships between variables in the model. It provides estimates of unknown coefficients in a set of linear structural equations. LISREL is well suited for exploring the complex models frequently needed to explain student behavior. There were several reasons for the choice of LISREL as an analysis technique. First, LISREL provides a more comprehensive test of a model's empirical adequacy than do ordinary least squares analysis techniques. Chi-square statistics for the fit of the entire model and modification indices allow the researcher to make theoretically sound adjustments to the model to improve fit. Incremental changes to the model are easily evaluated to determine effects on the overall causal structure. Second, it is possible to specify correlations among variables that may be related, but not related causally. Finally, within LISREL, multiple measures can be employed to estimate latent constructs simultaneously with analysis of the model (Stage, 1988, 1989).

Table 1

Means, Standard Deviations, and Covariance Matrix of Variables in Model (N=2497)

Variable	1	2	3	4	5	6	7	8	9
M	4.681	4.520	6.061	1.493	.904	3.607	22.294	2.740	3.540
SD	1.243	1.099	2.683	.500	.295	1.562	5.013	.788	1.716
1. Father's education	1.544								
2. Mother's education	.712	1.207							
3. Family income	1.427	.959	7.197						
4. Gender	-.033	-.004	-.009	.250					
5. Ethnicity	.051	.038	.137	-.001	.087				
6. Parents' expectations	.642	.489	.893	.016	.004	2.439			
7. Student's activities	.154	.326	-.052	.208	-.197	1.169	25.132		
8. GPA	.247	.215	.332	.041	.021	.471	.433	.621	
9. Student's aspirations	.571	.409	.777	.057	.005	1.503	1.571	.488	2.943

Using list-wise deletion, we created a covariance matrix containing the variables to be studied, and we employed this matrix to estimate the model. Means, standard deviations, and covariances are presented in Table 1. The model was specified so that the father's education and mother's education were joint indicators of the parents' education construct.[1] Additionally, no speculation was made about causal relationships among the intervening endogenous variables: parental expectation, high school activities, and high school GPA.[2] Instead, covariances of the disturbances among these variables, which significantly improved the fit of the model to the data, were estimated within the PSI matrix.[3]

Results

Analysis of the model of high school students' predisposition to college resulted in a chi-square of 16.76 for 8 degrees of freedom. A chi-square to degree of freedom ratio of less than 3 indicates a good fit of a model to its data (Joreskog; & Sorbom, 1989; Stage, 1990). The goodness-of-fit index for this model was .999, and the adjusted goodness-of-fit index was .992 (on a zero to one scale, one indicating perfect fit). Root-mean-square residual for the analysis was .028 (on a zero to one scale, zero indicating no residual). These statistics indicate a very good fit of the model to the data. Results of the analysis are presented in Table 2. Standardized path coefficients (beta weights) along with significance levels are indicated.

Influence of family background characteristics

Two background characteristics, parents' combined educational level and gender, significantly influenced all four dependent variables. Parents' educational level was positively related to expectation for the student, higher GPA,

greater involvement in activities, and students' aspirations. Family income was not significantly related to any of the dependent variables. For females in this sample, there were significantly higher parents' expectations, GPA, activities in high school, and aspirations.

Ethnicity was significantly and negatively related to involvement in activities (higher for minorities). And, ethnicity was significantly and negatively related to parental expectations (higher for minorities) and positively related to high school GPA (lower for minorities). Minority and nonminority students did not differ significantly in their aspirations.

Table 2

Standardized Path Coefficients for the Structural Model of Students' Predisposition to Attend College (N=2497)

	Dependent Variable			
Independent Variable	Parents' expectations	GPA	Student's activities	Student's aspirations
Parents' education	.435***	.350***	.091***	.094***
Family income	-.003	-.032	-.026	.003
Gender	.042*	.122***	.086***	.040**
Ethnicity	-.067***	.035*	-.144***	-.012
Parents' expectations	–	–	–	.452***
GPA	–	–	–	.090***
Student's activities	–	–	–	.143***

*p <.05 **p<.01 ***p<.001

Figure 2

Reduced path model of students' predisposition to college

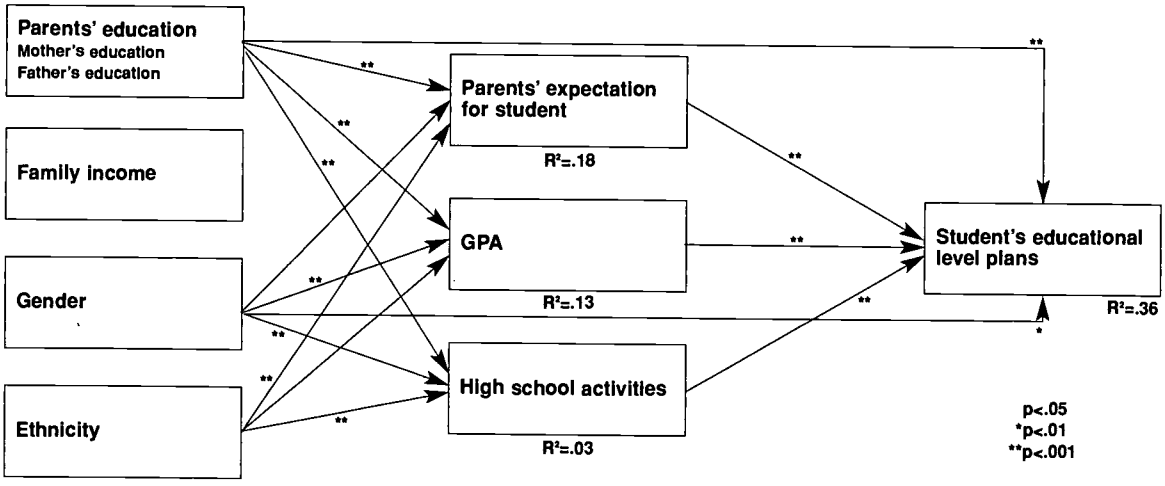


Table 3

Unstandardized Direct, Indirect, and Total Effects and Significances Within The Model

	Parents' education			Family income			Gender		
Dependent variable	Dir	Ind.	Tot.	Dir.	Ind.	Tot.	Dir.	Ind.	Tot.
Parents' expectations	.680***	–	.680	-.002	–	-.002	.131*	–	-.131
GPA	.276***	–	.276	-.009	–	-.009	.192***	–	.192
Student's activities	.459***	–	.459	-.049	–	-.049	.867***	–	.867
Student's aspirations	.162***	.438***	.600	.002	-.005	-.003	.136**	.151***	.287

*p<.05 **p<.01 ***p<.001

Influences of high school experience factors

Parental influence and both high school experience factors depicted in the model (grades and activities) were significantly related to students' aspirations. As expected, the strongest relationship was with parents' expectations; that standardized score was three times larger than the next highest standardized score. Higher levels of high school activities and better grades also related positively and significantly to students' aspirations.

The final empirical model, reduced to depict only significant paths, is shown in Figure 2. The model as depicted resulted in explanation of 36% of the variance in students' educational level plans. Additionally, the model explained 18% of the variance in parents' expectations for students, 13% of the variance in students' self-reported achievement, -but only 3 % of the variance in students' involvement in high school activities.

Indirect effects

Table 3 presents direct, indirect, and total effects and significances within the structural model. Parents' education, student gender, and ethnicity exerted significant indirect effects on students' aspirations.

Adequacy of the model

The structural model of high school students' predisposition to attend college proved to be a useful tool in analyzing student college choice. Several paths specified in the model proved to be significant predictors of parents' expectations for students and students' educational level plans. For this group of ninth graders, the model explained 36% of the variance. The model also supported previous studies from which it was drawn.

There were some limitations to this study. Students and their parents who participated in this study filled out a total of four questionnaires about themselves and their college attendance plans. It is probable that parents and/or students who did not have college plans were less likely to comPlete the surveys. The sample came from a targeted group of high schools in the state of Indiana. It was not a random sample of students from throughout the state or the United States. Nevertheless, the model shows promise for a better understanding of the college choice process.

The influence of parental education was strong throughout the model. Parental education had a significant direct effect on parents' educational expectations for their children, high school students' GPA and activities, and students' aspirations. In addition, parental education had a significant indirect effect on predisposition. Family income had no significant causal relation ship to other variables in the model. Student GPA exerted a strong direct influence upon predisposition. Gender was directly related to students' aspirations and indirectly related through student GPA and high school activities. Females in the sample had higher GPAs, were more involved in high school activities, and had higher educational aspirations. The findings support the earlier work of Marini and Greenberger (1978). Marini and Greenberger found that differences in the educational aspirations of male and female high school juniors from Pennsylvania could be explained by GPAs and parental levels of education. In this study, GPA and parental education were also associated with differing levels of educational aspirations among ninth-grade students.

Ethnicity produced one surprising result. The parents of minority students had higher educational expectations despite the fact that minority students had lower GPAs. Minority parents' higher levels of educational expectations partially support Brown's (1982) finding that minority students had higher levels of expectation than did similar majority students. in the present study, however, there were no differences in the actual levels of student aspirations when comparing minority and majority students. However, ethnicity had 2 strong indirect effect on student aspiration mediated by high school activities and GPA. It appears that the minority students in this sample were more involved in high school activities and reported higher GPAs, which in turn resulted in higher levels of postsecondary educational aspiration.

Ethnicity			Parents' expectations			GPA			Student's activities		
Dir	Ind.	Tot.	Dir.	Ind.	Tot.	Dir.	Ind.	Tot.	Dir.	Ind.	Tot.
-.354***	–	-.354	–	–	–	–	–	–	–	–	–
.094*	–	.094	–	–	–	–	–	–	–	–	–
-2.450***	–	-2.450	–	–	–	–	–	–	–	–	–
-.069	-.221***	-.290	.496***	–	.496	.312***	–	.312	.031***	–	.031

Although the percentage of explained variance compares favorably to other studies of college choice, it is possible that alternative approaches would prove more fruitful. The explanatory power of variables in the model might be increased by testing this model on more homogeneous populations chosen on the basis of gender or ethnicity. in addition, this data set did not permit the investigators to examine the effects of such factors as sibling modeling or the characteristics of the high schools in which the students were enrolled. The addition of these variables might have increased the amount of explained variance in the model. In any research effort, practical limitations preclude the inclusion of many potentially interesting and possibly influential variables. Such unavoidable "misspecification" in structural equations analysis can result in low explained variance or an exaggeration of the influence of variables included in the model (Russell, 1985, 1989). Nevertheless, because results from this study corroborate many previous findings, the utility of the model should be further explored.

Future research

Theory-based studies of the stages of college choice should continue to be conducted. The strong positive effects of parental educational expectations on the predisposition stage of college choice indicate that future studies should look carefully at how parental expectations are communicated. How do parents provide support and encouragement for the educational expectations they have for their children?

This study focused on the role of parental encouragement in the formation of future educational aspirations. It would be interesting to see if parental encouragement has a similar impact on the choice of the postsecondary educational institution in which the student actually enrolls (the choice stage of college choice). Additionally, do student and parental expectations also affect the search stage of college choice? Do the same variables explain the outcomes of the next two stages of student college choice? In addition to quantitative studies, ethnographic research techniques might be useful in examining all three stages of college choice. There is a dearth of research on the actual formation and development of educational aspirations. Ethnographic research might shed light on an important developmental process.

The causal model tested in this study provides a useful framework for studying student college choice. Nevertheless, whether the same factors are as important and interact in similar patterns among Black, Hispanic, or other ethnic groups is not known. Recent studies conducted by Hossler, Schmit, Vesper, and Bouse (1990) and Williams (1990) suggest that existing models of college choice are not adequate for Black students. More research on the college choice for other ethnic groups is needed.

Implications for practice

This study supports previous research indicating that parents' education and expectations exert strong influences on the postsecondary plans of high school students. The findings suggest that attempts to influence the postsecondary aspirations of high school students must begin early and be targeted at parents as well as students. Over 70% of this sample had established postsecondary educational plans by the ninth grade.

Policymakers who wish to increase postsecondary participation rates should concentrate their efforts on families whose parents have less exposure to education. Students whose parents have low levels of education and who have low GPAs could still benefit from some form of postsecondary education. They could be admitted to some 2-year colleges and vocational institutes. These are the students who are less likely to be planning to continue their education after high school. Furthermore, more targeted interventions should be directed at minority students and their families. They and their families have educational aspirations that equal or exceed those of similar majority students in the ninth grade. Yet, current enrollment rates suggest that by the time minority students reach high school graduation they are less likely to enroll.

The process of student college choice is complex, developing over several years. In recent years, federal and state policy incentives have been aimed at increasing postsecondary participation rates to increase the pool of trained workers and to redress problems of equity and access. Frequently, these initiatives have focused on financial aid interventions (Brouder, 1987; Dixon, 1986). Traditionally, high school students do not learn about financial aid until their junior and senior years in high school (Hossler, Schmit, & Bouse, 1990). This study of predisposition of ninth graders indicates that many students make the decision to pursue postsecondary education before they have learned about financial aid options. The results from this study indicate that interventions need to address basic

questions of parental and student educational aspirations. Such interventions need to begin earlier and to be directed at families as well as students.

Appendix

Measurement of variables

Background characteristics

Mother's education: 1, completion of grade school; 2, completion of 8th grade; 3, some high school; 4, high school diploma; 5, some college; 6, graduated from college; 7, post-graduate degree.

Father's education: same as mother's.

Family income: 1, < 10,000; 2, 10,000–14,999; 3, 15,000–19,999; 4, 20,000–24,999; 5, 25,000–29,999; 6, 30,000–34,999; 7, 35,000–39,999; 8, 40,000–44,999; 9, 45,000–49,999; 10, 50,000 +.

Ethnicity: 0, minority; 1, nonminority.

Gender: 1, male; 2, female.

Student experience factors

Parents' expectations: 1, high school diploma or uncertain; 2, vocational-technical certificate; 3, 2-year college degree; 4, 4-year college degree; 5, master's degree; 6, professional degree.

High school achievements: 1, A + to A -; 2, B + to B -; 3, C + to C -; 4, D + to D-; 5, F.

High school activities: Art, athletics, cultural events, debate or speech, drama, religion, journalism, social clubs, special interest groups, music, radio/TV, student government, and ROTC-ranging from 1, very active, to 4, not active.

Student's predisposition

Students' aspirations: 1, high school diploma or uncertain; 2, vocational-technical certificate; 3, 2-year college degree; 4, 4-year college degree; 5, master's degree; 6, professional degree.

Notes

An earlier version of this paper was presented at the annual meeting of the American Educational Research Association, New Orleans, 1988. The authors would like to thank the Indiana College Placement and Assessment Center and the Indiana Higher Education Commission for their support of this study. In addition, we would like to thank John Braxton for his assistance and anonymous reviewers for their suggestions.

[1] In lambda-x, father's education was fixed to one and mother's education was free to be estimated. The resulting lambda-*X* value, .715 (similar to a factor analysis loading score), was significant at the .001 level.

[2] The gamma matrix was specified as full with all parameters free to be estimated. Within phi, all but two elements (between student gender and family income and between student gender and ethnicity) were left free to vary. Theta delta had only two free elements, the variances of mother's education and father's education.

Beta was specified as subdiagonal, and only structural effects on the final criterion, student's educational level plans, were estimated. Within the matrix psi, residual covariances among the antecedent endogenous; variables were estimated.

[3] Upon a reviewer's suggestion, the analysis was rerun specifying the covariances among disturbances of the intervening variables to be zero. The resulting chi-square (219.47) for degrees of freedom (11) indicated a significantly poorer fit of the model to the data.

References

Alexander, K.L., D'Amico, R.J., Fennessey, J., & McDill, E.L.. 1978. *Status composition and educational goals: An attempt at clarification.* Washington, DC: National Institute of Education. (ED 160 537)

Anderson, C., Bowman, M.J., & Tinto, V. 1972. *Where colleges are and who attends.* New York: McGraw-Hill.

Astin, A.W., Henson, J.W., & Christian, C.E. 1980. *The impact of student financial aid programs on student college choice.* Washington, DC: Office of Planning, Budgeting, and Evaluation, U.S. Office of Education. 289–298.

Blau, P.M., & Duncan, O.D. 1967. *The American occupational structure.* New York: Wiley and Sons.

Bishop, J. 1977. The effect of public policies on the demand for higher education. *Journal of Human Resources, 5*:285–307.

Bowen, H.R. 1977. *Investment in learning: Individual and social value of American education.* San Francisco: Jossey-Bass.

Bowles, S. 1972. Schooling and inequality from generation to generation. *Journal of Political Economy, 80*:219–251.

Boyer, E.L. 1987. *College: The undergraduate experience.* New York: Harper and Row.

Brouder, K. 1987. Parental attitudes toward pre-college planning. *Journal of Student Financial Aid, 17*(2):5–13.

Brown, K.G. 1982, May. *Postsecondary plans of high school seniors in 1972 and 1980 Implications for student quality.* Paper presented at the Association for Institutional Research (AIR) Forum, Denver. (ED 220 060)

Carpenter, P.G., & Fleishman, J.A. 1987. Linking intentions and behavior: Australian students' college plans and college attendance. *American Educational Research Journal, 24* (1):79–105.

Colclough, G., & Horan, P.M. 1983. The status attainment paradigm: An Application of the Kuhnian perspective. *The Sociological Quarterly, 24*:25–42.

Coleman, J.S. 1966. Peer culture and education in modem society. In T.M. Newcomb and E.K. Wilson (Eds.), *College peer groups. Problems and prospects for research* (pp. 244–269). Chicago: Aldine.

Conklin, M.E., & Dailey, A.R. 1981. Does consistency of parental encouragement matter for secondary students? *Sociology of Education, 54*:254–262.

Corazzini, A.J., Dugan, D.J., & Grabowski, H.G. 1972. Determinants and distributional aspects of enrollment in U.S. higher education. *Journal of Human Resources, 7*:39–59.

Dahl. R.W. 1982, May. *College attendance and institutional choice. Results from the Kentucky longitudinal study.* Paper presented at the Annual Forum of the Association of Institutional Research, Denver. (ED 220 227)

Dixon, R. 1986. Parents of Illinois eighth graders: A survey of their knowledge about academic and financial planning for their child's education beyond high school. *Journal of Student Financial Aid, 18*:29–36.

Ekstrom, R.B. 1985. *A descriptive study of public high school guidance. Report to the Commission for the Study of Precollegiate Guidance and Counseling.* Princeton, NJ: Educational Testing Service.

Elsworth, G., Day, N., Harworth, R., & Andrews, J. 1982. *From high school to tertiary study. Transition to college.* Hawthorn, Victoria: Australian Council on Education.

Falsey B., & Heyns , B. 1984. The college channel: Private and public schools reconsidered. *Sociology of Education, 57*:111–122.

Featherman, D.L., & Hauser, R.M. 1976. Sexual inequalities and socioeconomic achievement in the United States. *American Sociological Review, 41*:462–483,

Fuller, W., Manski, C., & Wise, D. 1982. New evidence on the economic determinants of postsecondary schooling choices. *Journal of Human Resources, 17*(4):472–498.

Gilmour, J.E., Jr., Spiro, L.M., & Dolich, I.J. 1978. *How high school students select a college.* University Park, Pennsylvania: Pennsylvania State University. (ED 208 705)

Hause, J.C. 1969. Ability and schooling as determinants of lifetime earnings, or if you're so smart, why aren't you rich. *American Economic Review, 59*:289–298.

Hearn, J.C. 1984. The relative roles of academic ascribed and socioeconomic characteristics in college destinations. *Sociology of Education, 57*:22–30,

Hilton, J. 1982. *Persistence in college.* New York: The College Board.

Hodgkinson, H.L. 1983. *Guess who's coming to college., Your students in 1990.* Washington, D.C.: National Institute of Independent Colleges and Universities.

Hossler, D. 1984. *Enrollment management: An integrated approach.* New York: The College Board.

Hossler, D., Braxton, J., & Coopersmith, G. 1989. Understanding student college choice. In J. Smart (Ed.), *Higher education: Handbook of theory and research* (vol. 5, pp. 231–288). New York: Agathon Press.

Hossler, D., & Gallagher, K.S. 1987. Studying student college choice: A three phase model and the implications for policy makers. *College and University, 2*(3):207–221.

Hossler, D., & Stage, F. 1987. *An analysis of student and parent data from the pilot year of the Indiana College Placement and Assessment Center.* Bloomington, IN: Indiana College Placement and Assessment Center.

Hossler, D., & Stage F. 1988, April. *Family and high school experience factors' influence on the postsecondary plans of ninth-grade students.* Paper presented at the annual meeting of American Education Research Association, New Orleans.

Hossler, D., Schmit, J.S., Vesper, N., & Bouse, G. 1990, April. *The effects of mothers education and employment status upon the educational plans of high school students.* Paper presented at the annual meeting of American Education Research Association, Boston.

Jackson, G.A. 1986, February. *MISSA, the fall of Saigon, and college choice, 1972 to 1980.* Paper presented at the annual meeting of the Association for the Study of Higher Education, San Diego.

Jackson, G.A. 1978. Financial aid and student enrollment, *Journal of Higher Education, 49*:548–574.

Jackson, G.A. 1982. Public efficiency and private choice in higher education. *Educational Evaluation and Policy Analysis, 4*(2):237–247.

Joreskog, K., & Sorbom, D. 1989. *LISREL VII. Analysis of linear structural relationships*. Mooresville, IN: Scientific Software.

Kohn, M.G., Manski, C.F., & Mundel, D. 1976. An empirical investigation of factors influencing college going behaviors. *Annals of Economic and Social Measurement, 5*, (4):391–419.

Kolstad, A.. 1979, April. *The influence of high school type and curriculum on enrollment in higher education and postsecondary training*. Paper presented at the annual meeting of the American Educational Research Association, San Francisco. (ED 173 627).

Kotler, P., & Fox, K. 1985. *Strategic marketing for educational institutions*, Englewood Cliffs, NJ: Prentice-Hall.

Lam, J., & Hoffman, D. 1979. *The study of sequential student participation in university in a changing environment*. Manitoba, Canada: Brandon University. (ED 198 785)

Leslie, L.L., Johnson, G,P., & Carlson, J. 1977. The impact of need-based financial aid upon the college attendance decision. *Journal of Education Finance, 2*:269–286,

Lewis, G.H., & Morrison, J. 1975. *A longitudinal study of college selection* (Technical Report No. 2.). Pittsburgh: Carnegie-Mellon University, School of Urban and Public Affairs.

Maguire, J., & Lay, R. 1981. Modeling the college choice process. *College and University, 56*(2):123–139.

Manski, C.F., & Wise, D.A. 1983. *College choice in America*. Cambridge, MA: Harvard University Press.

Mare, R.D. 1980. Social background composition and educational growth. Demography, 16:55-71.

Marini, M.M., & Greenberger, E. 1978. Sex differences in educational aspirations and expectations. *American Education Research journal, 15*(1):67–79.

Murphy, P.E. 1981. Consumer buying roles in college choice. *College and University, 57*:141–150,

Nolfi, G.J. 1978. *Experiences of recent high school graduates*. Lexington, MA: Lexington Books.

Otto, L. 1976. Social integration and the status attainment process. *American Journal of Sociology, 81*:1360–1383.

Parents, programs, and Pennsylvania students. 1984. Harrisburg, PA: Pennsylvania Association of Colleges and Universities.

Perlman, R. 1973. *The economics of education: Conceptual problems and policy issues*. New York: McGraw-Hill.

Peters, W.B. 1977. *Fulfillment of short-term educational plans and continuance in education*. Washington, DC: National Center for Educational Statistics.

Rumberger, R.W. 1982. The influence of family background on education, earnings and wealth. *Social Forces, 61*:773–775.

Russell, C.N. 1980. *Survey of grade 12 students' postsecondary plans and aspirations*. Manitoba, Canada: Department of Education, Manitoba Province. (ED 201 225)

Russell, R.V. 1985. Simultaneous structural equations in leisure research. *Society and Leisure, 8*:371–383.

Russell, R.V. 1989. Recreation and quality of life in old age: A causal analysis. *Journal of Applied Gerontology, 9*:77–90.

Sewell, W.H., Haller, O.H., & Ohlendorf, G.W. 1972. The educational and early occupational status attainment process: Replication and revision. *American Sociological Review, 40*:1014–1027.

Sewell, W.H., Haller, A.O., & Portes, A. 1969. The educational and early occupational attainment process. *American Sociological Review, 34*:82–92.

Sewell, W.H., & Hauser, R.M. 1975. *Education, occupation and earnings: Achievement in early career*. New York: Academic Press.

Sewell, W.H., & Shah, V.P. 1978. Social class, parental encouragement, and educational aspirations. *American Journal of Sociology, 3*:559–572.

Solomon, L.C., & Taubman, P.J. 1973. *Does college matter?* New York: Academic Press.

Soper E. L. 1971. *A study of factors influencing the postsecondary educational plans of Utah high school students*. Washington, DC: National Center for Educational Statistics.

Spady, W.G. 1975. Lament for the letterman: Effects of peer status and extra2curricular activities on goals and achievement. *American Journal of Sociology, 75*:680–702.

Stage, F.K. 1988. University attrition: LISREL with logistic regression for the persistence criterion. *Research in Higher Education, 29*(4):343–357.

Stage, F.K. 1989. Motivation, academic and social integration, and the early dropout. *American Educational Research Journal, 26*:385–402.

Stage, F.K. 1990. LISREL: An introduction and applications in higher education research. In J. Smart (Ed.), *Higher education: Handbook of theory and research* (vol. 6, pp. 427–466). New York: Agathon Press.

Stage F.K., & Hossler, D. 1989. Differences in family influences on college attendance plans for male and female ninth graders. *Research in Higher Education, 30* (3):301–314.

Tierney, M. 1980, March. *Student college choice sets; Toward an empirical characterization.* Paper presented at the annual meeting of the Association for the Study of Higher Education, Washington, DC.

Tillery, D. 1973. *Distribution and differentiation of youth: A Study of transition from school to college.* Cambridge, MA: Ballinger.

Trent, J., & Medsker, L. 1967. *Beyond high school A psychological study of 10,000 high school graduates.* San Francisco: Jossey-Bass.

Tuttle, R. 1981. *A path analytical model of the college going decision.* Boone, NC: Appalachian State University. (ED 224 434)

Update. 1986. A report from the Washington office of the College Board, Washington, DC: College Board.

Williams, P.D. 1990. *Student predisposition to college, campus experiences, and educational attainment.* Unpublished doctoral dissertation, Indiana University, Bloomington, IN.

Willingham, W.W. 1970. *Free access to higher education.* New York: The College Board.

Yang, S.W. 1981, July. *Rural youths' decisions to attend college: Aspirations and realizations.* Paper presented at the annual meeting of the Rural Sociological Association, Guelph, Ontario. (ED 207 765)

Young, M.E., & Reyes, P. 1987. Conceptualizing enrollment behavior. *Journal of Student Financial Aid, 17*(3):41–49.

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4

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Increasing African Americans' Participation in Higher Education

African American High-School Students' Perspectives

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Researchers and policymakers rarely include the individuals who are the focus of their studies in the development of solutions to their own problems. Although individuals or groups are often asked their opinions about their plight, they are seldom asked to participate in the development of programs or models that will improve their lives. The very individuals who would be most affected and who should be the first to be consulted are not given a voice in the dialogue, as it they had no stake in these important decisions that determine the course of the policies that will affect their lives. The process of deciding how to increase African Americans' participation in higher education, one of the most important commodities for upward mobility in our society, provides a prime example. African American high-school students arc rarely, if ever, asked for their perceptions of the problems or, more important, for their ideas about possible solutions.

My intent in this study was to explore African American high-school students' perceptions of barriers to African Americans' participation in higher education and to explore their perceptions of effective program, for addressing the problems. In particular, this study asked two primary questions: What are the barriers African Americans face in their decision to participate in higher education? What are the solutions that African American students recommend to increase African Americans' participation in higher education? Of particular interest was how these students' responses could add to college choice and economics of education literature and to policy making.

This study is a qualitative inquiry across a range of cities, schools, and family circumstances, and it was intentionally designed to give African American students an opportunity to express their perceptions in their own voices. The study concludes that such voices provide valuable insights for researchers arid policymakers.

Research in context

There is still reason for great concern about African Americans' participation in higher education. The most recent (1994) *Status on Minorities in Higher Education* report indicates that African-Americans continue to trail Whites in their rate of college participation by 9% (42% to 32.9%). The editors, Carter and Wilson (1994) in this thirteenth annual status report indicate that, in fact, "overall, the 1993 college participation rate for African American high-school graduates showed little change from 1992" and that African Americans had "experienced little improvement in college participation since 1990, when they posted a rate of 33 percent" (p. 2). The 1992 *Status on Minorities in Higher Education* report indicated that "unlike enrollment figures, which provide a snapshot of college attendance for a particular period, participation rates track both the current enrollment and the recent postsecondary attendance patterns of a given age group, particularly youth ages 18 to 24" (Wilson, 1992, p. 6). According to that report, the participation rate of African Americans in higher education in 1991 showed a 1.8% decline from 1990.

Findings on African Americans' participation in higher education from the 1994 *Status on Minorities in Higher Education* report are particularly troubling, because educators and economists are in agreement on the importance of increasing African Americans' participation in higher education. Reports such as that of the Hudson Institute Workforce 2000 have indicated that by the twenty-first century, one of three jobs will require schooling beyond the secondary level, In his book *Faded Dreams*, Carnoy (1995) discussed the importance of African Americans increasing their educational opportunities. More specifically, Simms (1994) discussed the direct relationship between higher education and African Americans' participation in the economy.

Other economics of education theorists (i.e., Becker 1975; Cohen 1979; Freeman, R., 1976; Schultz, 1961; Thurow, 1972) have documented that although White Americans, over time, receive a higher return on their investment in

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higher education than African Americans, those African Americans who do attend higher education institutions fare better than those who do not. Previous research findings (Freeman, K., 1989) on the difference between White Americans' and African Americans' return on investment in graduate business training (using seven of the MBA programs that comprise the Consortium schools) revealed that African American MBA graduates in those programs received higher starting salaries, on average, than did White Americans. African Americans who receive a higher education also benefit themselves and society non-monetarily. For instance, those African Americans who are educated are more likely to educate their children.

Even though these findings suggest that African Americans are better off attending higher education institutions, the 1994 *Status on Minorities in Higher Education* report indicated that the African American college participation rate in the 1990s has fluctuated between stagnation and decline and that although the 1990s have shown a slight increase in African American enrollment in higher education, there is still a sizeable gap between White American and African American participation.

Much of the research on the cause of stagnation or decline in African American college participation has focused on the increasing investment students need to make to obtain a higher education, brought about, for example, by rising tuition costs and a decline in financial aid. (Nettles, 1988; Wilson, 1989). Little research has been conducted on African Americans' perception of the value of a college degree (the return on investment). Is it worth the cost? The recent cutback in funding for higher education specific to minorities makes it even more imperative to derive new ways of motivating African Americans to attend college.

Researchers have tended to focus on increasing the motivation and aspiration of African American students to attend higher education while excluding cultural considerations; the prescription for attracting and retaining students has been based on models that have paid little, if any, attention to the heritage and culture of African Americans. Moreover, through their policies and practices, policymakers and educators alike have tended to focus on remedies for increasing African American students' participation in higher education with little or no input from the students themselves.

Few studies have given voice to African American students, who are the ones that are in the best place to assess the problems and judge the programs that have most benefited them or their peers. By all accounts, the college choice process for African American high- school students is a complicated process, which necessarily has to take into consideration the context of their culture; otherwise, the solutions could be based on models that may not fit the circumstances of these students. It has been my intent with this research to review previous background information on the choice process and at the same time allow these students to voice their own personal accounts. In order to increase African American students' participation in higher education—and it is obvious that current models are not working—it is critical that educators and policymakers better understand how these students, based on their experiences, perceive what has worked for them and will work for others like them.

College choice: to participate or not to participate in higher education

Although there is much that researchers know about the process of choosing a college education. there is still much to learn about the decision-making process of under represented groups. Many questions are still unanswered: Are the influences that determine the choice to go to college the same for different cultural groups? At what age does the process to choose higher education begin'? What role does econometrics really play in the process for groups such as African Americans'! What role does secondary school play in the college choice process of under represented groups? Although these and other questions remain unanswered, this research explores what has been written about the majority culture to determine similarities and differences as they relate to African American students' perceptions.

Most of the recent college choice research focuses on college destination (Hearn, 1991; McDonough, Antonio, & Trent, 1995), better understanding of college matriculation decisions (Hossler & Vesper, 1993), or the marketing of colleges (Litten, Sullivan, & Brodigan, 1983; McDonough, 1994). However. much of this research—and even the multitude of earlier research that focused on how students choose to participate in postsecondary schooling—overlooked or did not include factors that were culture specific (Alexander et al., 1979; Alwin & Otto, 1977; Anderson & Hearn, 1992; Boyle, 1966, Hossler & Gallagher, 1997; Mortenson, 1991; Stage & Hossler, 1989). For example, although research certainly focused on social and cultural capital, it usually assessed these issues across all groups, not specifically the cultures of groups individually. Bourdieu and Passeron (1977), for example, tend to be the most

widely cited on the topic of cultural capital; yet, it is not clear what their specific experiences have been with different cultures within the United States. The intent of the research presented here is to point out that although many theories on how students choose to participate in a college education are applicable to students of all socioeconomic groups, researchers recognize the need to better understand the choice process for minority students (Hossler, Braxton, & Coopersmith, 1989; McDonough, Antonio, & Trent, 1995).

Discussions of aspiration and decision making about attending higher education generally focus on cultural and social capital, economics and financial capital, or some combination of the two (Hossler, Braxton, & Coopersmith, 1989). However, Orfield et al. (1984) conducted a comprehensive study of access and choice in higher education in Chicago, which concluded that minorities are channeled into college based on defined geographic locations—where they live. Although most choice theorists would include the concept of channeling—a concept that is greatly underexamined—under the cultural and social models of decision making, it was considered separately in the framework for this study.

Cultural and social capital

In simplest terms, the concepts of cultural and social capital mean assets, in the form of behaviors, on which individuals and/or families can draw to meet a certain set of established values in a society. These societal values are generally established by majority groups in society and encompass such behaviors as the way individuals speak and the way they dress. The more individuals are able to meet these established standards, the more they are accepted by different institutions (e.g., schools) in society. Researchers such as DiMaggio and Mohr (1985) have suggested that cultural capital is typically a set of specialized social behaviors that makes one accepted at different levels of society. Other theorists (e.g., Coleman, 1990) have indicated that although social capital is related to cultural capital, it is more related to relations among persons. For example, Coleman (1988) explains social capital as the networks that provide information, social norms, and achievement support.

There is no doubt, however, that the cultural and social capital that students bring to the primary school classroom has tremendous implications for how they will be accepted, treated, and given the necessary information on which to make choices that will lead to postsecondary schooling. According to Cicourel and Mehan (1985), students are provided different educational opportunities because they arrive in school with different types of culture capital. It is generally accepted that African Americans do not bring the same kind of social and cultural capital to the classroom as Whites bring. It may have been this very under explored phenomenon that led Orfield et al. (1984) to indicate that some researchers had posited a theory that Blacks and Whites form aspirations in different ways and to say, "There has been little exploration of the social consequences of the huge gap between Black hopes and the reality of higher education for Blacks" (p. 16).

The sociological model of student choice (which is the umbrella model for cultural and social capital), at least as described by Hossler, Braxton, and Coopersmith (1989), focuses on the factors that influence aspiration. This model describes family socioeconomic level and student academic ability as predictors of students' aspiration for college. It is important to note that in a study with socioeconomic status held constant, African Americans were more likely than Whites to begin college (Olivas. cited in Orfield et al., 1984, p. 34).

Hossler, Braxton, and Coopersmith further indicate that expectations from others, such as parents, teachers, and friends, also influence student aspiration. According to Orfield et al. (1984), next to socioeconomic status, the secondary school a student attends is the primary structure that provides access to college. It is the school curriculum (academic vs. technical-vocational), counseling (regarding college availability and preparation), and grading that have tremendous impact on students' choice to participate or not to participate in higher education.

However, if it is the case, as some theorists (Bourdieu & Passeron, 1977; Coleman, 1988, 1990; Collins, 1979) have suggested, that postsecondary aspiration and high-school academic decision making grow out of the cultural and social capital of families, it seems logical that aspiration and choice are based on culture and not necessarily on societal (elite) values. It is ironic that models to increase aspiration have generally been based on society at large, completely ignoring the culture, in this case, of African Americans.

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ECONOMETRIC MODEL AND FINANCIAL CAPITAL

In addition to cultural and social capital as one of the major rationales for how students choose college participation, the econometric model and financial capital have also been postulated as rationales in the decision-making process (Anderson & Hearn, 1992; Hossler, Braxton, & Coopersmith, 1989; Orfield et al., 1984). In the econometric model, as these college choice theorists and economics of education theorists (i.e., Becker, 1975; Cohn, 1979; Johns, Morphet, & Alexander, 1983) have suggested, expected costs and future earnings expected from attending college are the primary considerations that impact students' perception of the value of higher education, although economic status, race, and education of parents may also have bearing on future earning potential.

The notion of future earning potential as it relates to African American students' participation in higher education has been a very much underexplored topic. For example, Barnes (1992) completed a study on African American twelfth-grade male stay-ins (those who were persisting through high school), and in their responses found the following about those students' economic goals: "It is interesting that 43.7 percent indicated they wanted to become wealthy or comfortable rather than identify an occupation" (p. 96).

Socioeconomic factors, such as parental income level, occupation, educational level, and number of siblings, are also posited as indicators of students' choices regarding college participation (Alwin & Otto, 1977; Anderson & Hearn, 1992; Boyle, 1966; Hossler & Gallagher, 1987). Parental income and educational level have both a direct and an indirect effect on college choice. Indirectly, the lower the parental income and education levels, the less information they will have available to assist their children with financial decision making. Directly, as stated by Orfield et al. (1984), "Family income is viewed as causing inequalities in educational access" (p. 30). As an example, "Because family income is much lower for minority students than for White students, the former are three to four times more dependent on federal financial aid than the latter" (Morris, cited in Orfield et al., 1984, p. 25).

Although research is replete with information about the impact that the lack of financial aid has on participation in higher education (Cross & Astin, 1981; Nettles, 1988), what is increasingly clear is that there is a void in understanding how, in their decision-making process on college participation, different cultural groups interpret or perceive the expectations of future earnings.

CHANNELING

The term channeling can be defined as the environmental forces (whether individuals, institutions, or circumstances) that influence the direction of students' choice. Channeling, as it relates to college choice, cuts across social and cultural capital and economic and financial capital. That is, the more capital an individual has, whether cultural or economic, the more likely it is that he or she will be influenced by forces internal to the home. Aside from the influences inside the home, students are also channeled by influences outside the home in directions that impact their decision-making process to participate in higher education.

Outside the home, high-school teachers and counselors have tremendous influence on channeling students to choose or not to choose college participation (Barnes, 1992; Morrison, 1989; Orfield et al., 1984). According to Barnes (1992), 47.5% of the African American twelfth-grade male stay-ins in her study reported that "assignment to excellent teachers helped keep them in school" (p. 106). She further stated, "It seems clear that one way to hold African-American males' attention and keep them interested in their school work is to assign them the best teachers in school. These teachers will hold their interest, educate them, and help them graduate" (p. 106).

Counselors play an equally important function. Morrison (1989) wrote, "An opportunity for minority students and their parents to engage in programs that provide current institutional information, a visual campus overview, interaction with faculty and alumni, and questions and answers can be of considerable benefit" (pp. 13–14). It typically is the school counselors who help facilitate this process for high-school students.

As further support of the importance of environmental influences on students' decision making, one of the most recent studies that specifically investigated the choice process of under represented groups was a study by Levine and Nidiffer (1996). In their book *Beating the Odds: How the Poor Get to College*, they analyzed interviews of 24 students from impoverished conditions, including African American students. They found a common theme among their subjects in their comments on "how they came to attend college" (p. 65). This common element, "was an individual

who touched or changed the students' lives" (p. 65). Similarly, this was found to be a frequent comment of the students who were interviewed for this study.

The quality of high school understandably also has implications for whether students will choose college participation (Alexander et al., 1978; Anderson & Hearn, 1992, Boyle, 1966). For example, students at the top of their class in an inner-city school are less likely than their counterparts in a suburban school to have had access to college recruiters, are less likely to have visited a college campus, and are less likely to have had access even to the basic information necessary for college choice. Students who attend private/independent schools and suburban schools would more likely be influenced and channeled to attend higher education institutions than students who attend inner-city high schools. More than the location of the school itself, it is the services these schools provide—the assistance of teachers and counselors. "Schools in affluent suburbs encourage college attendance and channel their students into college preparatory curricula; schools in poor or working class neighborhoods tend to prepare students for jobs not requiring college training" (Jencks, cited in Orfield et al., 1984, p. 28).

Channeling, when used effectively, can mediate social and cultural differences, can impact the financial aid process and the economic outlook of students, and can influence the type of postsecondary school that is selected and the subsequent college experiences. As Orfield et al. (1984) explained, in discussing the concept of channeling, "Changes in the school situation can change outcomes" (p. 28).

In summary, research from student choice theorists has provided information for understanding the factors that motivate majority students to participate in higher education. New research has been helpful in finding some common influences on the under represented poor (Levine & Nidiffer, 1996); however, additional research on the specific factors that influence African American students' motivation and aspiration to attend postsecondary schooling is sorely lacking. Hossler, Braxton, and Coopersmith (1989) and Orfield et al. (1984) have suggested that further research is necessary to examine minority motivation and aspiration to attend or not to attend a college or university. The research presented in this article contends that the best way to understand the motivating factors impacting the choice of African Americans to participate in higher education is to ask African American students, for they are in the best position to assess the problems and to offer possible solutions.

Design of the study

To investigate the questions raised in this study, a qualitative inquiry method using groups was utilized. Why the qualitative approach? The voices of students are rarely heard in the debates regarding their lives, and the voices of disempowered students are even more silent, as stated by Nieto (1992). The purpose of this approach—using group interviews—was to allow a greater and more diverse number of African American students a voice and thus to provide a deeper understanding of their consideration of the value of higher education. According to Nieto (1992). qualitative studies can enable us to examine "particular situations so that solutions can be hypothesized and developed" (p. 5).

Data collection procedures

The data for this research were gathered through structured group interviews. A protocol was developed for the interviews based on pilot testing of a survey that was administered to a sampling of students in an inner-city school and in a private school in Atlanta, Georgia. (Atlanta was selected as a test site because of convenience of location.) After reviewing the responses on the survey, the researcher was left with many unanswered questions. The students' write-in responses indicated a desire to explain more about their answers, and therefore group interviews, as outlined by Nieto (1992), were determined to be an effective means of hearing students' voices.

Although there was a formal protocol, the interviews and guiding questions were generally flexible and informal in order to allow students to express their issues and concerns more freely. For better control of reliability in the questioning process, the researcher personally conducted all of the focus group interviews. The interviews were audiotaped, and the tapes were transcribed by a professional transcriber. The data were reread several times to confirm coding.

Primary patterns and themes in the interview transcripts were evaluated based on procedures outlined in Miles and Huberman (1984), who explain that "pattern codes are explanatory or inferential codes, ones that identify an emergent theme, pattern, or explanation" (p. 67), and further. that "the bedrock of inquiry is the researcher's quest for

repeatable regularities" (p. 67). The data were analyzed using what Miles and huberman (1984) refer to as a "start list," a deductive approach and cross-group analysis. A master list of codes was developed around the conceptual framework, the pilot test, and the research questions, using general categories with descriptive marginal remarks. Based on the master codes, cross-group analysis was used to determine commonality in theories and patterns among the responses of the different groups.

STUDENT AND SITE SELECTION

Focus group sessions were conducted in each of five cities that have large African American populations (Atlanta, Chicago, Los Angeles, New York, and Washington, DC). These cities were selected based on the previous work of Neimi (1974) and Simms (1995). Both indicated that these cities have the largest cross-section of African American populations, and Simms further noted that they are among the metropolitan cities where African Americans have the highest median income and lowest poverty rates.

Group interviews included African American students (male and female) in tenth, eleventh, and twelfth grades. These grades were the focus of this study because it is typically in these grades that students already have formed their perceptions about the worth of the investment in postsecondary education. In order to include a cross-section of school types, students in inner-city, suburban, magnet, and private schools (private and independent are used interchangeably throughout this article) in these cities were included.

As a first step, school board administrators in each city were asked to recommend schools based on the researcher's request for the stated school types. In each school, the principal or headmaster selected the group participants based on criteria the researcher outlined: all African Americans, equal number by gender, grade, and socioeconomic background (particularly in private schools). It is often difficult to gain access to private schools to conduct research; therefore, when this study was given the support of the National Association of Independent Schools, it was decided to oversample private/independent schools to obtain as much research data as possible from this school type. In addition, the researcher wanted to assess the differences in responses to the research questions by students from different socioeconomic levels within the African American race. Such a cross-section of schools, particularly private schools with African American students, would be inclusive of a broader range of socioeconomic levels.

A total of 70 students participated in 16 group interviews. The breakdown by school, gender, and grade is as noted in Table 1. In the inner-city school in New York and in one of the inner-city schools in Washington, DC, interviews were conducted with two small classes. In each case, one class was college preparatory and one class was not college bound. Because these classes were much larger in size than the groups, the numbers are not included in the total participant numbers in Table 1; however, the responses of students from these classes were coded and are included in the analysis. In group analysis it is acceptable to include these responses, because the study was designed to find patterns and themes based on the theoretical framework and the research questions. Though it is recognized that there is an uneven distribution of school types across cities, the diversity and the number of schools and students participating in the study allowed a representative sampling.

The background of the students varied, but there were some commonalities. In most cases, across school types, the students were first generation college-goers—most were from homes where the parents were not formally (college/university) educated. Though students were not asked any questions about income, because the researcher's interest was in the students' responses in the aggregate, the school distribution provided a basis for assumptions about income level. That is, it would not be expected that the income of parents of students who attended innercity schools is as high as that of parents of students who attend private schools. It is important to note, however, that several African American students in private/independent schools were on scholarships.

DATA ANALYSIS

As a result of the pilot test it was decided that the best way to examine students' perceptions of the value of higher education was to ask questions in a way that was not specific to their own college plans. One of the high-school principals said that American society places so much emphasis on higher education that for students to answer that they do not plan to attend a higher education institution following graduation or that they do not perceive higher education to be worth the cost automatically makes them feel as if they were a failure. Martin Carnoy of Stanford University (personal communication, 1991) indicated that if the question is made specific to the student, the student's response might imply that higher education is worth (fie investment, but "for other people not me."

Table 1
Profile of school participants in African American high school focus groups

School Type	School Location	No. of Schools	Participants	Gender		Grade Level		
				Male	Female	12th	11th	10th
Inner-City								
	Chicago	2						
	School A		2	1	1	1	1	0
	School B		4	2	2	3	1	0
	New York*	1						
	Washington, DC	2						
	School A		3	0	3	1	0	2
	School B*							
Magnet								
	Chicago	1	6	3	3	3	3	0
	Los Angeles	1	4	1	3	1	3	0
	Washington, DC	1	5	2	3	3	0	2
Private								
	Atlanta	1	5	3	2	5	0	0
	Chicago	2						
	School A		6	3	3	5	1	0
	School B		7	3	4	3	2	2
	Los Angeles	2						
	School A		5	2	3	2	2	1
	School B		5	2	3	1	2	2
	New York	2						
	School A		6	1	5	3	2	1
	School B		5	2	3	0	0	5
Suburban								
	Atlanta	1	7	6	1	7	0	0
Totals		16	70	31	39	38	17	15

* At the request of school officials, intact classes were interviewed as groups; therefore, the number of individual participants is not relevant to this table.

Thus, to encourage students to express their perceptions of the barriers (costs) to African Americans' participation in higher education, my question to them was, "Will you help me to better understand why there seems to be a lack of interest among African American high-school graduates regarding participation in higher education." In this way, students could more freely describe the barriers they perceived. This guiding question also served the two-fold purpose of eliciting not only statements of barriers to participation but also expressions of student-perceived "solutions" to these barriers. Themes were developed from the most frequently stated responses by the students. As Levine and Nidiffer (1996) noted about the findings from the interviews of their subjects: "When asked how they came to attend college, each of them told almost the same story" (p. 65). Although the students in this sampling attended different school types and lived in different geographic regions, their responses varied little. It was like listening to the same song—different school, different city.

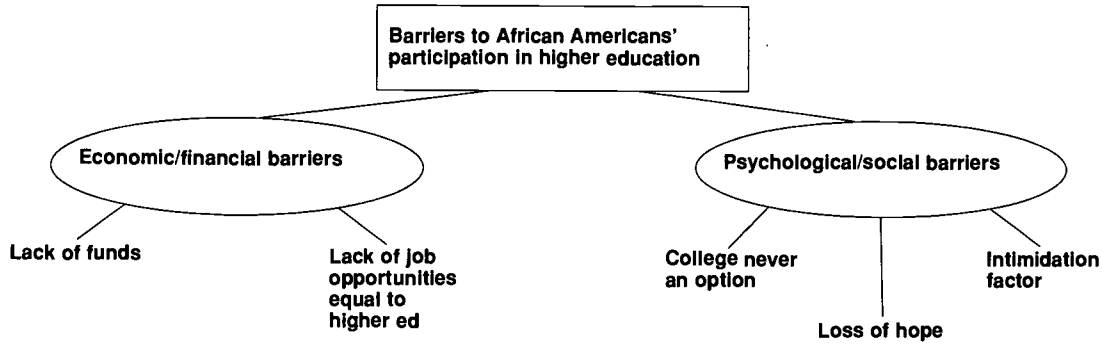
Students discuss the issues

Across school types and cities, four themes emerged from students' responses about their perceptions of barriers to African Americans' participation in higher education. These responses can basically be grouped into two broad categories: 1) economic barriers and 2) psychological barriers (see Figure 1). The responses relating to economic barriers can be described as a fear of (a) not having enough money to attend college or (b) not getting a job that pays appropriate to the level of education after completing higher education. In regard to psychological barriers, which

appear to pose even greater challenges to educators and policymakers, the students' responses stressed three issues: (a) college never being an option, (b) the loss of hope, and (c) the intimidation factor. The students' responses to these issues were surprisingly similar across school types.

Figure 1

African American high-school students' perceptions of barriers to African Americans' participation in higher education



Economic barriers

Money and jobs. The students' answers were either related to fear of not getting a job that pays adequately or of not having enough money to attend college. For example, a student attending a suburban school in Atlanta stated the following:

> A lot of people lose hope in college. They pass, and they are still not making a lot of money. They are still struggling.

A student attending an independent school in Atlanta responded:

> It does not guarantee a job. [They] may not see the point.

That statement was echoed in many different ways by students across the country. In one independent school in Chicago, a student responded:

> People are unaware that there are opportunities out there after college. People just kind of see it as: you get out of college and then what do you do?

At an independent school in New York, a student said this:

> Well, maybe, because a lot of times when you are growing up, you might get the feeling and the outlook that, you know, it makes no sense because the jobs are not out there. A lot of people feel that way, like, "Why am I going through all this when I am not going to get a job, a job equivalent to what I would get if I didn't go? So what's the point." I know a lot of people feel that way.

The responses of students in inner-city schools more often focused on making money. They spoke of the need to have an income during and immediately after high school instead of postponing earning wages for four more years. For example, at an inner-city school in Chicago, a student responded in this way:

> They [high-school students] start making so much money.

The issue of lack of money to attend college was also a concern expressed by students across cities and school types. One student at a suburban school in Atlanta responded with a statement that was frequently repeated by the students:

> They don't have money to go.

Another student attending an inner-city school in Washington, DC, simply stated:

> Money.

Psychological barriers

College never an option. Another rationale that students often expressed as to why there was a decline in African Americans' participation in higher education was that college had never been presented as an option. The responses here centered on several factors, such as not being pushed by parents or by school personnel or, generally, as not receiving encouragement from anyone. A student at an independent school in Los Angeles passionately stated this:

> Well, from personal experience, friends of mine are just not interested in college at all. They are into sports or something like that. It just seems that there is just not a want to go to college. People just don't want to do it. When I ask them, "Well, what are you going to do when you graduate from high school?" they don't know, but college has never been given to them as an option. It's never given. I don't know if that starts in the home with parents.

At an inner-city school in New York, a student had this to say:

> Parents. Some parents say like, "You are not going to go to school."

A student attending a magnet high school in Chicago responded in this way:

> Well, I think part of the problem is like you don't have anybody to help you, to want you to excel, to inspire you that you need to get a higher education, to help you understand that "we are here for you, and we are going to help you get through this."

A magnet school student in Los Angeles responded in a similar manner:

> There seems to be a decline, I think, because there is motivation but it is coming from the wrong people. A lot of people are not as strong as myself, for instance, and you might need to hear you need to go to college from somebody else. I am not the one you want to tell you. You might need your parent or your best friend to tell you. They are not the ones telling you.

Loss of hope. The third theme that emerged out of this question was that students lose hope, which in some ways is similar to the previous theme—college never given as an option. It differs in that students seemed to be saying here that African Americans are missing a passion for pursuing higher education or that the benefits of college are not recognized. For example, a student at an independent school in Los Angeles said:

> One of the things that I was really upset about in the school systems [public] how they took a lot of the fine arts, and that upset me, because kids—I mean I know that I did—need a passion, and they need something to look for, a goal. They need to say, "Well, I can go there, I will achieve my goal," and I think a lot of people don't have the drive, unfortunately.

A student attending another private school in Los Angeles echoed that response:

> There is a negative influence, and people don't have hope any more for the future. I know a lot of people like that. They don't care anymore. They just don't care about their future, and they don't have any hope.

At a suburban school in Atlanta, a student had this response:

> You watch TV, and you watch, like, movies, and you see kids stressed out and struggling in college and stuff. They don't want to go through all that.

In Chicago, a student attending an inner-city school perceived it in this way:

> Most [students] just want to live a ghetto life. Because they belong to a gang at a young age, they don't come to school; the whole school is a gang bang. They don't come to school.

The intimidation factor. The final and most prevalent theme that emerged in response to the interviewer's question was what students referred to as the "intimidation factor." Interestingly, students attending independent schools generally held this perception about students attending inner-city schools. A student attending a private school in Chicago stated the following:

> I think that a lot of times when you go to public school. higher education can be a really intimidating factor, especially if you go to like an inner-city public school, because you are used to seeing, you know, nothing but Black people going to school. If you see a White person at your school, hey. they are rare. But when you go to higher education, it seems as though that's really all you see, and you are sort of intim-

idated by these people who may not have necessarily gone to an independent school but who have had the benefit of a White education.

Students attending public schools who had visited a college/university campus were more likely to agree with that assessment than those who had not visited a campus. For example, a student attending a suburban school in Atlanta, said the following after an overnight stay at a university:

I went and stayed overnight at a university in Georgia, and I got to see how things are after classes and stuff, how they act. To tell you the truth, before I visited it, I was more excited about going there. After I visited it and saw a lot of the people there, it seems like they are not used to being around [Blacks]. That visit kind of turned me more off than on.

By way of explanation, he offered the following:

I visited such and such college, and I go there and everybody, well most of the people there are White, there is not a lot of Black people. To me I have always been around all Blacks. I just don't see myself being comfortable around [them], having a White person for a roommate. I just know that I am going to have to adjust when I go.

These students were asked whether they believed that the American society overemphasizes higher education participation. The intent of the question was to further understand if they perceived the worth of an investment in higher education for African Americans in general. Across school types, these students believed that not enough emphasis is placed on higher education participation. For example, a student in an innercity school in Chicago said,

I don't. I mean, because I feel that there is not enough emphasis put on it, you know, pressuring a child to go to college. You have to. You can't even get a job at McDonald's without a high-school diploma. So just imagine what, say four more years, five more years for me, 1999, I couldn't even probably get a job, period. Nowhere. So I don't think there is enough emphasis put on it—about going to college.

At another inner-city school in Chicago, a student stated something similar:

It is a big deal. You want to become something better.

In New York at an inner-city school, a student responded,

The world is changing; you have to get more than a college education now. You have got to have more than a college education.

A student in a private school in Chicago remarked,

I mean people whose families haven't gone to college or haven't gotten asked if they should go to college. I think those families don't think about going to college, and I think that's bad. I think that people should figure out a way to make everyone understand that college is really an important part of what you do.

In sum, in spite of these students' perceived costs to African Americans' participation in higher education, they still perceived that the benefits far outweigh the costs. That is, they perceived that this country does not emphasize the benefits of participation in higher education enough.

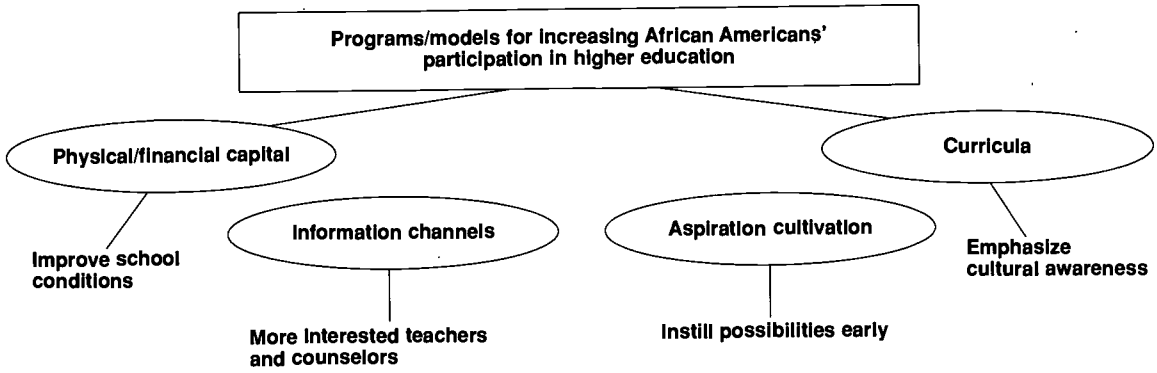
Students offer solutions

The students did not hesitate to voice their opinions about what models were needed to increase African Americans' participation in higher education—it was as though they were waiting to be asked. As evidence of the seriousness of their thoughts about ways to increase African American students' participation in higher education, it is important to note how their suggestions for solutions are closely aligned to their perceptions of the barriers. Notable also, is the similarity of the students' responses across geographic regions, school types, socioeconomic levels, and gender.

The sense of being accepted for who they are and having someone who encourages them to maximize their potential were the themes that were stressed most often. It is not surprising, then, that many students expressed "teaching other people about their culture" as one possible solution. Another response that was frequently voiced was having "more Black teachers—who want to be there." In fact, according to these students, what happens inside the walls of schools holds great importance for motivating African American students to participate in higher education.

Therefore, the themes that emerged from these students suggestions for solutions mostly centered on the conditions of the place where students are being taught—how schools are equipped, who is teaching, how they are teaching, and what they are teaching as it relates to who they are. Their responses can be classified into the following categories: (a) improve school conditions, (b) provide interested teachers and active counselors, (c) instill possibilities early,. and (d) expand cultural awareness. (See Figure 2 for students' suggestions for programs/models.)

Figure 2
African Americans high-school students suggestions for programs/models to increase African Americans' participation in higher education



A student attending an independent school in Los Angeles captured the essence of the students' responses across cities when he stated the following:

> I think that if we were to start a program, it would start in the elementary school and junior high school; in my opinion the kids would he more interested in learning then, [and] they would want to go to college and learn more. I think that the schools themselves in the Black neighborhoods [would], if more money was put into them, if [they had] better teachers. My hat is off to teachers, but I think that teachers need to be paid more to make them want to teach more. I think that if we do that and then still if African Americans are not excited about going to college, then we need a program; then I think we really need to just upgrade and improve the schools in our neighborhoods.

Improve school conditions

The suggestion of the need to improve the conditions of the schools was stated frequently—the need to improve the physical condition of the building as well as the contents of the building, such as having more computers available for students. The following statements were heard from students across school types and across cities:

> My cousin, she still lives in DC and she is still in elementary school, but for like the first three years up to the third grade she went to the same elementary school that I went to, and from the time I had been there until then it had just been in a steady decline, so finally my aunt just took her out and put her in a White school. [To transfer her child to another public school] she had to either lie or pay a fine or something. But [at] all costs she said, "My kid can't go to this school." At this White school, it is like four stories, huge and sprawling with lockers and science rooms, but in the other school, it was dingy, with cockroaches, rats. She used to hate to read; she used to scream and cry when she used to have to read. Now she comes home and starts her homework. She reads for pleasure now. That's the reason why I know that if the schools were improved, they would have a chance. (Independent school student, Los Angeles)

> I know the reason why we don't have the things we need; it's because we are a minority school. Because my cousin goes to another high school, and they have a computer at every desk. We have a computer lab. You have to make an appointment to go the computer lab because it is always full. (Magnet school student, Los Angeles)

> The school must know what it wants to do. (Independent school student, New York)

Program necessity

Program necessity

More interested teachers and actively involved counselors

Even more frequently stated than the need to improve schools, interested teachers and active counselors were repeatedly suggested as ways to motivate students to participate in higher education. The students placed greater emphasis on their perceived value of having teachers who instill a passion in students, who believe in African American students' ability to learn, and who push students to maximize their potential. Students voiced their opinions about the role of the teachers in motivating in this way.

> I have been fortunate enough to have a teacher who made me work for everything. Mr. Sweeney [name changed] is a real mathematics teacher. Some other mathematics teacher might not be as good, but what I learned was college math analysis, and that is because Mr. Sweeney got out his paycheck and went and bought these college prep books. (Magnet school student, Los Angeles)

> ...then also have a lot of Black teachers. (Independent school student, New York)

> A program. like a different type of teaching program. Like [now] most students are in the chairs, and teachers are at the board. I think more discussions should be involved in the classrooms and not so much reading the books. (Inner-city school student, New York)

> Enthusiastic teachers come across interesting. Teachers are everything. (Independent school student, New York)

> There are not that many Black teachers here at all. I mean, this school is an excellent school for an education, but it would probably even be better. (Independent school student, Chicago)

> I think it's school. I don't have many friends outside of school, but the couple that I do have, the way they Describe it, it's like the teachers don't even care if they come to school everyday and stuff like that, and I don't know if it's exaggerated, but it is completely different from here. (Independent school student, Chicago)

> Teachers and friends, or something, encourage then) to go on with their education. (Inner-city school student, Washington. DC)

> You know. I had teachers who, like, were strong. They motivated you to do your work and helped you a lot. I think some schools in the Black community, they don't have enough money to buy books that will teach the kids; so, you know. the teachers don't want to teach it. then it is not good material and the students don't want to learn. So I think it is like you got to get your money together, put it in the schools where it counts, you know, and help these kids. (Independent school student, Los Angeles)

In addition to some students' stated responses about the importance of having counselors actively involved in the process to increase African American Students' participation in higher education, observations and conversations with school officials confirmed students' statements. It was personally noted by the researcher that in those schools that had structured counseling programs, there tended to be a greater number of students interested in higher education participation. As would be expected, the private schools had active college-related events. and in those public schools that did have active counseling programs, the success in stimulating and preparing students to participate in higher education seemed equal to that of private schools. The following statements demonstrate how strongly students felt about active counselor involvement in assisting students in the college process:

> Because we are pushed. We are pushed to go on to higher education and then get a job. That's Ms. Getter's [name changed] whole basis [for] being here basically. (Magnet school student, Los Angeles)

> Maybe get some college programs in high school. To prepare them for college so they won't go and be scared what it is going to be. (Inner-city school student, New York)

> Counselors generally have the information as far as scholarships. Certain counselors have information about internships, different opportunities for us so that you can get to work, specific jobs where you get

to go into that field of your interest to see if that's what you really want to do. If you keep in contact with these individuals [counselors] then, I mean, these who haven't really had, have the opportunity. (Magnet school student, Washington, DC)

Counselors do not help. They discourage you, especially in public schools. They tell you such things as, "You are not qualified." They do not care. (Independent school student, New York)

I have got career beginnings. It's a program to help me decide what college I want to go to and where. And [it] helps you with your financial aid. (Inner-city school student, Chicago)

They let us know about upcoming scholarships from this point on. They have something like a senior letter, and every time a new scholarship comes up, they put it on that list. (Suburban school student, Atlanta)

Junior year you start having classes about college courses. You have to have required meetings with the counselor. (Independent school student, Chicago)

Counseling. (Inner-city school student, Washington, DC)

Instill possibilities early

The idea of instilling at an early age an awareness of the possibilities of attending college, as voiced by these students, affirmed the need for providing students with information on possibilities, requirements, and outcomes earlier than in high school. In addition, these students discussed the need to develop excitement about higher education and prospects for jobs after completing higher education. A group of students attending the same private school in New York summarized it best:

I think what you should do [is[like early, start really early in third, fourth, fifth grade. Get them involved in stuff that you know you have to [learn] to go to college to get a degree like in communications. Give them a lot of opportunities, and in turn take them places and get them excited about, you know, get them out in the world to get an education.

Show more Black people with jobs that pay, who have been to college.

Oh yeah, just to show people who have been to college, Black people preferably, who have jobs that pay a lot of money, like maybe engineers and architects. More higher paying jobs for people who are Black.

We have to learn how to make college seem like the best four years of your life. (Independent school student, New York)

I would tell someone in the younger age bracket to always look for a challenge, and school is always going to be a challenge. (Magnet school student, Washington, DC)

If you can show them what they can be or who is successful and how far they could really go, you know, if they do this and do that, you are already showing them like a light they could try to get to. (Independent school student, Los Angeles)

Invest more in younger age. (Independent school student, New York)

They [students] just have to realize, and they are not realizing it soon enough, because by the time they get in here they have got to pay for those classes that they didn't pass. (Suburban school student, Atlanta)

I think people can be helped more when they are younger. It's like hard to convince tenth or eleventh graders that never cared about college or anything. (Independent school student, Los Angeles)

Program necessity

Emphasize cultural awareness

Out of very passionate discussions about their culture, students, particularly those students who attended independent schools, voiced the need to increase cultural awareness as a way to motivate more African Americans to participate in higher education. Also included in this category was the need for more male role models.

> We need more Black male role models. (Independent school student, Los Angeles)

> More role models that don't play sports all the time. I mean, I love them. I love basketball, but we need to get kids at a young age to love education and to feel the need that they have to do this to survive in the world, because without it you are just going to be like lost. (Independent school Student, New York)

> I think when they are young you need to teach them backgrounds of other cultures, not only European. European history, and then are you saying [it's] the ideal school or something like that? (Independent school student. New York)

> I have had a hard time in African American history because I don't know about Black history, because I was never taught. I was always taught other things. It's so backwards. I think it's crazy. How do you skip the years which were some of the most important times, which helped in the creation of America. How do you skip that—from early to modern? (Independent school student, Chicago)

> There should be Black history. (Independent school student, New York)

> I know early world history, and they do not incorporate African Americans in their history. (Independent school student, Chicago)

> They don't really teach you about Black history. Like this is Black history month; we will focus on Black people. But it is not worked into the curriculum as a whole like, you know, as a whole thing. (Independent school student, New York)

Within their communities across cities, students, particularly students attending private schools, indicated tremendous pressure to be accepted, describing the feeling of "living in two different worlds." Several students described their experiences of having their friends in their communities accuse them of "acting White," because they attended private schools, and at the same time feeling the pressure to make themselves accepted in their school environment.

Interpretations and implications of students' thoughts

This study clearly points out how important it is that researchers not only include individuals as subjects in their studies but also include their voices in the development of solutions to their problems. This would particularly appear to be appropriate when studies cut across cultures. Student choice and economics of education theorists have long documented the factors that influence the decision-making process of students (see the college choice section for a listing of theorists), but one rationale why these models and programs have failed to increase African Americans' participation in higher education might be a lack of understanding of how these models and programs would work within the context of the African American culture.

For example, these research findings do not disagree with those of the student choice theorists, which note the importance of parental education and income. However, when these students describe barriers and possible solutions to African Americans' participation in higher education, they stress the importance of the elementary and secondary school environments. The school system plays an even greater role when neither parent has participated in higher education, for many of the students in this sample came from such homes. Understanding this in the context of the African American culture has merit.

However, this finding should not be interpreted as meaning that students who do not live in the traditional two-parent family, particularly in the inner city, are not aware of the value of higher education. The research presented in this article suggests that although these students are aware of the barriers to African Americans' access to higher education, they still perceive that it is worth the costs. In fact, researchers such as Anderson and Hearn (1992) and Orfield et al. (1984) have indicated that when socioeconomic background is held constant, African Americans have developed on understanding the college choice process, the development of models and programs to increase

African American students' motivation and aspiration to participate in higher education is within reach. The research presented in this article points out that the missing link to previous research has been the voices of the students. The next step is for educators and policymakers to work with African American students, to empower them, to investigate their thoughts more formally, and to develop sites to test their models.

It is clear that current models are not working and that these students' ideas are solid ones. It would be difficult to find anyone who would disagree that physical and financial resources are necessary for inner-city schools, that better teachers and interested counselors are needed, that instilling possibilities earlier is indicated, and that having, across all school types, a curriculum that is inclusive of all cultures (not just for one event or one month) is desperately lacking.

However, all too often, researchers unfamiliar with the historical and structural differences of cultures continue to define the problems and develop the solutions based on models that are applicable to the majority population. In order to develop workable programs and models, educators and policymakers must begin the process of hearing the voices that are all too often regulated to the margins, for, logically and intuitively, those are the only voices that can possibly hold the Solutions.

References

Alexander, K., D'Amico, R., Fennessey, J., & McDill, E. 1978. *Status composition and educational goals: An attempt at clarification.* Report 244. Baltimore: Johns Hopkins University Center for Social Organizations of Schools.

Alwin, D. F., & Otto, L. B. 1977, October. High school context effects on aspiration. *Sociology of Education. 50*:259–273.

Anderson, M., & Hearn, J., 1992. Equity issues in higher education outcomes. In W. E. Becker & D. R. Lewis (Eds.), *The economics of American higher education,* (pp. 301–334). Norwell, MA: Kluwer Academic Publishers.

Barnes, A. S. 1992. *Retention of African American males in high school.* New York: University Press of America.

Becker, G. S. 1975. *Human capital* (2nd ed.). New York: Columbia University Press.

Bourdieu, P., & Passeron, P. 1977. *Reproduction in education, society, and culture.* London: Sage Publications.

Boyle, R. 1966. The effect of the high school on students' aspirations. *The American Journal of Sociology, 6*:628–639.

Camoy, M. 1995. *Faded dreams: The politics and economics of race in America.* New York: University of Cambridge Press.

Carter, D., & Wilson (Eds.). 1994. *Status on minorities in higher education.* Washington, DC: American Council on Education.

Cicourel, A. V., & Mehan, H. 1985. Universal development, stratifying practices, and status attainment. *Research in Social Stratification and Mobility, 4*(5):728–734.

Colin, E. 1979. *The economics of education.* Cambridge, MA: Harper & Row.

Coleman, J. S. 1988. Social capital in the creation of human capital. *American Journal of Sociology, 94*:95–120.

Coleman, J. S. 1990. *Foundations of social theory.* Cambridge, MA: Belknap Press of Harvard University.

Collins, R. 1979. *The credential society: An historical sociology of education and stratification.* San Diego, CA: Academic Press.

Cross, P., & Astin, H. 1981. Factors affecting Black students' persistence in college. In G. Thomas (Ed.), *Black students in higher education* (pp. 76–90). Westport, CT: Greenwood Press.

DiMaggio, P., & Mohr, J. 1985. Cultural capital, educational attainment, and marital selection. *American Journal of Sociology, 90*(6):1231–1261.

Freeman, K. 1989. *The returns to schooling: The impact of career counseling on Black-White MBA starting salaries.* Unpublished doctoral dissertation, Emory University, Atlanta, GA.

Freeman, R. B. 1976. *The overeducated American.* New York: Academic Press.

Hearn, J. C. 1991. Academic and nonacademic influences on the college destinations of 1980 high school graduates. *Sociology of Education, 64*:158–171.

Hossler, D., Braxton, J., & Coopersmith, G. 1989. Understanding student college choice. In J. C. Smart (Ed.), *Higher education: Handbook of theory and research: Vol. 5* (pp. 231–288). New York: Agathon Press.

Hossler, D., & Gallagher, K. 1987. Studying student college choice: A three-phase model and the implications for policymakers. *College & University, 62*(3):207–221.

Hossler, D., & Vesper, N. 1993. *Consistency and change in college matriculation decisions. An analysis of the factors which influence the college selection decisions of students.* Paper presented at the annual meeting of the American Educational Research Association, Atlanta, GA.

Johns, R. L., Morphet, E. L., & Alexander, K. 1983. *The economics and financing of education* (4th ed.). Englewood Cliffs, NJ: Prentice-Hall.

Levine, A., & Nidiffer, J. 1996. *Beating the odds: How the poor get to college.* San Francisco: Jossey-Bass.

Litten, L., Sullivan, D., & Brodigan, D. (1983). *Applying market research in college admissions.* New York: The College Board.

McDonough, P. 1994, July/August. Buying and selling higher education: The social construction of the college applicant. *Journal of Higher Education, 65*(4):427–446.

McDonough, P., Antonio, A., & Trent, J. 1995. *Black students, Black colleges: An African American college choice model.* Paper presented at the meeting of the American Educational Research Association, San Francisco, CA.

Miles, M. B., & Huberman, A. M. 1984. *Qualitative data analysis.* Newbury Park, CA: .Sage Publications.

Morrison, L. 1989. The Lubin House experience: A model for the recruitment and retention of urban minority students. In J. C. Elam (Ed.), *Blacks in higher education: Overcoming the odds* (pp. 11–27). New York: University Press of America.

Mortenson, T. 1991. *Equity of higher educational opportunity for women, Black, Hispanic, and low income students.* American College Testing Program.

Nettles, M. 1988. *Financial aid and minority participation in graduate education.* Princeton, N J: Minority Graduate Education Project for Educational Testing Service.

Niemi, A. W. 1975, January. Racial differences in returns to educational investment in the South. *American Journal of Economics and Sociology, 34*:87–94.

Nieto, S. 1992. *Affirming diversity: The sociopolitical contest of multicultural education.* White Plains, N Y: Longman Publishing Group.

Ogbu, J. U. 1988, Winter. Cultural diversity and human development. In D. T. Slaughter (Vol. Ed.), *Black children and poverty: A developmental perspective. Vol 42. New directions for child development* (pp. 11–28). San Francisco: Jossey-Bass.

Orfield, G., Mitzel, H., Austin, T., Bentley, R., Bice, D., Dwyer, M., Gidlow, L., Herschensohn, J., Hibino, B., Kelly, T., Kuhns, A.. Lee, M., Rabinowitz, C., Spoerl, J., Vosnos, A., & Wolf, J. 1984. *The Chicago study of access and choice in higher education.* (Report prepared for the Illinois Senate Committee on Higher Education). Chicago: Illinois Senate Committee.

Schultz, T. W. 1961. Investment in human capital. *American Economic Review, 51*:1–17.

Simms, M. 1995, July. The place to be: Washington. *Black Enterprise,* 24.

Stage, F, & Hossler, D. 1989. Differences in family influences on college attendance plans for male and female ninth graders. *Research in Higher Education, 30*(3):301–315.

Thurow, L. C. 1972. Education and economic equality. *Public Interest, 28*:66–81,

Wilson, R. (Ed.). 1989. *Status on minorities in higher education.* Washington, DC: American Council on Education.

Wilson, R. (Ed.). 1990. *Status on minorities in higher education..* Washington, DC: American Council on Education.

Wilson, R. (Ed,). 1992. *Status on minorities in higher education..* Washington, DC: American Council on Education.

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5 Program necessity

Postsecondary Education Opportunity

Thomas G. Mortenson
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In 1983 the National Commission on Excellence in Education released its alarming report, *A Nation at Risk*. The Commission said:

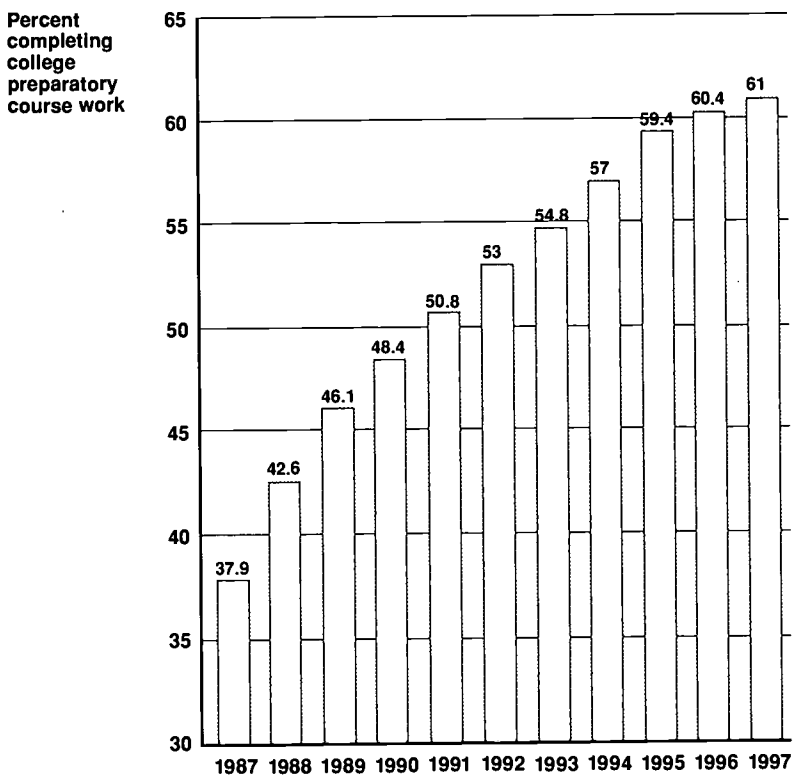
> Our society and its educational institutions seem to have lost sight of the basic purpose of schooling, and of the high expectations and disciplined effort needed to attain them.

More will be taken from the Commission's report in this analysis of the response to the challenges posed. But this analysis focuses on the response of public policy and student course-taking and academic preparation for college to the first of the five recommendations of the Commission:

> We recommend that State and local high school graduation requirements be strengthened and that, at a minimum, all students seeking a diploma be required to lay the foundations in the Five New Basics by taking the following curriculum during their 4 years of high school. (a) 4 years of English; (b) 3 years of mathematics; (c) 3 years of science; (d) 3 years of social studies; and (e) one- ha4f year of computer science. For the college-bound, 2 years of foreign language in high school are strongly recommended...

In July of 1995 *OPPORTUNITY* reported the results of three federal transcript studies of student completion of this New Basics Curriculum. These studies found that the proportion of high school seniors completing the New Basics

Figure 1
College core coursework completion rate for ACT-tested college-bound high school seniors 1987 to 1997



had increased from 12.7 percent in 1982 to 46. 8 percent by 1992. In this report we examine and report on the academic preparation for college of two similar groups of students: college-bound high school seniors who took the ACT Assessment, and first-time, full-time college freshmen participating in the annual national survey of American College Freshmen by the Higher Education Research Institute at UCLA. Our framework for academic preparation is the New Basics Curriculum proposed by the National Commission on Excellence in Education in 1983. What our analysis finds is that high school students have greatly improved their high school course selection in preparation for college, precisely as recommended by the Commission in 1983. As a result, students overall are entering college better academically prepared than they were 15 years ago. These gains am broad, affecting nearly every group of students.

The measures examined here, however, also identify serious remaining trouble spots:

- Some groups of students—particularly low income, some minorities—are not entering college well prepared to meet the academic challenges of college.
- Gains in academic preparation are (inevitably) uneven, with women showing more progress than men.
- Moreover, the gains in academic preparation appear to be slowing.

To the extent public policy is guided by the findings of this kind of analysis, resources could and should be targeted to address the gross inequalities that remain.

The National Commission on Excellence in Education

In August of 1981, then Secretary of Education T. H. Bell created the National Commission on Excellence in Education and directed the Commission to present a report on the quality of education in America by April of 1983. The Commission set out to define the problems afflicting American education and to offer solutions.

The Commission's final report was delivered on schedule in April, 1983. Its title described its theme: *A Nation at Risk: The Imperative for Educational Reform*. The Commission's complete report is available on the internet at: www.inct.gov/pubs/NatAtRisk

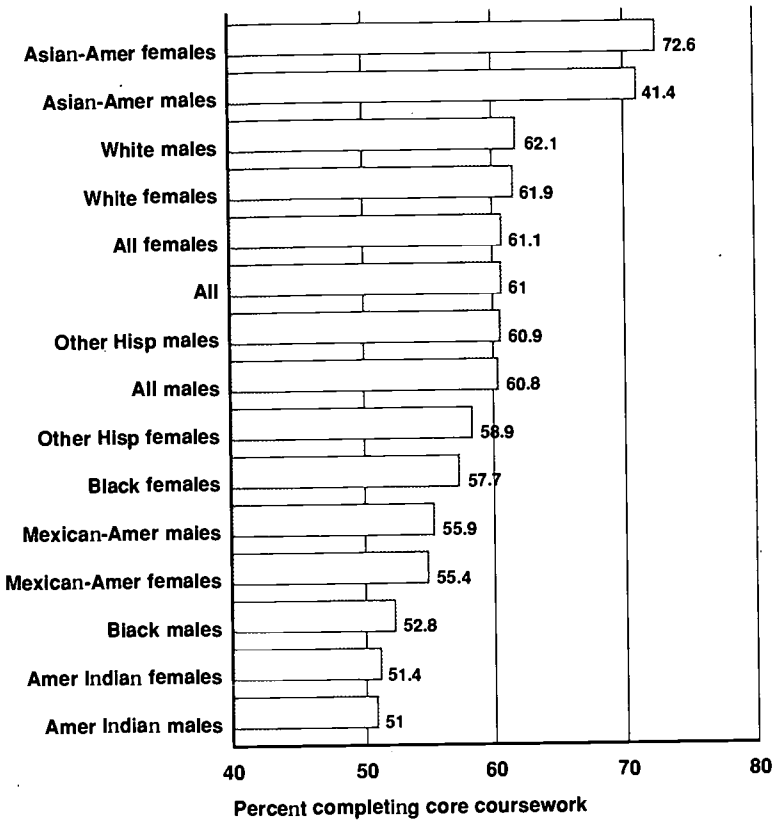
The Commission's report makes for sobering reading. It begins:

> Our Nation is at risk Our once unchallenged preeminence in commerce, industry, science and technological innovation is being overtaken by competitors throughout the world. This report is concerned with only one of the many causes and dimensions of the problem, but it is one that undergirds American prosperity, security, and civility. We report to the American people that while we can take justifiable pride in what our schools and colleges have historically accomplished and contributed to the United States and the well-being of its people, the educational foundations of our society are presently being eroded by a rising tide of mediocrity that threatens our very future as a Nation and a people. What was unimaginable a generation ago has begun to occur—others are matching and surpassing our educational attainments.
>
> If an unfriendly foreign power had attempted to impose on America the mediocre educational performance that exists today, we might well have viewed it as an act of war. As it stands, we have allowed this to happen to ourselves. We have even squandered the gains in student achievement made in the wake of the Sputnik challenge. Moreover, we have dismantled essential support systems which helped make those gains possible. We have, in effect, been committing an act of unthinkable, unilateral educational disarmament.
>
> Our society and its educational institutions seem to have lost sight of the basic purposes of schooling, and of the high expectations and disciplined effort needed to attain them…

The findings of the Commission began with those regarding curriculum:

> By content we mean the very "stuff" of education, the curriculum. Because of our concern about the curriculum, the Commission examined patterns of courses high school students took in 1964–69 compared to the course pattern in 1976–81. On the basis of these analyses we conclude:
>
> - Secondary school curricula have become homogenized, diluted, and diffused to the point that they no longer have a central purpose. In effect, we have a cafeteria style curriculum in which the appetizers and deserts can easily be mistaken for the main courses. Students have migrated from vocational and

Figure 2
College core coursework completion rate by gender and race/ethnicity 1997



college preparatory programs to "general track' courses in large numbers. The proportion of students taking a general program of study has increased from 12 percent in 1964 to 42 percent in 1979.

This finding, in particular, led directly to the Commission's first (of five) recommendations, quoted on page 1 of this issue of *OPPORTUNITY*. By graduation, high school students should have token 4 years of English, 3 years of mathematics, 3 years of science, 3 years of social studies, and one-half year of computer science. Those going on to college should also have completed 2 years of a foreign language.

> Whatever the student's educational or work objectives, knowledge in the New Basics is the foundation of success for the after-school years and, therefore, forms the core of the modern curriculum. A high level of shared education in these Basics, together with work in the fine and performing arts and foreign languages, constitutes the mind and spirit of our culture.

The data

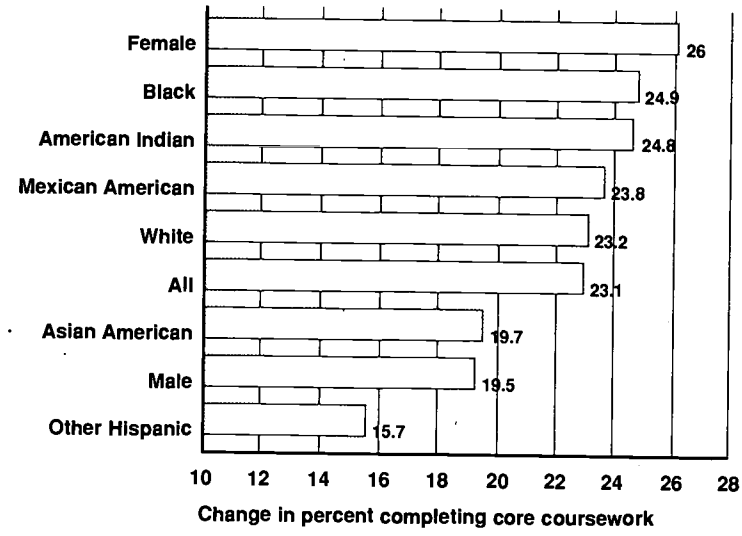
In response to this 1983 challenge, several major data collectors began reporting information on the course taking patterns of American high school students, particularly by the time they had graduated from high school. We examine two here: ACT test-takers, and college freshmen from the national survey of American College Freshmen conducted by UCLA.

Since 1987 ACT has been reporting course taking patterns of college-bound high school seniors who have taken the ACT Assessment. ACT reports seminary data for those who have and for those who have not completed the "College Core" coursework by the time they leave high school. This core consists of 4 years of English, 3 years of math, 3 years of science and 3 years of social studies—neatly coinciding with the four components of the ACT Assessment. ACT's college core does not include high school course-taking in computer science or foreign language which are not included in the ACT Assessment. Since 1983 the annual survey of American College Freshmen has asked first-time, full-time college freshmen about their high school courses. These results were most recently reported

Program necessity

Figure 3

Change in percent of ACT-tested high school seniors that completed college core coursework between 1987 and 1997



for the 1996 college freshman class. This Survey reports the proportion of freshmen that have met or exceeded years of high school study in the following areas: 4 years of English, 3 years of mathematics, 2 years of foreign language, 2 years of physical science, 2 years of biological science, 1 year of history or American government, 1/2 year of computer science and 1 year of art and/or music.

In both the ACT and UCLA reports, data are available for different demographic breakdowns of the population. ACT has for several years prepared special tabulations for *OPPORTUNITY* on request, that permit examination of data by gender, race/ethnicity and family income. We have included summaries from these special requests in tables in this report.

Core coursework completion

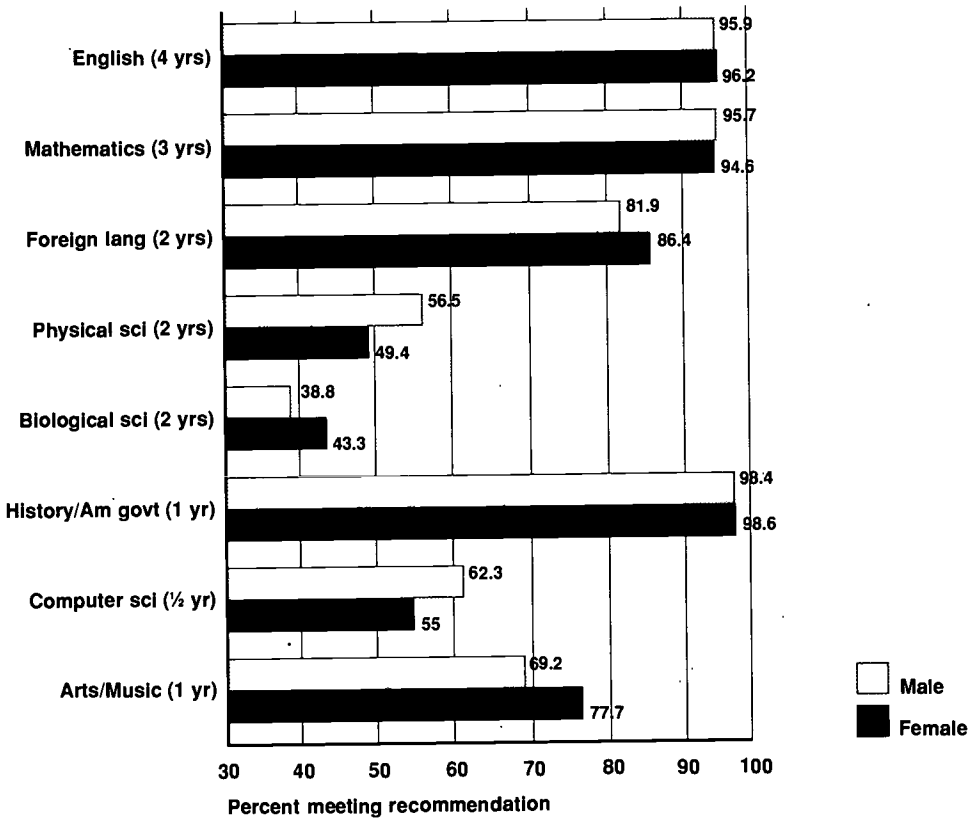
Like the federal transcript studies, the ACT data on college core coursework completion has shown substantial growth since the Nation at Risk report appeared in 1983. As shown in the chart on page 1 of this issue of *OPPORTUNITY*, between 1987 and 1997 the proportion of ACT-tested college-bound high school seniors that completed the College Core curriculum increased from 37.9 to 61 percent. Moreover, in sheer numbers, these gains are just as impressive. The number of college-bound high school seniors completing the College Core curriculum increased from 284,000 in 1987 to 566,000 in 1997. During this same period the number not completing this curriculum decreased from 465,000 to 362,000. These shifts are further magnified by the increasing proportion of high school graduates and college freshmen taking the ACT Assessment over this period. Between 1987 and 1995 the proportion of high school graduates taking the ACT increased from 29 to 36 percent, while the number of college freshmen that took the ACT increased from 52 to 59 percent. Quite likely, the ACT is being taken by more students who would have been least likely to take a college preparatory curriculum in the past.

While this proportion has increased every year, the rate of growth has clearly slowed, particularly between 1995 and 1997. Between 1987 and 1988, the proportion of ACT-tested high school seniors who completed the College Core curriculum increased by 4.7 percent. But between 1996 and 1997 the increase had dropped to just 0.6 percent. Apparently the educational reform initiated in 1983 is losing its early momentum. And, unfortunately, there is still far to go.

The gain between 1987 and 1997 in the proportion of seniors completing the College Core curriculum was 23.1 percent. But, to be expected, this gain was distributed unevenly across different demographic groups, as shown in the chart on page 4. For example, the proportion of females completing the College Core increased by 26 percent, but only 19.5 percent for males. (This is consistent with data previously reported here on the educational progress of females, and relative lack thereof among males.)

Among the racial/ethnic groups, Blacks and American Indians made the most progress between 1987 and 1997. Both increased their proportions completing the College Core by just under 25 percent. Mexican Americans and whites were close behind. The groups nuking the smallest gains were other Hispanics (Cubans, Puerto Ricans, etc.) and Asian Americans.

Figure 4
College freshmen meeting or exceeding recommended years of high school study by gender 1996



Course-taking patterns

Here we switch data bases (temporarily) to examine any changes in the courses students have taken in high school since A Nation at Risk appeared in 1983. Here we examine data on high school course-taking as reported by college freshmen from the annual survey of American College Freshmen by UCLA. In particular we are interested in the courses taken in English, mathematics, social studies, science, computer science and foreign language. The UCLA data come close to fitting the original prescription. It will be obvious where they do not. The chart on this page shows the proportion of college freshmen by gender meeting or exceeding certain specified years of study in particular courses over the years between 1983 and 1996. In 1996 nearly all college freshmen—about 95 percent or better—had completed the recommended 4 years of English and 3 years of mathematics.

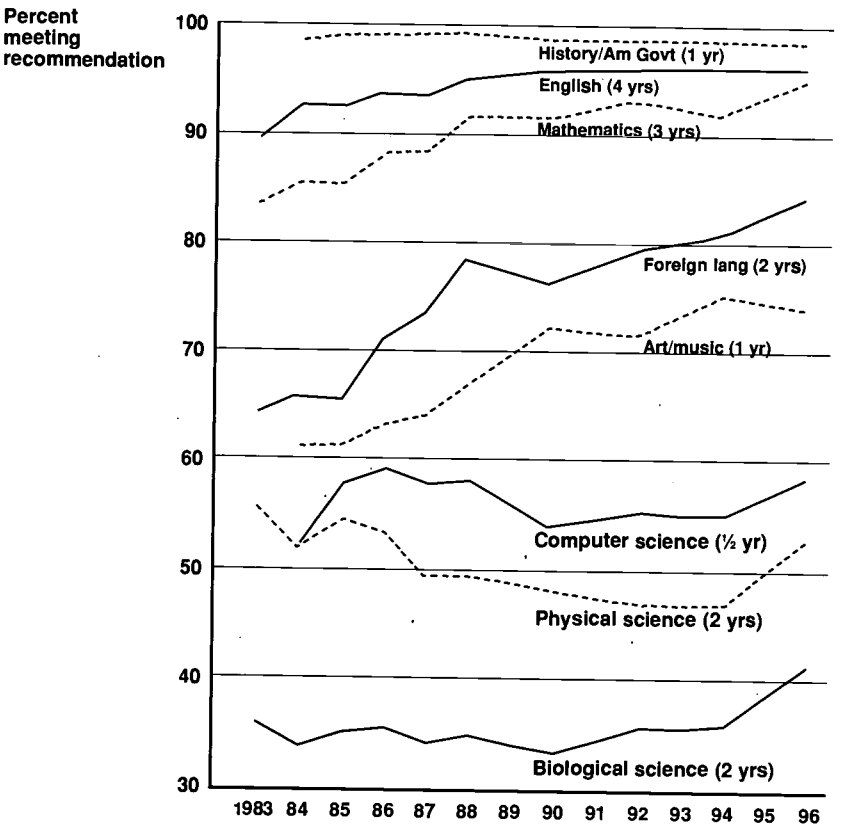
After English and math, however, smaller proportions of college freshmen reported that they had completed the recommended years of study. In foreign languages, 82 percent of males and 86 percent of females reported that they had completed 2 years in high school. In computer science, 62 percent of the males and 55 percent of the females reported that they had completed the one-half year recommended.

The UCLA data do not lend themselves to determining student course-taking patterns regarding the 3 year social studies recommendation or the 3 years of science recommendation. Clearly nearly all freshmen had taken at least 1 year of history or American government. But other reported data—are more ambiguous. The proportions taking 2 years of physical science and 2 years of biological science cannot be added because the percentages undoubtedly overlap—some students may have taken both 2 years of physical science and 2 years of biological science, but do not know from the published data how much overlap this represents.

Program necessity

Figure 5

College freshmen having met or exceeded recommended years of high school study 1983 to 1996



What the UCLA data do lend themselves to is examining changes in high school course-taking patterns after *A Nation at Risk* appeared in 1983. Since the same questions have been asked regularly, we examine here changes between 1983 and 1996.

The results show many large gains, and a few small losses, in the high school coursework of college freshmen. With respect to the New Basics Curriculum, the largest gains have been in the proportion of students having taken at least 2 years of a foreign language in high school. Other gains have occurred in mathematics, English and computer science.

The smallest gains appear in science, although the UCLA data do not lend themselves to direct comparison with the New Basics Curriculum recommendation of 3 years of science. While the proportion of college freshmen reporting that they took 2 years of physical science in high school declined (from, 55.6 to 52.6 percent) between 1983 and 1996, the proportion reporting that they took 2 years of biological science increased (from 35.9 to 41.3 percent).

By gender, males made their largest gain in foreign language, from about 62 to about 82 percent between 1984 and 1996. Females had their largest gain in mathematics, from about 83 to about 95 percent, followed by computer science, from about 47 to 55 percent.

The historic gender gaps in academic subject area generally closed between 1983 and 1996. In areas of mathematics, physical science and computer science, where boys were more likely than girls to have taken at least the minimum recommended curriculum, the change in the proportion of girls reporting that they had completed the recommended curriculum increased more than did the proportion for boys.

	Gap	
	1984	1996
Math	4.6%	1.1%
Phy Sci	11.0%	7.1%
Comp Sci	10.5%	7.3%

Similarly, in the areas of English, foreign languages and arts/music, where girls had taken more coursework, the gaps closed between 1984 and 1996:

	Gap	
	1984	1996
English	1.0%	0.3%
Foreign Lang	7.5%	4.5%
Art/Music	10.5%	8.5%

Only in the areas of biological science and history/American government were the changes trivial.

ACT assessment

The ACT Assessment is a widely used college admissions exam whose content neatly dovetails with the New Basics Curriculum recommendations (except for foreign language and computer science curricular recommendations) of the National Commission on Excellence in Education. The ACT Assessment consists of four tests, on English, mathematics, social studies and science. The means of these four tests is the ACT composite score, which can range up to 36. In 1997 the mean ACT composite score for the 959,301 college bound high school seniors who took the ACT was 21.0.

For the last decade, ACT has reported national average ACT Composite scores separately for those who have completed the College Core curriculum, and those who have not completed this coursework. ACT's College Core

Table 1

ACT composite scores and college preparatory core course completion for all college-bound high school seniors 1987–1997

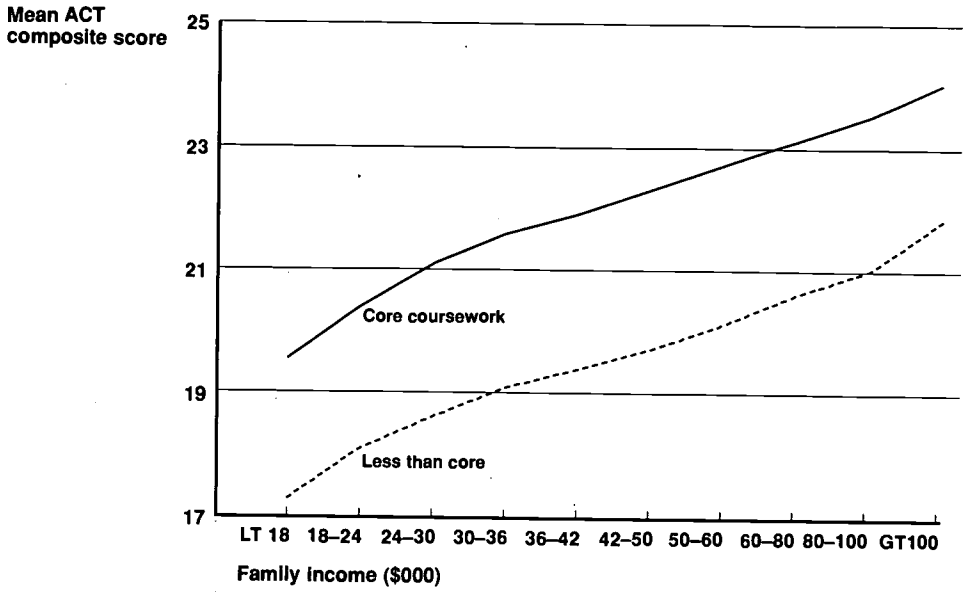
Estimated Family Income	1997 ACT mean composite score			College prep core course completers					
	All[1]	Core	LT Core	1987	1989	1990	1993	1995	1997
0–$5,999	↑	↑	↑	27.4%	34.0%	35.7%	41.2%	45.0%	↑
$6,000–11,999	18.5	19.6	17.3	30.3	38.3	39.9	44.9	49.8	51.0%
$12,000–17,999	↓	↓	↓	32.7	40.1	42.2	47.9	52.4	↓
$18,000–23,999	19.4	20.4	18.1	35.1	42.2	44.6	50.0	54.5	54.3
$24,000–29,999	20.1	21.1	18.6	36.4	44.3	46.2	52.0	56.3	57.1
$30,000–35,999	20.6	21.6	19.1	38.2	45.8	48.0	53.8	58.0	58.6
$36,000–41,999	20.9	21.9	19.4	40.1	47.5	49.4	54.7	59.3	60.1
$42,000–49,999	21.3	22.3	19.7	42.6	50.1	52.2	57.4	61.0	61.8
$50,000–59,999	21.8	22.7	20.1	44.0	52.1	54.1	59.7	63.2	64.3
$60,000–79,999	22.3	23.1	20.6	↑	↑	↑	↑	↑	66.9
$80,000–99,999	22.7	23.5	21.0	47.2	55.8	58.4	64.7	68.2	70.2
$100,000 & over	23.4	24.0	21.8	↓	↓	↓	↓	↓	72.5
Total	21.0	22.1	19.3	37.9%	46.1%	48.4%	54.8%	59.4%	61.0%
Number:									
1997	959,301	566,141	361,947						
1995	945,369	529,146	360,925						
1993	875,603	453,064	374,256						
1990	817,096	370,379	394,256						
1989	855,309	380,576	445,236						
1987	777,508	283,562	464,760						

[1]Includes those for whom core course work could not be determined.

consists of 4 years of English, 3 years of mathematics, 3 years of social studies and 3 years of science. In 1997, the mean ACT composite score was 22.1 for those who had completed the College Core Curriculum, and 19.3 for those who did not complete it.

Figure 6

Mean ACT composite scores by family income for college core and non-core completers 1997



ACT has prepared a special tabulation for *OPPORTUNITY*—with special thanks to Dr. James Maxey and David Shawyer—that permits us to examine both performance on the ACT Assessment and College Core course-taking patterns for several important demographic groupings of the population. These demographic groups include gender, race/ethnicity, and family income's interaction with gender and race/ethnicity. These data are available for six of the last ten years.

The results are clear and unequivocable.

First and most important, for both males and females, for each racial/ethnic group, and at every level of family income, ACT-tested college-bound high school seniors who completed the College Core curriculum had higher mean ACT Composite scores than did students who did not complete the College Core curriculum in high school. The average difference was 2.8 points.

- The difference was somewhat greater for males (3.1) than for females (2.6).
- The difference was somewhat greater for whites and American Indians (2. 8) than it was for blacks (1.9).
- The difference was somewhat greater for students from families with incomes between $42,000 to $60,000 (2.6) than it was for both those from lowest family income, below $24,000 per year (2.3), or for those from highest family incomes, above $100,000 (2.2).

But these ACT data tell other important stories as well. For example, in 1997 (as in each prior year) the proportion of college-bound high school seniors that completed the College Core Curriculum increased directly with family income. For those with families with incomes below $18,000 per year, 51 percent completed the College Core. For those from families with incomes of more that $100,000 per year, the percentage was 72.5 percent. Between these extremes, the relationship was nearly linear.

The above finding applies to males, females, blacks American Indians, whites, Asian-Americans, Mexican-Americans and other Hispanics equally. This finding also applies to three other groups: unreported race/ethnicity, multiracial and "prefer not to respond", which are not reported separately in the following tables.

Table 2

ACT composite scores and college preparatory core course completion for male college-bound high school seniors 1987–1997

Estimated Family Income	1997 ACT mean composite score			College prep core course completers				
	All[1]	Core	LT Core	1987	1990	1993	1995	1997
0–$5,999	↑	↑	↑	30.5%	38.4%	41.7%	45.6%	↑
$6,000–11,999	18.6	19.9	17.3	33.3	41.6	45.0	49.6	50.3%
$12,000–17,999	↓	↓	↓	35.6	44.3	48.7	51.8	↓
$18,000–23,999	19.4	20.7	18.0	38.3	46.6	50.4	54.2	53.9
$24,000–29,999	20.2	21.4	18.6	39.6	48.4	52.9	56.1	56.5
$30,000–35,999	20.7	21.9	19.1	41.5	50.2	54.7	58.0	57.9
$36,000–41,999	21.0	22.2	19.3	43.1	51.9	55.6	59.1	59.2
$42,000–49,999	21.4	22.5	19.7	46.0	54.1	58.2	60.9	61.4
$50,000–59,999	21.9	22.9	20.0	47.8	55.9	60.4	63.1	63.7
$60,000–80,999	22.4	23.3	20.5	↑	↑	↑	↑	66.8
$80,000–99,999	22.8	23.6	20.9	50.0	60.1	65.3	67.9	70.0
$100,000 & over	23.4	24.1	21.6	↓	↓	↓	↓	72.0
Total	21.1	22.4	19.3	41.3%	50.9%	55.9%	59.6%	60.8%
Number:								
1997	419,049	244,304	157,337					
1995	416,159	231,182	156,397					
1993	393,707	205,844	162,625					
1990	373,310	175,840	159,671					
1987	356,695	140,352	199,505					

[1]Includes those for whom core course work could not be determined.

Table 3

ACT composite scores and college preparatory core course completion for female college-bound high school seniors 1987–1997

Estimated Family Income	1997 ACT mean composite score			College prep core course completers				
	All[1]	Core	LT Core	1987	1990	1993	1995	1997
0–$5,999	↑	↑	↑	25.7%	34.0%	40.8%	44.7%	↑
$6,000–11,999	18.4	19.4	17.3	28.4	38.8	44.9	49.9	51.4%
$12,000–17,999	↓	↓	↓	30.7	40.6	47.3	52.7	↓
$18,000–23,999	19.3	20.3	18.1	32.5	42.9	49.6	54.7	54.5
$24,000–29,999	20.0	20.9	18.7	33.6	44.3	51.2	56.4	57.5
$30,000–35,999	20.5	21.4	19.2	35.4	46.1	53.0	58.0	59.1
$36,000–41,999	20.8	21.7	19.4	37.3	47.2	54.0	59.5	60.8
$42,000–49,999	21.2	22.1	19.7	39.4	50.4	56.6	61.1	62.1
$50,000–59,999	21.7	22.5	20.2	42.0	52.5	59.0	63.3	64.8
$60,000–79,999	22.2	23.4	20.7	↑	↑	↑	↑	67.1
$80,000–99,999	22.7	23.4	21.2	44.5	56.6	64.1	68.4	70.3
$100,000 & over	23.4	23.9	22.0	↓	↓	↓	↓	73.1
Total	20.8	21.9	19.3	35.1%	46.4%	53.9%	59.3%	61.1%
Number:								
1997	540,252	321,837	204,610					
1995	529,210	297,964	204,528					
1993	481,896	247,220	211,631					
1990	443,786	194,539	224,869					
1987	420,729	143,205	265,235					

[1]Includes those for whom core course work could not be determined.

Table 4

ACT composite scores and college preparatory core course completion for African American/Black college-bound high school seniors 1987–1997

Estimated Family Income	1997 ACT mean composite score			College prep core course completers				
	All[1]	Core	LT Core	1987	1990	1993	1995	1997
0–$5,999	↑	↑	↑	25.4%	35.3%	41.1%	45.1%	↑
$6,000–11,999	16.1	16.9	15.3	28.5	39.6	44.7	50.7	50.7%
$12,000–17,999	↓	↓	↓	30.2	41.4	47.7	53.0	↓
$18,000–23,999	16.5	17.3	15.6	31.8	42.2	49.1	55.5	56.4
$24,000–29,999	16.9	17.7	15.9	32.8	44.7	50.3	55.6	56.4
$30,000–35,999	17.4	18.1	16.3	34.2	46.7	53.1	57.0	58.0
$36,000–41,999	17.6	18.4	16.4	34.9	48.2	53.2	59.9	59.0
$42,000–49,999	17.9	18.7	16.7	39.0	49.4	56.1	61.2	60.7
$50,000–59,999	18.4	19.0	17.2	38.8	51.4	57.6	62.4	62.6
$60,000–79,999	18.8	19.7	17.4	↑	↑	↑	↑	63.3
$80,000–99,999	19.3	20.0	17.7	43.3	52.7	60.4	64.6	66.2
$100,000 & over	19.8	20.6	18.0	↓	↓	↓	↓	67.0
Total	17.1	17.9	16.0	30.9%	42.6%	48.9%	54.5%	55.8%
Number:								
1997	90,617	50,100	39,696					
1995	89,155	48,097	40,099					
1993	80,401	28,893	40,620					
1990	71,197	29,814	40,127					
1987	61,772	18,789	42,109					

[1]Includes those for whom core course work could not be determined.

Table 5

ACT composite scores and college preparatory core course completion for American Indian/Alaskan Native college-bound high school seniors 1987–1997

Estimated Family Income	1997 ACT mean composite score			College prep core course completers				
	All[1]	Core	LT Core	1987	1990	1993	1995	1997
0–$5,999	↑	↑	↑	16.8%	26.2%	31.9%	36.0	↑
$6,000–11,999	17.4	19.0	16.5	20.2	29.7	37.0	38.7	41.8
$12,000–17,999	↓	↓	↓	36.0	35.8	43.7	42.7	↓
$18,000–23,999	18.0	19.4	16.8	27.4	40.5	44.7	46.7	49.1
$24,000–29,999	18.8	20.2	17.5	28.7	39.5	47.1	51.6	49.4
$30,000–35,999	19.1	20.4	17.9	28.2	39.4	50.0	53.0	52.2
$36,000–41,999	19.5	20.7	18.2	36.8	46.4	50.7	54.4	55.2
$42,000–49,999	19.7	20.9	18.2	36.8	46.4	50.7	54.4	55.2
$50,000–59,999	20.1	21.1	18.7	32.4	46.5	55.5	58.3	58.5
$60,000–79,999	20.7	22.0	19.0	↑	↑	↑	↑	57.7
$80,000–99,999	21.0	22.2	19.6	36.7	49.5	58.0	61.3	55.7
$100,000 & over	21.5	22.6	19.6	↓	↓	↓	↓	65.6
Total	19.0	20.4	17.6	26.4%	37.8%	45.7%	49.5	51.2
Number:								
1997	11,509	5,685	5,414					
1995	11,361	5,398	5,509					
1993	10,384	4,537	5,390					
1990	9,101	3,163	5,208					
1987	7,359	1,769	4,943					

[1]Includes those for whom core course work could not be determined.

Table 6

ACT composite scores and college preparatory core course completion for White college-bound high school seniors 1987–1997

Estimated Family Income	1997 ACT mean composite score			College prep core course completers				
	All[1]	Core	LT Core	1987	1990	1993	1995	1997
0–$5,999	↑	↑	↑	28.8%	35.1%	40.3%	44.1%	↑
$6,000–11,999	20.1	21.6	18.7	30.8	39.2	43.7	48.5	50.0%
$12,000–17,999	↓	↓	↓	33.0	41.8	47.2	51.4	↓
$18,000–23,999	20.5	21.7	19.1	33.5	44.6	49.6	53.9	53.8
$24,000–29,999	20.9	22.0	19.4	36.7	46.0	51.6	55.8	56.8
$30,000–35,999	21.2	22.3	19.6	38.4	47.8	53.4	57.6	58.2
$36,000–41,999	21.3	22.4	19.8	40.2	49.3	54.5	58.9	59.9
$42,000–49,999	21.6	22.6	20.0	42.7	52.2	57.1	60.8	61.6
$50,000–59,999	22.0	22.9	20.3	44.9	54.1	59.5	62.9	64.2
$60,000–79,999	22.5	23.3	20.8	↑	↑	↑	↑	67.0
$80,000–99,999	22.9	23.6	21.2	47.2	58.3	64.6	68.1	70.2
100,000 & over	23.4	24.0	21.9	↓	↓	↓	↓	72.7
Total	21.7	22.8	20.0	38.8%	49.1%	55.5%	60.2%	62.0%
Number:								
1997	663,878	408,851	250,763					
1995	650,664	388,508	257,159					
1993	625,242	342,884	275,294					
1990	605,361	290,929	301,253					
1987	610,780	234,118	369,995					

[1]Includes those for whom core course work could not be determined.

Table 7

ACT composite scores and college preparatory core course completion for Asian-American/Pacific Islander college-bound high school seniors 1987–1997

Estimated Family Income	1997 ACT mean composite score			College prep core course completers				
	All[1]	Core	LT Core	1987	1990	1993	1995	1997
0–$5,999	↑	↑	↑	41.6%	54.1%	56.1%	57.6%	↑
$6,000–11,999	18.8	19.6	17.3	46.1	59.4	62.6	63.4	65.3%
$12,000–17,999	↓	↓	↓	49.2	60.9	64.0	65.8	↓
$18,000–23,999	19.8	20.6	18.2	50.8	61.9	65.3	67.2	66.5
$24,000–29,999	20.6	21.2	19.0	51.0	63.4	68.0	71.0	71.2
$30,000–35,999	21.1	21.9	19.5	55.4	62.8	68.7	71.8	71.8
$36,000–41,999	21.7	22.3	20.1	56.5	65.1	42.2	71.3	73.2
$42,000–49,999	22.3	23.0	20.5	55.7	66.7	71.1	71.0	72.1
$50,000–59,999	23.0	23.5	21.3	58.5	66.5	72.4	75.3	76.0
$60,000–79,999	23.8	24.3	22.0	↑	↑	↑	↑	76.6
$80,000–99,999	24.2	24.7	22.5	59.9	70.5	74.0	78.1	78.5
$100,000 & over	25.4	25.8	24.1	↓	↓	↓	↓	78.7
Total	21.7	22.5	19.8	52.4%	63.6%	68.5%	70.7%	72.1%
Number:								
1997	28,542	20,201	7,834					
1995	27,784	19,237	7,989					
1993	24,754	16,600	7,649					
1990	19,081	11,734	6,714					
1987	13,885	7,070	6,411					

[1]Includes those for whom core course work could not be determined.

Table 8

ACT composite scores and college preparatory core course completion for Mexican-American/Chicano college-bound high school seniors 1987–1997

Estimated Family Income	1997 ACT mean composite score			College prep core course completers				
	All[1]	Core	LT Core	1987	1990	1993	1995	1997
0–$5,999	↑	↑	↑	22.8%	35.6%	38.9%	44.8%	↑
$6,000–11,999	17.4	18.6	16.2	28.6	40.0	46.8	51.5	51.1%
$12,000–17,999	↓	↓	↓	31.2	42.3	48.0	52.6	↓
$18,000–23,999	18.0	19.1	16.8	31.0	43.2	50.7	53.2	50.9
$24,000–29,999	18.4	19.4	17.3	32.6	45.4	49.2	55.6	54.7
$30,000–35,999	19.0	19.9	17.8	35.2	49.1	52.0	58.7	56.8
$36,000–41,999	19.1	19.9	18.0	38.0	47.8	52.1	57.3	57.8
$42,000–49,999	19.7	20.6	18.3	41.0	50.9	56.7	58.3	59.1
$50,000–59,999	20.1	21.0	18.7	39.8	50.6	57.1	62.2	60.3
$60,000–79,999	20.9	21.9	19.1	↑	↑	↑	↑	65.2
$80,000–99,999	21.2	21.9	19.6	42.3	55.2	62.4	66.1	68.1
$100,000 & over	21.7	22.7	19.7	↓	↓	↓	↓	66.9
Total	18.8	19.9	17.4	31.8%	44.2%	50.0%	55.4%	55.6%
Number:								
1997	21,511	11,875	9,475					
1995	24,431	13,435	10,801					
1993	27,713	13,764	13,753					
1990	22,806	9,770	12,349					
1987	17,451	5,407	11,614					

[1]Includes those for whom core course work could not be determined.

Table 9

ACT composite scores and college preparatory core course completion for Puerto Rican, Cuban, other college-bound high school senior 1987–1997

Estimated Family Income	1997 ACT mean composite score			College prep core course completers				
	All[1]	Core	LT Core	1987	1990	1993	1995	1997
0–$5,999	↑	↑	↑	28.6%	35.8%	38.9%	42.9%	↑
$6,000–11,999	17.2	18.2	16.1	37.9	44.1	48.7	49.9	52.5%
$12,000–17,999	↓	↓	↓	39.9	49.3	52.6	53.6	↓
$18,000–23,999	17.9	18.9	16.6	42.2	50.5	53.8	56.0	54.5
$24,000–29,999	18.6	19.5	17.2	45.7	51.3	58.2	57.6	60.0
$30,000–35,999	19.2	20.2	17.7	50.6	56.3	60.6	61.0	60.9
$36,000–41,999	19.5	20.6	17.7	51.1	57.6	60.1	62.0	61.3
$42,000–49,999	20.1	20.8	18.7	50.4	56.1	65.4	63.2	64.2
$50,000–59,999	20.4	21.3	18.8	56.4	60.8	66.0	66.1	64.7
$60,000–79,999	21.1	21.9	19.4	↑	↑	↑	↑	66.6
$80,000–99,999	21.7	22.3	20.2	56.5	64.4	70.1	71.5	72.1
$100,000 & over	22.5	23.1	20.7	↓	↓	↓	↓	73.9
Total	19.0	20.1	17.4	44.0%	51.8%	57.0%	58.1%	59.7%
Number:								
1997	26,841	15,693	10,615					
1995	24,054	13,585	9,812					
1993	13,894	7,693	5,799					
1990	10,669	5,250	4,886					
1987	7,566	3,149	4,003					

[1]Includes those for whom core course work could not be determined.

Summary and conclusions

There can be no doubt that the 1983 report *A Nation at Risk* prepared by the National Commission on Excellence in Education started an educational reform process with widespread and persistent effects. Those effects are reflected in the great changes in course-taking patterns of American high school students between 1983 and 1997. These changes followed directly from the Commission's recommendations for the New Basics Curriculum. By every available demographic grouping—gender, race/ethnicity and family income—students have responded by taking high school courses prescribed by the Commission at increasing rates since 1983.

In 1983 the Commission was profoundly troubled by the deteriorating and/or inferior Performance of American high school students based on both international comparisons and comparisons to performance of earlier generations of high school students. Their findings appeared to be explained by the weakening of high school curricula:

- Secondary school curricula have been homogenized, diluted, and diffused to the point that they no longer have a central purpose. In effect, we have a cafeteria style curriculum in which the appetizers and deserts can easily be mistaken for the main courses. Students have migrated from vocational and college preparatory programs to 'general track' courses in large numbers.The proportion of students taking a general program of study has increased from 12 percent in 1964 to 42 percent in 1979.

- This curricular smorgasbord, combined with extensive student choice, explains a great deal about where we find ourselves today. We offer intermediate algebra, but only 31 percent of our recent high school graduates complete it; we offer French I, but only 13 percent complete it; and we offer geography, but only 16 percent complete it. Calculus is available in schools enrolling about 60 percent of all students, but only 6 percent of all students complete it.

- Twenty-five percent of the credits earned by general track high school students are in physical and health education, work experience outside the school, remedial English and mathematics, and personal service and development courses, such as training for adulthood and marriage.

Out of these findings and other efforts of the Commission grew the recommendation for the New Basics Curriculum.

By 1993 just six states had adopted the New Basics curricular requirements in English, mathematics, social studies and science for all high school graduates in their states. These states were: Florida, Georgia, Hawaii, Louisiana, Pennsylvania and the District of Columbia.

Thirty-nine states required 4 years of English for all high school graduates, 27 required 3 years of social studies 15 required 3 years of mathematics and just 7 states required 3 years of science for all high school graduates. Some states had no state-level graduation requirements (Colorado, Massachusetts) and many other states had higher graduation requirements for college preparatory curricula than for standard programs. But most states simply required for standard high school graduation fewer years of study in the New Basics Curriculum than what had been recommended by the Commission a decade earlier.

While the response from most states has deviated (and usually fallen short) from the Commission's New Basics recommendations, there has been a very large growth in the proportion of high school graduates taking the course work that met the recommendation. In the ACT data, for college-bound high school seniors, the proportion taking ACT's similar Core Courses increased from 38 to 61 percent between 1987 and 1997. Although the growth momentum is clearly slowing in the mid-1990s compared to the rate of growth in the late 1980s, growth does continue.

Moreover, the growth in the proportion of college-bound high school seniors completing ACT's College Core Curriculum has been widespread affecting subpopulations grouped by gender, race/ethnicity and family income. This growth has been somewhat uneven, with females increasing their College Core work faster than males; blacks, American Indian and Mexican-Americans increasing their College Core course work at greater rates than Asian-Americans and other Hispanics.

Perhaps most troubling in these data is the persistent effect of family income on college course work completion, with its evident implications for performance on the ACT Assessment used for college admissions. For males and

females, as well as for those of any race or ethnic group, the proportion of college-bound high school seniors completing ACT's College Core courses is lowest for those from lowest family income and highest for those from highest family income. This carries over into performance on the ACT Assessment as well.

But even in this problematic area, the contribution of course-taking to performance on the ACT Assessment is unmistakable. Completing the College Core helps close the gap when it comes to the ACT Composite test score.

Finally, the contribution of public policy making to educational preparation of secondary students for college stands out in these data. Clear public policy has made a very large difference in the courses taken by college bound high school seniors (who become college freshmen shortly thereafter). The data are striking. Students (and the educational systems within which they study) do respond to the reasoned, researched, compelling arguments.

But the momentum for educational reform appears to be losing steam.The 14 years since release of *A Nation at Risk* has seen waning progress. But the social, economic and cultural needs for greater levels of educational performance and attainment are at least as urgent in 1997 as they were in 1983. The country responded once. Perhaps it is time to renew the call for educational reform and marshall the commitment.

Between 1996 and 2006 U.S. employment will grow from 132.4 million to 150.9 million—an increase of 18.6 million jobs. Over this same period, an additional 32 million existing jobs will open up due to net replacements as workers retire of otherwise leave the job market.

What are the educational requirements for the 50.6 million openings that will occur over this decade? Not surprisingly, all job openings will require at least some training. But 31 million jobs will not require postsecondary education. These jobs are the lowest paid jobs in the labor force. They will all require short-term, moderate-term or long-term on-the-job training to perform the duties of the job.

The remaining roughly 20 million new openings will require some form of formal postsecondary education or training. About half of these new openings will require a bachelor's degree.

These are some of the findings reported from a recent release of employment projects for the ten-year period from 1996 to 2006. These projections were prepared by the Bureau of Labor Statistics, U.S. Department of Labor. The BLS prepares these projections for studying long-range economic and employment trends, planning education and training programs, and developing career information.

The data

Since the early 1980s, the Bureau of Labor Statistics has periodically developed projections for the labor force, aggregate economic growth, industry employment and occupation employment. These projections were in the ten to fifteen year range. The projections reported here will be next updated in two years.

These projections incorporate demographic information on age, gender and race/ethnicity. Projections are made by major industry division, occupational group, and—key for our purposes here-by education or training requirements.

A summary of these projections is available in a news release from BLS labeled USDL 97-429. This news release is also available on the Internet at: *http://stats.bls.gov/news.release/ecopro.nws.htm*

Labor force projections

The labor force is projected to increase from. 134 million to 149 million between 1996 and 2006. This is an increase of 11 percent, which is below the 14 percent increase that occurred between 1986 and 1996.

- Labor force growth will grow fastest in the 45–64 age group—the baby boom generation born after World War II
- The labor force 25 to 34 years of age is projected to decline by nearly 3 million. This is a reflection in the decline in live births in the late 1960s and 1970s.

- The white labor force will grow by 7 percent, the black by 14 percent, the Hispanic by 36 percent, and the Asian and other by 41 percent.
- By 2006 the black and Hispanic labor forces will be nearly equal in size.

Employment by industry

Between 1996 and 2006 employment is projected to increase from 132 to 151 million, or by 19 million.

- Service industries will account for nearly all of this growth. Nearly one out of every two jobs added to the economy between 1996 and 2006 will be in health services, business services, social services, and engineering, management and related services.
- Manufacturing's share of employment will decline from 14 percent in 1996 to 12 percent in 2006. In 1970 it had been over 26 percent, and until the mid-1950s manufacturing had provided about a third of employment.

Education and training

The Bureau of Labor Statistics' report summarizes data on several aspects of the relationship between education and employment.

First among these is the often-reported relationship between education and income. As shown in the chart on the previous page, median weekly earnings of those with college degrees are invariably higher than are earnings for those with different combinations training and work experience, but who lack college educations. For full-time work, persons with more education can earn three times as much for their labors as can less educated and trained workers.

Second, between 1996 and 2006, employment growth will be about 14 percent. But for every employment/training category below the associate degree, employment growth will fall below this level, and for every employment/training category beginning at the associate degree employment growth will be above 14 percent. The greatest growth will be for those with bachelor's and associate degrees from college, both more than 20 percent between 1996 and 2006.

Third, buried in the Bureau of Labor Statistics projections is another important finding. Among those job openings that require less than an associate degree from college, about three-quarters are net replacement openings with the remaining quarter resulting from employment growth. However, among those job openings that require an associate degree or more from college, less than half of the new job openings will be net replacement positions and just over half—about 55 percent—will result from employment growth.

The new job openings that are created by employment (and economic) growth will require the talents and skills of college educated workers. In contrast, the net replacement job openings of existing jobs will be filled primarily by long-term, moderate-term or short-term on-the-job training. This is a clear signal that economic growth is mor dependent on college-educated workers than are the jobs in the existing economy.

There are other aspects of these employment projections by the Bureau of Labor Statistics that deserve special note with respect to our concerns for postsecondary education and training opportunities for young people. Foremost among these is the changing demographic profile of the population. The labor market will have to adapt to the baby-bust that has moved through the education pipeline. That means fewer younger workers entering the labor pool.

More importantly, these newer and younger workers will look less like the older workers they are replacing. Racially and ethnically they will be much less white and more Asian, Hispanic and black than in the past. If higher education is to meet the economic challenge of preparing fully the next generation of workers—who come from populations not previously well represented in nor served well by higher education—then the educational system must try harder than it has just to produce what it has produced up until now.

Additional information on these 1996–2006 employment projections are available in other BLS publications. The November 1997 issue of the *Monthly Labor Review* contains five articles on the projections. Graphic representation of these projections appears in the Winter 1997–98 issue of *Occupational Outlook Quarterly.*

6

Program necessity

Access, Equity, and the Privatization of College Counseling

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Introduction

College choice is the process by which college aspirants prepare for and apply to colleges. College access is the process whereby educators, policy makers, and administrators attempt to ensure a college education for all who aspire to that goal. Researchers in these domains have made significant contributions to our understanding of the transition from secondary to postsecondary schooling—e.g., social psychological analyses of choice stages (Hossler, Braxton, & Coopersmith, 1989), aggregate analyses of the socioeconomic differentials in college access and attainment (Hearn, 1984, 1991), and marketing and policy analyses of student enrollments (Litten, 1982; Wenglinsky, 1996). Often this individual- and institutional-matching process has been treated empirically as a technical fit between an individual and a particular postsecondary institution.

We believe that college choice is a more complex social and organizational reality. Recent shifts in institutional responsibilities for helping students make their college choices (McDonough & Robertson, 1995), the growth of admissions management practices (McDonough, 1994), and the selective access to these advantageous practices by predominantly high socioeconomic status students have strengthened the contribution this perspective can make to understanding the processes of college choice and college access.

This paper focuses on the phenomenon of private college counselors, other-wise known as independent educational consultants (IECs), one of the more interesting sectors of the growth industry of admissions. We document who these counselors are, who the IEC users (IECUs) are, and begin to question the impact of this privatization of college counseling on admissions and equity considerations. Some background information on the recent changes in college admissions will set the stage for our study.

Overview of problem

College admissions, formerly the professional purview of high school counselors and college admissions officers, is now a growing entrepreneurial sector of substantial investment and profit. We believe that four environmental factors are closely linked to the rise of the entrepreneurial advising sector: colleges' focus on admissions marketing and enrollment management in response to anticipated enrollment declines, an increased competition for college seats, public high schools' virtual divestment of the college advisement function, and a commodification of college knowledge.

The admissions institutional sectors of high schools and colleges have changed dramatically over the last 30 years, raising questions about who students today can turn to for help. Traditionally, students have relied on high school counselors and college admissions officers. Today, counselors are more plentiful than ever before, given the improvement in the ratio of secondary school guidance counselors-to-students: from 1:2,403 in 1960 to 1:509 in 1990 (National Center, 1992). Yet simultaneously, the profile of a high school counselor's appropriate activities has dramatically changed. As part of a larger phenomenon of turning to schools to handle social ills, today's school counselors spend substantial effort on the prevention of dropout, drug abuse, pregnancy, and suicide, as well as counseling about sexuality and personal crisis management.

After these needs have been met, public high school counselors may have time for college choice advising. A decade ago, researchers found that counselors devoted only 20% of their time to college guidance (Chapman & De Masi, 1985). Today, 10 of the largest urban public high schools have effectively divested themselves of college advisement with average high school counselor- to- student ratios of 1:740 (Fitzsimmons, 1991). Some states, notably California

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where the counselor-to- student ratio is 1: 1,040 students, offer even less advisement than Fitzsimmons' inner-city schools. However, most American high schools offer college counseling, although students apparently find it less than overwhelmingly useful. According to one survey of undergraduates' college decision-making processes, 60% of 1993 freshman said that the advice of their high school counselor was not very important to them (Astin, Korn, & Riggs, 1993).

Concomitantly, the number of college admissions officers has grown exponentially, but their training and task orientations have a pronounced marketing emphasis, downplaying their former role of educator dedicated to assisting students making the transition from high school to college. Because of exigencies born of maintaining a steady and fiscally healthy freshman class, admissions officers are far more oriented to their recruitment, selection, and enrollment management task functions. Moreover, in identifying characteristics desirable in admissions staff members, chief admissions officers identified marketing as the premier course background and said they sought staff who were friendly, poised, and willing to travel over staff who possessed strong educational beliefs or previous teaching or counseling experience (McDonough & Robertson, 1995). Thus, college admissions officers, the other institutional resource formerly available to help students in choosing a college that would enhance their personal and intellectual development, are otherwise occupied with the marketing tasks necessary to help colleges secure needed monetary resources. College applicants are consequently left on their own to navigate the often turbulent waters of this American rite of passage, the college choice process.

Students, mostly upper-middle class college applicants, have been engaging in a whole new range of admissions management behaviors to maintain a competitive edge and deal with anxiety about getting into what they consider to be a "good" college. A quarter century ago, 50% of all students filed one application and only 8% of students felt the need to cover their bases by filing five or more applications (Dey, Astin, & Korn, 199 1). In contrast, 29% of students in 1993 had filed one application, and the number filing five or more had grown to 22% (Astin, Korn, & Riggs, 1993). Among educationally privileged students, those figures are higher: 50% of all students at elite institutions and 70% of all students whose fathers have at least a bachelor's degree filed six or more applications (Horvat & McDonough, 1994).

Publishers and software designers capitalizing on the lack of institutional support have tackled the information gap with a commodification of college knowledge. Some examples include: (a) a three-fold increase in books on college choice listed in Books in Print-up from 100 in 1967 to 336 in 199 1, (b) college choice software, (c) computerized viewbooks, and (d) interactive media. These last three inventions, none of which existed earlier than 1980, allow students to visit any U.S. campus in virtual reality using their computer terminal. This commodification of college knowledge also extends to knowledge that will enhance a student's college entrance exam performance. In 1993, SAT exam coachings' gate receipts topped $100 million, with the industry leader, the Stanley Kaplan Educational Centers (owned by the Washington Post Corporation), garnering between 60-80% of this profit. However, this phenomenon is not limited to economically advantaged students since close to half (44%) of all first-time freshmen take some kind of SAT preparation course (Astin, Korn, & Riggs, 1993).

College choice decision making is more than a problem of information. Advising is crucial. Different groups of students have different strategies for dealing with this gap. Some low-income, first- generation, and minority students have advocacy programs like Upward Bound available to them which provide students with the support structures to prepare for and apply to college. Admittedly these programs are meagerly funded and serve a tiny proportion of the students in need. Many other students look to private avenues, often their own families, for college advice. Another solution is for families with the requisite resources to enroll their children in private high schools where college counseling is a priority.

Another private remedy is a counselor-for-hire who assists students through the college choice process and provides them with: (a) specialized knowledge and assistance, (b) uninterrupted time with a counselor, (c) organization and management of the college choice process, and (d) the cooling out of unreasonable aspirations with viable, personalized alternatives (McDonough, 1994). We believe that these consultants and the students they assist are collectively changing the taken- for- granted process of college application behavior in the 1990s and are another example of the privatization of college choice assistance. Independent educational consultants fill in some of the gap created by insufficient college counseling in high schools.

Program necessity

Theoretical framework

This research is part of a larger research project using a Bourdieuian field analysis which documents how the interinstitutional transition from high school to college can be better understood by simultaneously viewing changes in applicant behavior, high schools, colleges, and the entrepreneurial sector. This integrated analysis accounts for the reciprocal influence of individuals and institutions and illuminates the dynamic interactions of student behavior and admissions professionals' practices.

According to Pierre Bourdieu, fields are definable areas in which people struggle over capital (economic, social, cultural, and symbolic) (Bourdieu, 1984). Fields are structured by their own histories, internal logic, and patterns of recruitment and reward, as well as by external demands. Fields are constantly transformed by their participants because, once a large number of actors gains a large amount of capital, those actors influence and eventually change the structures. Bourdieu's field framework suggests that, as the numbers and types of people attending college increase, competition increases, the means that economically advantaged students use to gain access to college change, and the impact of those new means changes the terms of competition, especially at the most selective colleges. In other words, the terms of interaction and competition for the scarce resource of a college education, or particular type of college education, are constantly being redefined.

Cultural capital is one of the most important forms and can often transform aspirations into more valued educational credentials. For example, from childhood, students from high socioeconomic status backgrounds focus on maximizing their schooling opportunities and on using all of their available capital resources to help in that status maximization (Lareau, 1989). Individuals are "optimizers" who strategize about how to maximize cultural capital (DiMaggio, 1979) using their habitus, a social-class-based set of subjective perceptions that shapes expectations, attitudes and aspirations; it also generates: (a) common aspirations about good college choice outcomes and (b) social-class-based strategies about how to secure desired outcomes, in this case, admission into a "good" college. In today's upper middle-class world, students' habits include: (a) being focused on making a good college choice because their undergraduate experience will position them for good graduate school and job opportunities, (b) hiring a private counselor, (c) supplementing that counselor's advice with the advice of the high school counselor and teachers, (d) spending considerable time in clubs and student organizations because of their potential in filling out admissions profiles, (e) taking SAT coaching courses, and (f) getting remedial help in academic areas of relative weakness, etc. These activities constitute the norms, expected patterns, or tastes of this social class around this issue; collectively, they constitute an example of habitus.

The overriding importance of a field analysis is in directing our concurrent attention to many sectors-high schools, colleges, and the entrepreneurial arena-and then asking if and how equality of access has been affected as the available cultural resources used in the college admissions process have changed. This paper builds on what other researchers have found regarding changes in high schools and colleges, then empirically focuses on the entrepreneurial sector. Specifically, we are asking why IECs have developed, for whom IECs provide their services, how the use of IECs varies by social class or ethnicity, and how IECs have affected students' college application behaviors.

Research questions

This study documents independent educational consultants' demographic and professional backgrounds, the scope of their services and practices, and how they view the students who use their services. This study also details the characteristics of students who use independent educational consultants and explores the predictors of this behavior. The two primary questions guiding this study are: (a) Who are the independent educational consultants? and (b) Who are the students who seek their services? A primary concern undergirding this research project is how the privatization of college counseling affects college access and equity in general.

Prior to this study, IECs have been a relatively unstudied occupational group, and information about the students who use private counselors' services was anecdotal and unkind (Krugman & Fuller, 1989; Tyson, 1988). To supplement our data on IECs and IEC users, we conducted an exhaustive review of the periodical and professional literatures. This review disclosed the belief that IECs can be found mostly in large U.S. cities, near prestigious colleges, in more affluent suburbs, and some international locations. Popular newspaper and magazine articles describe consultants as offering students help with essay writing and SAT coaching ("Alma Mater:' 1989; Bernstein, 1996; "Private Counselors," 1988; Schurenburg, 1989; Stickney, 1988). Students who use private counselors' services are believed to be academically marginal and to come disproportionately from private preparatory schools;

one knowledgeable source estimated that, out of the annual freshmen class in the U.S., perhaps 10,000 students used IECs (M. Spence, private communication).

Methodology

To understand the interrelated needs of both students and counselors and to capture comprehensively and feasibly the requisite information, we drew our data from two national surveys: (a) We developed, piloted, and disseminated the Consultant Survey, the first national survey of independent educational consultants, and (b) We drew the Student Survey data from the 1993 annual freshman survey of the Cooperative Institutional Research Program (CIRP). This survey, conducted by the Higher Education Research Institute at UCLA, is the longest on-going study of first-time freshmen in the nation.

Consultant survey

Using the membership lists of the two predominant professional associations (the National Association of College Admissions Counselors and the Independent Educational Consultants Association), regional admissions associations, word-of-mouth referrals, and snowball techniques, we surveyed all of the independent educational consultants we could identify throughout the country. We distributed an eight-page, 53-question survey instrument to 317 self-identified independent educational consultants in April 1993. After a second mailing to nonrespondents and postcard reminders, we received responses from 55% of the original sample. The analytical sample used in this portion of the study consists of 157 independent educational consultants.

Respondents reported on their backgrounds, their practices, and their clients. Questions on the IECs' race, gender, and region in which they practice yielded demographic data. Questions about IECs' education and prior work experiences provided data on their training and backgrounds. Questions about the services they offered, why students used those services, how the IECs charged for their services, and the size of their operation supplied data about the nature and scope of their practices. Items on the race, gender, and family income of their clients provided additional data.

Figure 1

Schemata for variables and blocking for regression analyses

Block 1	**Block 2**	**Block 3**	Outcome variable 2
Background variables	*High school variables*	*Student self-ratings*	Number of college applications filed
Gender	Studied with other students	Academic ability	
Race	Was guest in teacher's home	Competitiveness	
Level of parental education	Felt overwhelmed	Drive to achieve	
Father's career	Studied in library	Emotional health	
Mother's career	Visited art gallery/museum	Leadership ability	
Home state	Had remedial work in:	Math ability	
Parental income	- English	Intellectual confidence	
Marital status of parents	- Math		
	Hours per week spent on:		Outcome variable 1
	- Talking with teachers		Use of independent educational consultants among students: "In planning for college, did you hire a private college counselor?"
	- Active in clubs/orgs.		
	Type of high school attended		
	High school GPA		
	SAT composite score		
	Sought advice of high school counselor in planning for college		
	Highest degree planned		
	Hired a private college counselor		

Program necessity

STUDENT SURVEY

By adding a single question to the CIRP annual freshman survey to determine how many and which students used the services of a private counselor, we subsequently were able to access a wide spectrum of demographic, attitudinal, cognitive, and affective outcomes associated with college attendance. In addition to students' self-reported information, we obtained their SAT scores and institutional data directly from the participating institutions.

The total sample for the 1993 survey is 296,828 freshmen from over 600 institutions of higher education. We used all freshmen for the frequency analyses. Nearly 3% of the total sample (n = 8,029) actually used private counselors in planning for college, but we examined both students who used private counselors (IEC-users or IECUs) and those who did not (non-IECUs) to provide a comparison. Accordingly, data used for the cross-tabulation and regression analyses come from all students' who responded to each survey item corresponding to the variables under investigation in each procedure.

Given the magnitude of the CIRP database, the results reported here are preliminary. Utilizing our Bourdieuian framework, we profiled both IECUs and non-IECUs through frequency analysis of students' cultural capital, family status, high school activities, college application behaviors, demographic variable, and high IEC-density states.

For multivariate analyses, we employed logistic regression to model the dichotomous outcome of students' use and non-use of IECs. Next, we used blocked stepwise linear regression to examine the effect of IEC use on the number of college applications filed. (See Figure 1 for variables used in analysis.) Finally, to examine interaction effects on the number of applications filed, we divided the sample into IECUs and non-IECUs and ran separate regression equations for each subsample.

Results

CONSULTANT SURVEY

We compiled a preliminary profile of the independent educational consultants, their practices, and the services they provide from the results of means, frequencies, and cross-tabulations. Table I presents the detailed profiles, including gender comparisons.

Table 1

Variable Frequencies of Independent Educational Consultants

Variable	*Overall*	*Men*	*Women*
n	157.0	37.0	120.0
Race			
White	98.1	97.3	98.3
Asian/Asian American	0.6	0.0	0.8
African American/Black	0.6	2.7	0.0
Chicano/Latino	0.6	0.0	0.8
Gender	–	24.0	76.0
Highest Degree Obtained			
Bachelor's	20.0	8.1	23.3
Master's	61.0	64.9	60.0
Doctorate	17.0	21.6	15.0
Previous Work Experience			
High school counselor	35.0	24.3	38.3
High school teacher	31.8	32.4	31.7
High school administrator	19.1	35.1	14.2
College admissions	14.6	18.9	13.3
College, other	14.6	21.6	12.5
Mental health professional	12.7	10.8	13.3
College teacher	12.1	18.9	10.0
College financial aid	1.3	0.0	1.7

Variable	*Overall*	*Men*	*Women*
Reasons Became an IEC			
To help clients	86.7	75.7	90.0
To use specialized knowledge	82.3	83.8	81.7
Autonomy	54.4	67.6	50.8
To work at home	24.7	18.9	26.7
Money	13.3	24.3	10.0
Professional Association			
IECA	69.6	45.9	42.5
National ACAC	61.4	59.5	62.5
Regional ACAC	43.7	64.9	71.7
Attend Annual Conference			
IECA	65.8	32.4	35.8
National ACAC	65.8	32.4	24.2
Regional ACAC	47.5	32.4	35.0
Percent Incorporated	21.0	37.8	15.8
Region			
Northeast	31.6	45.9	27.5
Mid-Atlantic states	7.1	8.1	6.7
South	5.2	2.7	5.8
Midwest	14.2	5.4	16.7
Northwest	5.2	8.1	5.0
California	27.1	10.8	31.7
Southwest	7.1	10.8	31.7
Hawaii	0.0	2.7	0.0
Alaska	0.0	2.7	0.0
College Visits Per Year	61.0	63.0	60.0
Average Percent, College Advising	72.1	65.6	74.1
Want Minimum Credential	88.6	78.4	91.7
Location of Business			
Home office	30.8	30.8	54.8
Non-home office	60.2	60.2	40.2
Client's home	11.3	11.2	4.8
Average Fees ($)			
Per hour	86.13	80.21	88.50
Per visit	149.87	105.00	160.23
Per package	949.74	937.95	953.71
Average Number of Clients	41.0	51.0	39.0
Average Hours with Client	11-14	11-14	11-14
Average maximum Hours with Client	–	19	24
Availability During Off Hours	91.0	94.6	89.2
Important Services Client's Perspective			
Compiling a list of schools	86.1	78.4	89.2
Narrowing a list of schools	72.8	73.0	73.3
Alleviate pressure	70.3	62.2	73.3
Meet deadlines	60.1	56.8	61.7
Special circumstances	50.6	48.6	51.7
Important Services, Consultant's Perspective			
Compiling a list of schools	82.6	73.0	85.0
Narrowing a list of schools	74.7	75.7	75.0
Alleviating pressure	78.1	59.5	83.3
Keeping students on schedule	62.6	59.5	63.3
Meeting deadlines	62.0	59.5	63.3
Managing peer pressure	53.8	35.1	60.0

Program necessity

Professional Issues. Independent educational consulting is a white, female dominated occupation: 98% of all IECs are white and 76% are women. Our sample contained only one Asian American, one African American, and one Latino IEC. The modal educational attainment (61%) of IECs is a master's degree; another fifth have a bachelor's degree, and 17% have doctorates. Although IECs come from varied educational and mental health work backgrounds, more IECs have worked in high school than in college. Slightly over a third have been high school counselors; slightly under a third (32%) have high school teaching experience, and 19% have been high school administrators. Only 15% report having any previous college admissions experience, and this figure includes the 6% of all IECs who concurrently work in a college admissions office.

While IECs are drawn to their profession for various reasons, the most frequently cited are, in this order: (a) the potential of helping clients, (b) the use of specialized knowledge, (c) autonomy, (d) freedom to work at home, and (e) money. Over four-fifths of all IECs reported that the potential of helping clients and the use of specialized knowledge were very important to their becoming an IEC. Thirteen percent cited money as a very important reason for becoming an IEC.

Most IECs belong to professional associations: 61% belong to the National Association of College Admissions Counselors (NACAC), 70% belong to Regional ACACs, and 44% of the sample belong to the Independent Educational Consultant Association (IECA). The lower participation rate in IECA may be a result of its more stringent membership; it is also newer than NACAC, and NACAC includes college admissions officers and high school counselors. Two-thirds of all IECs report that they attend the NACAC and/or IECA conferences, while just under half report that they attend regional ACAC conferences. IECs belong to these associations primarily for information and resource sharing (84%), contact with others in the field (81%), insight into improving their practice (67%), and legitimacy (61%).

Operations. Consulting practices vary; and although a few IECs have been in business since 1972, the majority of practices have sprung up since 1983. Only one-fifth of all IECs are legally incorporated, and only 3% of those are incorporated as nonprofits. IECs are clustered in three areas: almost a third are in the Northeast, 27% in California, and 14% in the Midwest. The rest of the sample is distributed almost evenly throughout the United States. IECs visit a college campus approximately every six days (61 visits per year) and generally do not bring students with them.

IECs conduct almost three-quarters of their work in the college advising arena, while the rest of their practice is devoted to pre-high school and other types of counseling. One-fifth of all IECs are exclusively engaged in college counseling; and those IECs are four times more likely to be incorporated, tend to have home offices, and are more highly involved with regional admissions professional organizations rather than national groups.

IECs charge their clients by varying units of service. Over 76% of all IECs offer a college counseling package, with an average charge of $950. The average hourly charge is $86, while the average per visit charge is $150. The average caseload is 41 college-bound students. Parents make two-thirds of the first contacts with an IEC; most parents find the IEC by word-of mouth references. IECs report that 95% of clients hear about their services from current or former clients. IECs who do advertise use the yellow pages of the phone book (46%), flyers (37%), newspapers (33%), magazines (13%), and television or radio (4%).

Forty percent of IECs report that they are in a solo practice, and three quarters work by themselves or with no more than two other professionals. Four-fifths do some pro boric, work-67% with low-income students, and 44% with under represented minorities.

Types and Utility of IEC Services. IECs, by any measure, are more available and spend more time with college-bound students than any type of high school counselor. The majority of IECs spend between I I to 14 hours with a client; and 9 1 % of IECs report that they are available, both by phone and in person, to clients during evenings or weekends.

When asked what services their clients found most useful, they reported that the top services are compiling a list of possible colleges, narrowing a list of schools, alleviating anxiety about the college choice process, helping with special

circumstances (such as learning disabilities), helping meet deadlines, and helping to manage peer pressure. Over 85% of IECs do not view SAT coaching as a significant service, and 57% do not even offer it.

Gender Differences. Women IECs are clustered at the lower end of degree attainment; almost three times more women than men have bachelors' degrees as their highest degree; men hold 7% more of the doctorates. Male IECs are more than twice as likely to be incorporated. IECs. More women than men have home offices, perhaps because men find it more important to separate the personal and public spheres while women prefer the mixture of home and business or deliberately provide a more nurturing atmosphere for their clients (Anderson, 1988, p. 410).

Women IECs charge more than men, see fewer clients, and spend more time with their clients. This client contact profile may be why women charge more for their services. Women IECs do more pro bono work than men and are more focused on its emotional components; more women than men felt that alleviating pressures from the college selection process was important, and women were twice as likely as their male peers to think that the managing peer pressure was important.

Program necessity

STUDENT SURVEY RESULTS

Of our first-time full-time freshman sample, 2.7% used independent educational consultants. Given that the national, first-time full-time population numbers 1.5 million, this figure indicates that 40,500 students use private counselors-four times higher than any previous estimate of the scope of this phenomenon. This unexpected finding is important because IECUs are assumed to be mostly full-tuition payers (M. Spence, private communication) and are therefore an extremely desirable student population in an era where need-blind admission is disappearing.

Table 2 indicates comparative findings of IECUs versus non-IECUs. Initial frequency results point to an IECU population comprised of academically above-average students with moderate testing ability (60% with B+ grade point averages or better and 78% with SAT scores above 1000). These students are seeking to make themselves more marketable in the highly competitive process of selective college admissions.

IEC use (just like IEC professionals) is an overwhelmingly Caucasian phenomenon (83.6%) with a slightly higher occurrence among females (52%). IECUs are predominantly from the East and West coasts with home states of New York (13.9%), California (13%), New Jersey (10.3%) and Massachusetts (6.6%) being most prevalent. Although the largest percentage of IECUs come from public high schools, IECUs do attend private schools more often than non-IECUs. They also attend private, nondenominational high schools (13.0%) at more than twice the rate of non-IECUs (5.7%), among them preparatory schools which currently set the standard for college advising; the counselor-to-student ratio at these schools is 1:65 (Cookson & Persell, 1985). Clearly, those who currently have the most college guidance feel they need more advice and are seeking it.

Three primary trends emerge from initial frequency results.

1. IECUs are advice seekers. IECUs have higher rates than the average freshman of seeking their high school and private counselor's advice, taking SAT prep classes, doing remedial work in math, and finding their teachers' and counselors' advice helpful.
2. They are from privileged families. Both parents have higher rates of having graduate degrees and much higher incomes (than non-IECUs) from which they provide higher amounts of college financial assistance to their offspring.
3. Their college application behaviors differ from those of other first time full-time freshmen. IECUs file higher numbers of college applications, attend college far from home, attend private colleges, and are less influenced in their college choices by tuition or financial aid.

Having established IECUs as advice seekers, we examined one facet of this profile and addressed the issue of whether this behavior varied by type of high school attended. Looking at IECUs who also sought their high school counselor's advice in planning for college made it clear that this behavior transcends institutional type and control. Of IECUs at public high schools, 69% also sought their high school counselor's advice; at private denominational and nondenominational high schools, the figures are 73% and 83% respectively. Not only does this behavior transcend high school type, but it is common among these students.

Program necessity

Cross-tabulations of IEC use by parental income revealed a positive, rapidly increasing relationship; over 10% of the students with annual parental income greater than or equal to $200,000 used IECs. We controlled for the effects of parental income on these students' SAT composite scores and high school GPAs by establishing that, at parental income levels of $50,000 and above, a higher percentage of IECUs report SAT scores over 1000 (mean difference is +3.7%). However, a higher percentage of IECUs than non-IECUs have GPAs of B- or lower (mean difference is +3%). Nonetheless, almost 80% of IECUs are B students or better, and their SATs are slightly higher than those of their counterparts at every income strata. Through these comparisons, a more accurate profile of IECUs' academic ability, above and beyond the effects of parental income, becomes clear. IECUs are not the mythical "rich, dumb kids." Rather, while they are from economically advantaged families, they are, academically, quite strong.

Table 2

Frequency Analysis, IECUs (N=8,029) AND Non-IECUs (N=288,799)

	IECU	Non-IECU	Difference
SAT Score			
> 1,000	77.5	68.4	+9.1
Gender			
Male	48.2	45.5	+2.7
Female	51.8	54.5	-2.7
Race			
White	53.6	77.1	+6.5
High School Type			
Private nondenominational	13.0	5.7	+7.1
Private denominational	17.7	14.2	-3.5
Public	68.2	79.4	-11.2
Advice-Seeking Behaviors			
Sought HS counselor's advice	71.1	35.4	+35.7
Took an SAT prep. course	66.6	44.2	+22.4
Took remedial math	21.9	10.9	+11.0
Found HS counselor's advice helpful	43.7	36.4	+7.3
Found HS teacher's advice helpful	34.5	29.6	+4.9
Family Background			
Father has a graduate degree	42.6	25.4	+17.2
Mother has a graduate degree	30.7	25.3	+5.4
Father is a businessmen	38.4	27.3	+11.1
Parental income ≥ $75,000	57.7	28.9	+28.8
Financial aid from parents >$3000	72.6	50.0	+22.6
College Application Behaviors			
Filed ≥ 5 college applications	60.2	31.2	+29.0
Admitted to first choice college	68.6	72.6	-4.0
Attending college > 500 miles away	34.1	16.2	+17.9
Attending private college	70.4	49.9	+20.5
Living in college dormitory	87.1	77.5	+9.6
Financial aid offer not important	59.8	43.5	+16.3
Low tuition not important	66.0	49.0	+17.0
Becoming more cultured is a reason for going to college	58.8	48.3	+10.5
Sought HS Counselor's Advice			
Public HS	69.0	63.0	+6.0
Private denominational HS	73.0	70.0	+3.0
Private nondenominational HS	83.0	76.0	+7.0
Parental Income ≥ $50,000			
SAT scores ≥1000	80.0	76.3	+3.7
H.S. GPA≤B-	19.0	16.0	+3.0
≥ 6 college applications filed	50.6	27.1	+23.5

*Difference is calculated by subtracting non-IECU percentage from IECU percentage.

Finally as indicated by earlier frequency data, 29% more IECUs filed five or more applications than did non-IECUs. This trend is still evident even after controlling for parental income. In fact, of students who file six or more applications, IECUs surpass their non-IECU counterparts by a 24% margin. Keeping in mind that IECUs tend to be admitted to their first choice institutions less often, it seems likely that they might be aiming higher and seeking to gain admission to more selective colleges than non-IECUs.

Having empirically established the general characteristics of IEC users, we attempted to determine what explains students' use and nonuse of private counselors. For logistic regression analysis of the dichotomous outcome variable of students' use and non-use of IECs, we selected independent variables for entry into the equation based on the frequency data. These initial results indicated differences between IECUs and non-IECUs. We divided the variables into two blocks and subsequently entered them into the equation in a stepwise manner: 22 student background variables in Block I and 17 high school experience variables in Block 2 emerged as predictive. (See Figure 1.)

Several powerful predictors of this phenomenon-namely SES variables, living in high IEC-density areas, and doing remedial work in math-were identified through logistic regression (N = 128,554). Table 3 depicts the percentage change in the odds of students using IECs based on the independent variables that entered the regression. Column 1 indicates the raw effect of the independent variables on the likelihood of using an IEC. Column 2 indicates the scoring range of each of the independent variables, and Column 3 is the product of Columns I and 2. Therefore, Column 3 displays the relative power of each predictor, taking into account the unstandardized nature of those independent variables.

Table 3

Logistic Regression Predicting Students' Use of IECs (N= 128,554)

	Percent Change In Odds of Using An IEC	*Units in Range of Variable*	*Influence over Full Range of Variable*
Background Characteristics			
Home state: California	138.5%	1	138.5%
Father's career :lawyer	84.4	1	84.4
Father's career: doctor	71.0		71.0
Home state: New Jersey	62.1	1	62.1
One or both parents deceased	46.9	1	46.9
Home state: Connecticut	47.8	1	47.8
Father's career: businessman	44.5	1	44.5
Race: white/Caucasian	38.3	1	38.3
Home state: New York	38.2	1	38.2
Father's career: engineer	-23.0	1	-23.0
Home state: Massachusetts	21.9	1	21.9
Parental income	16.4	13	213.2
Parents separated or divorced	16.4	1	16.4
Mother's educational level	7.9	7	55.3
High School Experiences			
Did remedial work in math	74.6	1	74.6
Did remedial work in English	48.9	1	48.9
> 6 hrs/wk talking with teachers	31.6	1	31.6
Visited an art gallery/museum	23.0	1	23.0
Attended private nondenom. HS	22.0	1	22.0
Felt overwhelmed	15.9	2	31.8
High school GPA	-10.1	7	-70.7

In Column 3, the top six background characteristics predicting IEC use are: parental income, living in California, father's occupations of lawyer and doctor, living in New Jersey, and mother's educational level. Clearly, the most powerful predictor of IEC use is socioeconomic status as measured by parental income (213.2%). Of particular note is the tremendous effect living in California has (138.5%) on students' use of IECs. We believe this characteristic

is directly related to the proliferation of IECs in California, the extremely high student-to-counselor ratio in the public high schools, and what has become the taken- for-granted habitus of using private counseling among a certain strata of college-bound students in California. Other variables, like having fathers in high status careers and mother's educational level, also suggest the enormous influence of socioeconomic status. Clearly, those students who already have educational and economic advantages are leveraging that capital for enhanced college choice assistance.

While the results reported up to this point have carefully established a profile of IEC users, the fundamental concerns regarding privatization and equity in the college admissions process require answers to the question, "What difference does IEC use make?" We looked at the number of college applications filed as an outcome variable to determine the impact of IEC use on one critical aspect of the college admissions process.

To examine the effect, we utilized stepwise linear regression analysis by blocking the independent variables, including a dummy variable of whether students used an IEC, according to the same criteria stated above. Of the variables which we examined through the stepwise regression, 41 actually entered the equation with a final RI of .13. (See Table 4.) Student background variables account for 8% of the total variance, with the father's education entering as a positive predictor at the first step. Most germane to our question is the fact that IEC use entered as a positive predictor at step 21. Therefore, even after controlling for the effects of parental education, income, and occupation, IEC use tends to increase the number of college applications filed by students.

Table 4

Linear Regression Predicting Number of Applications Filed

Variable Block	*R" After Block ** *Total (n=104,741)*	*IECUs (n=3,677)*	*Non-IECUs (n=103,542)*
Block 1			
Student background characteristics	.08	.04	.08
Block 2			
High school variables	.12	.06	.11
Block 3			
College choice variables	.13	.07	.12
Block 4			
Self-ratings	.13	.07	.13

* $p < .001$

Since the IEC-use variable entered the regression equation, we conducted further analyses to address the issue of interaction effects. We facilitated this step by dividing the sample into IECUs and non-IECUs, running separate regression analyses for each sub-sample. We employed blocked, forced entry of all independent variables entering the initial regression model which predicted the number of applications filed into these two secondary regression equations. Results indicate minimal significant differences ($p < .001$) in variables predicting the outcome for the two separate groups. Therefore, the most salient finding is the strong, positive influence that IEC use actually bears on the number of applications filed.

Discussion

Limitations

Because of the demands of regression analysis, a meaningful but constraining temporal order was forced on a college choice process which is free-flowing in real life. We believe that our blocking of variables represents a process that is consistent with our Bourdieuian theoretical framework and is also consistent with accepted college choice models.

Privatization and access

The results of our study indicate that socioeconomic status is the overriding influence on using an independent educational consultant, causing us to reflect on fundamental questions about the privatization of a college access resource. There has been very little discussion of privatization in the postsecondary arena, partly because we have long had a dual system of private and public colleges; and unlike the precollegiate sector, federal financial aid

belongs to the student, not the institution. However, an important privatization phenomenon is occurring in college admissions.

Privatization can take four forms, only one of which applies to the privatization of college counseling: "the entry by private producers into markets that were formerly public monopolies" (Goodman & Loveman, 1991, P. 28).[2] Under the privatization of college access, trusted public servants (high school guidance counselors) are replaced by private entrepreneurs (independent educational consultants) who are driven by bottom-line financial considerations. IECs serve those students who know about them and are able and willing to pay for private counseling.

The privatization of college counseling is a serious organizational change because of its long-term impact and consequences. With a national average of one guidance counselor per 527 students, high schools have divested themselves of any real responsibility for college counseling, but private service providers have picked up the slack. In privatization debates, ownership of a service per se is not as important as accountability to the public's goals, which go beyond fiscal considerations. In the arena of college access, the public's goals include fair access to social goods, optimal deployment of human talent, and distributive justice. The 97% of college students who did not use private counselors still had limited access to school counselors, posing a serious concern, particularly for students who are the first in their families to plan on attending college. The implication of this pattern is that resources, information, and cultural capital are accumulated further by those who already have it. In other words, it takes economic capital to buy IEC time and to gain the cultural capital of a college education.

Another issue is how private counselors behave and are monitored. Nine out of ten IECs surveyed desire a required minimum credential; they obviously want some kind of monitoring or regulation. However, credentialing speaks only to the monitoring process and not to the accountability issues. In other domains where privatization has occurred, the best way to encourage private managers to serve the public interest is through competition among potential providers, governmental entities and private entrepreneurs alike (Goodman & Loveman, 1991). We believe that the focus of the privatization of college counseling debate should be on the nature of the organizational changes in the entire field of college access and on how to ensure accountability and consonance with the public's interests.

Three percent of the college-bound high school students in America today have their access to college enhanced by the use of a private resource. Most often, these are students who already have other private resources; parents who are college educated, SAT coaching, other remedial assistance, etc. Although 3% is not a large percentage, it is meaningful if these students have disproportionate access to better, more elite colleges. Elite colleges themselves have enormous influence over the postsecondary and secondary systems even though they enroll only 2% of all college students. Finally, it is interesting to note that IEC use closely parallels Japanese shadow education-a set of educational activities outside the formal schooling structure that is used by high-SES students and that greatly facilitates access to elite education (Stevenson & Baker, 1992).

Furthermore, given the precarious future of need-blind admissions and the current financial pressures facing higher education (Graham, 1994), IECUs are becoming increasingly important to colleges and universities as they often are full-tuition-paying students. Therefore, the students' college choice behaviors which form the basis for this study are increasingly important to investigate.

Future research

One question that we currently cannot answer is: What actual impact do these independent educational consultants have on the admissions outcomes of the students who use them? Do the students get into schools to which they otherwise might not have gained access? Although we currently cannot answer these questions as framed, we are now engaged in additional analyses based on the selectivity of college attended to assess the impact of IEC use on college access.

This research offers a number of implications for practice. Dialogues in the high school counseling and admissions professional communities are needed and should be focused on whose responsibility it is to assist students in making the transition from high school to college. Private counselors are providing a needed service; the fact that this phenomenon exists attests to this need. Those scholars and policy-makers interested in maintaining equal access to college need to ask additional questions about how we can assure all students of the assistance they need in applying to college, especially those who are first- generation college-bound students and/or are under represented minorities.

Notes

[1] We included only data for students attending four-year institutions, because previous results indicated that few IECUs attend two-year colleges. Given our theoretical framework, we expected that IECUs would seek admission to four-year colleges—specifically, more prestigious institutions.

[2] The other privatization forms are: "the sale of public assets to private owners, the simple cessation of government programs, [and] the contracting out of services formerly provided by state organizations to private producers."

References

The alma mater derby: High stakes and high anxiety at the top schools. 1989, February 6. *Newsweek*:62.

Anderson, M. L. 1988. *Thinking about women: Sociological perspectives on sex and gender.* New York: Macmillan.

Astin, A., Korn,W., & Riggs, E. 1993. *The American freshman: National norms for 1993.* Los Angeles: Cooperative Institutional Research Program.

Bernstein, E. 1996, April 17. College matchmakers: Consultants plot ways to impress the "right" school. *New York Times*:23.

Bourdieu, P. 1984. *Distinction: A social critique of the judgement of taste.* Cambridge, MA: Harvard University Press.

Chapman, D., & De Masi, M. 1985. College advising in the high school: Priorities and problems. *NASSP Bulletin*:78–86.

Cookson, P., & Persell, C. H. 1985. *Preparing for power: America's elite boarding schools.* New York: Basic Books.

Dey, E.,Astin, A., & Korn,W. 1991. *The American freshman: Twenty-five year trends.* Los Angeles: Cooperative Institutional Research Program.

DiMaggio, P. J. 1979. Review essay on Pierre Bourdieu. *American Journal of Sociology, 84*:1460–1474.

Fitzsimmons, W. 1991, January/February. Risky business. *Harvard Magazine*:23–29.

Goodman, J. B., & Loveman, G. W. 1991, November/December. Does privatization serve the public interest? *Harvard Business Review*:26–38.

Graham, E. 1994, October 10. The halls of ivy imitate halls of commerce. *Wall Street Journal,* 1:5.

Hearn, J. C. 1984. The relative roles of academic, ascribed, and socioeconomic characteristics in college destinations. *Sociology of Education, 57*:22–30.

Hearn, J. C. 1991. Academic and nonacademic influences on the college destinations of 1980 high school graduates. *Sociology of Education, 64*:158–71.

Horvat, E., & McDonough, P. M. 1994, April. *Application and attendance patterns, 1972–1991: How far have we come?* Paper presented at the annual meeting of the American Educational Research Association, New Orleans.

Hossler, D., Braxton, I., & Coopersmith, G. 1989. Understanding student college choice. In John C. Smart (Ed.), *Higher Education: A Handbook of Theory and Research* (Vol. 5, pp. 231–288). New York: Agathon Press.

Krugman, M. K., & Fuller, J. H. 1989, Spring. The independent, private counselor. *Journal of College Admissions*:10–19.

Lareau, A. 1989. *Home advantage: Social class and parental intervention in elementary education.* New York: Falmer Press.

Litten, L. 1982. Different strokes in the applicant pool: Some refinements in a model of student choice. *Journal of Higher Education, 53*:383–402.

McDonough, P. M. 1994. Buying and selling higher education: The social construction of the college applicant. *Journal of Higher Education, 65*:427–446.

McDonough, P. M., & Robertson, L. D. 1995, Spring. Gatekeepers or marketers: Reclaiming the educational role of chief college admissions officers. *Journal of College Admissions*:22–31.

National Center for Education Statistics. 1992. *Digest of Education Statistics.* Washington, DC: U.S. Department of Education, Office of Educational Research and Improvement.

Private counselors aid college-bound teens. 1988, April 25. *Business Journal-Portland*:1.

Schurenberg, E. 1989, May. The agony of college admissions. *Money Magazine*:142–156.

Stevenson, D. L., & Baker, D. P. 1992. Shadow education and allocation in formal schooling: Transition to university in Japan. *American Journal of Sociology, 97*:1639–1657.

Stickney, J. 1988, June. Guides to the admissions maze. *Money*:127–138.

Tyson, D. C. 1988, Summer. The counselor as hireling. *Journal of College Admissions,* 33–35.

Wenglinsky, H. 1996. The educational justification of historically black colleges and universities: A policy response to the U.S. Supreme Court. *Educational Evaluation and Policy Analysis, 18*:91–103.

7

Program necessity

Early Awareness of College Financial Aid: Does It Expand Choice

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The body of research of institutional differences and their impacts on students suggests that most differences are small; simply having a college degree may be more important than where one obtains it (Pascarella and Terenzini 1991). There is some evidence, however, that institutional control (public versus private) may influence such student outcomes as occupational status attainment, either indirectly, as a mediator of student background characteristics, or conditionally, depending upon the kinds of occupations which graduates enter (Ethington, Smart, and Pascarella 1988; Smart 1986).

Additionally, the evidence that two-year college transfer students do not have graduation rates as high as four-year college freshmen casts doubt on the wisdom of the increasingly popular cost-containment strategy of enrolling in a low-tuition community college to begin a postsecondary career (Pascarella and Terenzini 1991). At least one recent study indicates that college students do indeed "get what they pay for" in terms of early career benefits (Pascarella, Smart, and Smylie 1991). In this context policymakers cannot dismiss the role of student financial aid in equalizing socioeconomic opportunity by promoting access and choice to educational opportunities (Mortenson 1987).

Access, choice, and price

For decades, the public policy goals of student financial aid have been access and choice (Fenske 1983). Gregory Jackson (1978) observes that student aid, to increase enrollments (access), should go to persons unlikely to enroll otherwise. With few exceptions (Higgins 1984), studies demonstrate that student aid improves enrollment rates (Bishop 1977, Leslie, Johnson, and Carlson 1977-, Leslie and Brinkman 1988). Choice, on the other hand, has been defined pragmatically as the situation in which students apply to more than one college and are offered admission to more than one college (Mortenson 1991). When multiple financial aid offers accompany multiple offers of admission, one may reasonably assert that financial aid might influence choice.

There is in this context, however, a "strong" and a "weak" sense in which aid influences choice. If the colleges which students consider are all similarly priced, then financial aid may influence which one of a relatively homogenous set of institutions the student chooses to attend. This use of financial aid to make similarly priced institutions competitive at the margin is relatively inefficient and a "weak" means of promoting choice, since one could argue that the mere fact of applying to several colleges of similar price reveals a student predisposed to choose one regardless of any offer of financial aid. For that reason, most observers might accept the use of institutional, not public, funds to obtain such competitive advantage.

Suppose, however, that due to financial aid availability a student considers a set of colleges which exhibit a wide range of prices. Now the "strong" sense in which financial aid might influence choice is to make the net cost of college to the student relatively equal between institutions dissimilar in price, thus enabling the student to permit other factors such as selectivity or location to influence the final choice. Consequently, to meet the policy goal of increasing college choice in the 11 strong" sense, financial aid should increase the level or the range of prices of colleges which students and their families consider (Flint 1991a). Specifically, financial aid should permit families to consider colleges they might otherwise omit because of cost.

Many theorists make a distinction between that "searching" phase in the student decision-making process vs. the "selection" phase in which the student actually submits applications and ultimately chooses a college (Hossler and Gallagher 1987; Hossler, Braxton, and Coppersmith 1989; Jackson 1978, 1982). Studies of the influence of financial aid on choice often focus on the selection stage, or on matriculated students (Chapman and Jackson 1987: Higgins 1984; Leslie, Johnson, and Carlson 1977; Manski and Wise 1983). The shortcoming of such data

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sets is the absence of information about which colleges were considered but never applied to and the reasons for non-application.

A common reason for not applying must be cost or lack of the means to meet the cost. William D. Van Dusen and Edmond C. Jacobson (College Entrance Examination Board 1977) conducted one of the earliest studies of cost influences upon college choice set formation, finding that more than half of the low- and middle-income high school students they surveyed said that they would switch from the types of institutions that they planned to attend if costs were not a factor or if better information were available about financial aid.

Two strategies for making college affordable are through family savings and through financial aid programs in the form of grants, loans, and student employment. To the extent that these strategies are effective for families, they should be correlated with higher college costs than could be predicted without them. However, the effectiveness of aid programs is not easy to assess, due in part to the fact that few empirical studies of the influence of financial aid during the search stage exist (Gilmour, Spiro, and Dolich 1978; Hossler, Schmit, and Bouse 1991).

Research focus

This study examines whether parents' knowledge of and plans to apply for student financial aid to pay college costs are associated with higher tuition in the colleges they expect their college-bound grade school children to consider. Thus, this study focuses on how financial aid awareness affects choice, particularly in the search phase.

Parental knowledge of college financing is gathering greater attention for its policy implications (U.S. General Accounting Office 1990). Parents are widely understood to be very influential upon all phases of the college choice process and figure prominently in research about college choice of the last decade (Conklin and Dailey 1981; Cowart 1988; Erdmann 1983; Gilmour, Spiro, and Dolich 1981; Hearn 1984, 1988; MacDermott, Conn, and Owen 1987; Murphy 1981, Pennsylvania Association of Colleges and Universities 1984; Smith and Bers 1989; Stage and Hossler 1989).

A parent survey of college-bound, pre-high school students offers several advantages over direct student surveys. First, most parents help finance college, thus influencing the decision in the direction of affordability; few traditional-age students have the resources to pay for college without their parents' help. Parents may be in a better position than their children to understand the options which financial aid opens to precollege students. Students seem to become cost conscious about colleges from their parents (Hossler and Schmit 1990; Hossler et al. 1990; Olson and Rosenfeld 1985), although parents themselves may lack financial information and many seem to become aware of financial aid programs out of cur-rent experience or from having children in college previously (Brouder 1987; Little and Chronister 1983; Muffett, Smith, and Gordon 1990; Olson and Rosenfeld 1984; Reynolds 1980). Finally, a study of college choice after students have already applied to a set of colleges, or chosen or matriculated into one, misses the information on whether financial aid influences the kinds of colleges to which students make application for admission in the first place. If some colleges are initially excluded from consideration because of price, despite financial aid availability, or initially included based on financial aid awareness, despite price, then that is important evidence related to the policy goal of choice for student financial aid.

In a study of family knowledge of college costs and financial aid, Hossler, Schmit, and Bouse (1991) recommend that future research in this area be done using large data sets which permit multivariate analyses. Elsewhere, Hossler, Braxton, and Coopersmith (1989) have urged the use of causal modeling techniques to better estimate the various influences upon the college choice process. This study proposes and estimates such a model.

The causal model

Background variables

The causal model to be estimated in this study includes family background characteristics often included in college choice and educational attainment models (Hossler, Braxton, and Coopersmith 1989; Litten 1991; Paulsen 1990; U.S. General Accounting Office 1990). The variables of gender, racial/ethnic category, parental educational attainments, and family income, which are routine in these models, are included here. The number of children simultaneously enrolled influences college destinations, usually towards lower cost institutions (Hearn 1984); having a sibling already in college influences the college plans of not-yet-enrolled family members (Stage and Hossler

1989). Thus, the model incorporates both of these variables. Taken together, these variables comprise the block of exogenous variables which causally precede the other variables in the model.

College savings and financial aid awareness variables

A second block of variables, the college savings and financial aid awareness variables, are a function of the family background characteristics. The number of kinds of savings or investments to pay future college costs is assumed to be dependent not only on the amount of family income but also on parental education levels and the potential needs for other college-bound siblings in the family (Stage and Hossler 1989). Parental knowledge of and plans to apply for various grant, loan, and student employment programs are also taken to be a function of the parents' income and education as well as student characteristics (Hossler, Schmit, and Bouse 1991; Olson and Rosenfeld 1984, 1985).

College search variables

A third block of constructs comprises the college search variables. Students from families of higher incomes and higher parental educational levels apply to more colleges than those of lower levels (Zemsky and Oedel 1983). As mediating variables, awareness of financial aid programs may stimulate the extent of the search for colleges by either compensating for lower income levels or by augmenting the effects of parental education.

Related to the breadth of the college search is a second variable in this block, the degree of knowledge about specific college admission requirements. If a student has already sought and obtained information about prospective college destinations, I considered it as additional evidence of college search. As mediating variables, awareness of financial aid programs may stimulate an interest in specific colleges' entry requirements. If a student thinks he or she can afford a specific college, he or she is more likely to investigate its admission policy on, for instance, required secondary school coursework or preferred test scores. Finally, the degree aspiration for the child is included here as a college search variable. Degree aspiration is frequently a linchpin of college choice and educational attainment models (Hearn 1984, 1988; Stage and Hossler 1989) and has been used as the last variable to enter models testing the effects of financial aid on access (St. John 1989, 1991). Parental awareness of financial aid programs may heighten expectations for the child's eventual college degree attainment, since aid programs represent financial resources that enable a student to continue his or her education beyond the limits of the family's finances.

Dependent variable

The final, predicted variable in this model is the averaged tuition level of the colleges considered by these parents for attendance by their children. To the extent that the particular variables indicating awareness of financial aid programs demonstrate positive direct or indirect effects on tuition levels, one may assert that such awareness promotes choice by enabling consideration of costlier colleges which families might otherwise overlook. Figure 1 depicts the causal model and the directions of hypothesized influences between the blocks of variables.

Method

Sample

Subjects for this study were previously surveyed by the Illinois Student Scholarship Commission, as reported by Rhonda Dixon (1986, 1988). These subjects were all parents of Illinois eighth graders, whose children would enter college in 1990, approximately four years from the time of the survey. Dixon's work focused only on parental awareness of specific financial aid programs and their desire to gain more information. However, some respondents also provided names of colleges that they expected their child to consider.

My further analyses of this subgroup (Flint 1991b) showed that various familial and college planning variables predicted many institutional characteristics of the colleges named, including levels of degree offerings, selectivity, distance from home, and size. I included a variable for the number of student awards that the family intended to use- but it was not significantly related to institutional characteristics, including tuition. No distinction was made between the various forms of assistance (grant, loan, or work). These kinds of distinctions may be critical for understanding the effects of financial aid on choice (Hearn and Longanecker 1985).

I use 823 parent surveys, representing respondents with children (425 girls and 398 boys) in urban and rural schools, both public and parochial, from various Illinois regions. Although the respondents represent a 24 percent rate of return from distributed questionnaires, the sample is generally representative of the families of freshmen who enrolled in 1990 (Table 1), with an important exception. The sample underrepresents families of higher-income

levels and it overrepresents students from middle- or lower-income families. However, this bias may be advantageous to the study since the policy goals for student financial aid have been directed towards low- and middle-income families, and it is reasonable to assess the effects of aid programs primarily from the populations which they are intended to serve.

Table 1
Comparison of demographics in percentages

	Dixon (1986)	Current Study	1990 College Freshman*
Family Incomes			
Below $10,000	16.28	9.60	6.00
$10,000 to 19,999	16.44	14.30	10.20
$20,000 to 29,999	17.65	18.20	13.20
30,000 to 49,999	33.36	38.40	30.10
50,000 and over	16.27	19.40	40.50
Total	100.00	100.00	100.00
Father's Educational Attainment			
Some high school	12.0	8.9	11.1
High school/GED	24.4	23.3	28.0
1-3 years college	31.4	31.3	20.2
4 + years college	32.2	36.4	40.7
Total	100.00	100.00	100.00
Mother's Educational Attainment			
Some high school	10.8	6.6	8.8
High school/GED	30.6	28.7	34.4
1-3 years college	37.3	38.6	24.5
4 + years college	21.3	26.1	32.2
Total	100.00	100.00	100.00
Race/Ethnicity			
White	83.0	88.00	84.3
Black	12.9	7.3	9.6
Others	4.1	4.7	6.1
Total	100.00	100.00	100.00

* Freshman data are derived from Dey, Astin, and Korn (1991).

Most of the parents do not perceive access to higher education as a problem; when asked, "Do you expect that your eighth grade child will continue his/her education after high school?", 734 checked "yes," and only 89 checked "uncertain." Questions of choice, rather than access, are obviously the chief concern.

Variables

The model estimated in this study includes three different variable groupings ordered in a causal sequence (Figure 1):

1. Background Variables: Student sex, race (black), father's education, mother's education, family income, number of children in college, and whether the eighth grader is the family's first child to attend college.
2. Savings and Financial Aid Awareness Variables: Number of college savings sources, and knowledge of and intent to apply for three kinds of aid-grant, loan, or work-in specific programs.
3. College Search Variables: Number of colleges nominated, knowledge of admissions rules, and degree aspiration for the eighth grader.

I obtained college tuitions from the Peterson's college guidebook series (Kaye and Hunter 1983a, 1983b) for colleges which could be unambiguously identified, as mentioned by each respondent, then calculated an average tuition for each respondent, based on up to three identifiable colleges collected in each survey. Table 2 presents full operational definitions and scalings of all the variables.

Figure 1
A model for estimating the effects of financial aid awareness upon tuitions in preferred colleges.

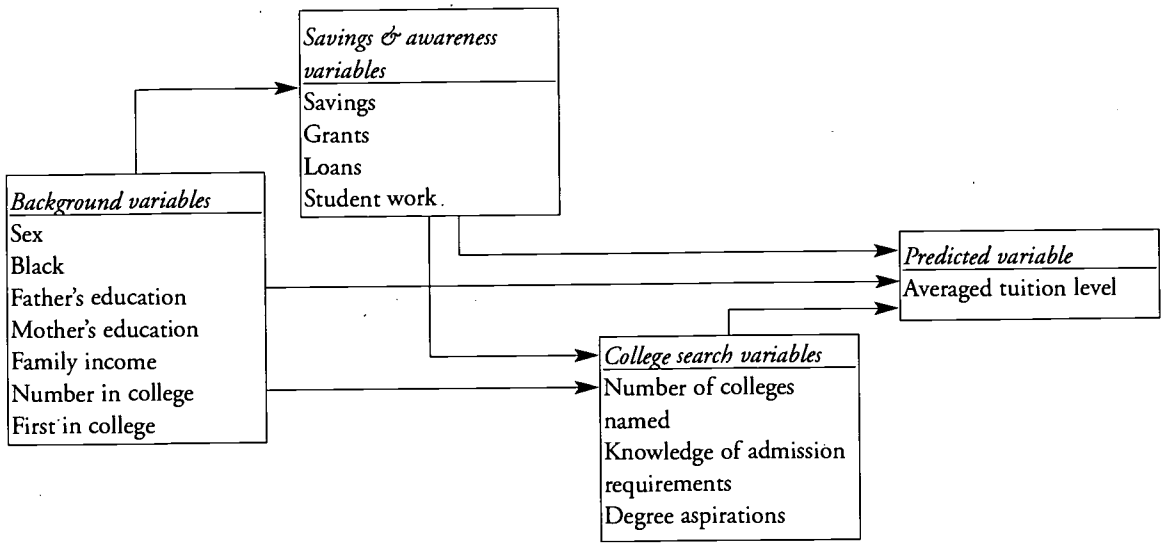

Table 2
Description and coding of variables

Background Variables

1. Sex — 0 = female eighth grader; 1 = male eighth grader
2. Black: 1 = black
3. Father's education (highest level of education attained by the father):
   1 = Some high school
   2 = High school graduate or GED
   3 = Some college or vocational school or associate degree
   4 = Bachelor's degree
   5 = Graduate/professional degree (law. medicine, etc.)
4. Mother's education: Same coding as fathers education
5. Family income: Approximate family income for 1985:
   1 = Below $10,000; 2 = $10,000 to $19,999
   3 = $20,000 to $29.999; 4 = $30,000 to $49,999
   5 = Over $50,000
6. Number in college (other siblings attending college at the same time):
   0 = No other sibling will attend college simultaneously
   1 = One other sibling will be in attendance simultaneously
   2 = Two or more siblings will be in attendance
7. First in college
   1 = Eighth grader will be first to attend college

College Saving/Financial Aid Awareness Variables

8. Family savings sources planned: 0 to 4. Choices included parent savings, student savings, gifts from relatives, investments
9. Grants: 0 to 10, depending on awareness of and application for Pell Grants, Illinois Monetary Award Program, National Guard Scholarships, Merit Recognition Scholarships, and National Merit Scholarships
10. Loans: 0 to 8, depending on awareness of and application for Guaranteed Student Loans, Parent Loans for Undergraduate Students. Auxiliary Loans to Assist Students, and National Direct Student Loans
11. Working: 0 to depending on "student earnings while attending college" and/or awareness of and plans to apply for College Work Study Program

(Table continues)

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College Search Variables

12. Number of colleges in the choice set: 1 to 3, for any respondent with at least one unambiguous college mention within the choice set. This number may include codings judged ambiguous or those without data for analysis
13. Knows institutional admissions rules: 1 = Familiarity with admissions requirements of at least one specific college mentioned
14. Degree aspiration for the child (highest degree eighth grader is expected to obtain):
    1 = High school graduate or GED
    2 = Some college or vocational school or associate degree
    3 = Bachelor's degree (4 year)
    4 = Graduate/professional degree (law, medicine, etc.)

Predicted Variable

15. Averaged tuition: full-time tuition for one year in $100's, resident tuition rates within Illinois, nonresident rates outside Illinois, for each identifiable institution (up to three) mentioned by respondents. Example: 60 represents $6,000 in tuition. Averages computed within respondent choice sets from tuition rates reported in Kaye and Hunter (1983a, 1983b).

ANALYSES

Table 3 presents the means, standard deviations, and intercorrelations of all variables in the model. Ordinary least squares multiple regression was used to calculate regression coefficients on all variables having other variables preceding them in the model. This resulted in eight sets of regression coefficients representing direct effects of exogenous variables on enclogenous variables, shown in Table 4. The statistical significance of the indirect effects in the model was calculated using GEMINI (Wolfle and Ethington 1985), and those results are summarized in Table 5. In discussing the results, the significance level of the effects will be characterized as strong ($p < .001$), modest ($p < .01$), or weak ($p < .05$).

Results

BACKGROUND VARIABLES

Of the background variables, only the father's educational level shows statistically significant direct effects on averaged tuition levels, such that greater educational attainment is weakly associated with higher tuitions. However, Table 5 indicates that both the father's and the mother's education have strong indirect effects on tuitions, resulting in significant positive effects on tuitions.

An inspection of the structural parameters in Table 4 shows that there are two paths by which the indirect effects

Table 3

Means, standard deviations, and correlations

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. SEX	1.000														
2. BLACK	-.019	1.000													
3. FATHEDUC	.067	-.178	1.000												
4. MOTHEDUC	.007	-.140	.550	1.000											
5. FAMLYINC	.057	-.268	.505	.390	1.000										
6. NMBRCOLL	.013	-.064	.245	.155	.154	1.000									
7. FIRSTGEN	-.071	.030	-.061	-.020	-.162	-.310	1.000								
8. SAVINGS	.072	-.089	.297	.244	.317	.120	.032	1.000							
9. GRANTS	.019	.036	.185	.219	.035	.125	-.110	.091	1.000						
10. LOANS	.013	.043	.097	.097	.023	.099	-.085	.099	.601	1.000					
11. WORKING	.045	.021	.096	.148	.017	.067	-.082	.125	.497	.462	1.000				
12. SETNMBR	.027	-.011	.181	.166	.168	.071	-.042	.191	.144	.149	.102	1.000			
13. KNOWADM	-.015	.004	.240	.199	.126	.080	-.243	.114	.192	.166	.186	.110	1.000		
14. CHILDDEG	.005	.009	.375	.320	.240	.119	.018	.251	.284	.187	.166	.186	.110	1.000	
15. TUITAVG	-.026	.028	.235	.209	.144	.081	.014	.171	.150	.107	.041	.228	.007	.308	1.000
Means	.484	.073	3.141	2.937	3.437	.580	.564	1.424	2.508	2.401	1.130	2.148	.442	3.091	17.467
Std. Dev.	.500	.260	1.223	1.043	1.225	.640	.496	1.022	2.164	1.973	.935	.806	.497	.778	16.068

occur. First, parental education levels are strongly associated with higher degree aspirations for their children, which are then associated with higher tuitions in the chosen colleges. Second, parental education levels are modestly associated with greater knowledge of and intent to apply for college grants and with more numerous college savings sources, which in turn are strongly associated with higher degree aspirations for their children, and again in turn with higher tuitions.

A weak, indirect effect also occurs in this sample for black students towards higher tuitions, again mediated by degree aspirations; but it involves no significant gender-related effects.

Table 4

Structural parameter estimates for averaged tuition levels

1= SEX	6= NMBRCOLL	11= WORKING	
2= BLACK	7= FIRSTGEN	12= SETNMBR	
3= FATHEDUC	8= SAVINGS	13= KNOWADM	
4= MOTHEDUC	9= GRANTS	14= CHILDDEG	
5= FAMLYINC	10= LOANS	15= TUITAVG	

	8	*9*	*10*	*11*	*12*	*13*	*14*	*15*
1	.116	.038	.022	.075	.011	-.050	.033	-1.299
	(.057)	(.009)	(.006)	(.040)	(.007)	(-.050)	(-.021)	(-.040)
2	.031	.516	.451	.125	.108	.076	.252**	3.585
	(.008)	(.062)	(.060)	(.035)	(.035)	(.040)	(.084)	(.058)
3	.104**	.227**	.115	.032	.039	.077***	.141***	1.285*
	(.125)	(.128)	(.071)	(.042)	(.059)	(.189)	(.221)	(.098)
4	.076*	.397***	.139	.138***	.044	.040*	.078**	1.005
	.076*	.397***	.139	.138***	.044	.040*	.078**	1.005
5	.190***	-.199***	-.075	-.056	.052	-.016	.047	0.16
	(.228)	(-.113)	(.047)	(-.073)	(.079)	(-.040)	(.073)	(.001)
6	.119*	.182	.183	.031	.004	-.055*	.028	.283
	(.075)	(.054)	(.059)	(.021)	(.003)	(-.070)	(.023)	(.011)
7	.216**	-.044**	-.277	-.151*	-.024	-.250***	.107*	.266
	(.105)	(-.101)	(-0.70)	(-.080)	-.015	(-.249)	(.068)	(.008)
					.098***	.028	.091***	.965
					(.123)	(.057)	(.119)	(.061)
					.017	.012	.068***	.450
					(.047)	(.053)	(.189)	(.060)
					.037*	.017	.009	.234
					(.090)	(.067)	(.023)	(.029)
					.003	.024	.010	-1.145
					(.003)	(.046)	(.018)	(-.067)
								2.919***
								(.146)
								-2.174
								(-.067)
								4.168***
								(.202)
R sq. .	14	.08	.02	.03	.08	.14	.22	.16

See Table 2 for variable descriptions. Upper row: coefficients. Lower row: standardized coefficients.

COLLEGE SAVINGS AND FINANCIAL AID AWARENESS VARIABLES

None of the variables in this block show any significant direct effects on tuitions, and two of the variables-awareness of student loans and of student employment-do not show any significant indirect effects mediated by the college search variables (Table 5). However, the indirect effects of the awareness of student college grants and of the number

Program necessity

Program necessity

of savings sources both have highly significant indirect effects on tuitions as a result, higher awareness of grants or more savings sources are positively associated with higher tuitions.

Inspection of Table 4 indicates that the paths for these indirect effects in both cases are through the variable for degree aspirations. In the case of college savings sources, an additional path is through the variable for the number of colleges which are nominated on behalf of the student. Resultingly, the greater the number of savings sources, the greater the number of colleges which the parents mention, and subsequently, the higher the average tuitions in those colleges.

Table 5
Direct, indirect, and total effects

Variable Name	*Direct Effect*	*Indirect Effect*	*Total Effect*
Sex	-1.299	.131	-1.168
	(-.040)	(.004)	(.036)
Black	3.585	1.652*	5.237*
	(.058)	(.027)	(.085)
Father's education	1.285*	.874***	2.159***
	(.098)	(.066)	(.164)
Mother's education	1.005	.679***	1.684***
	(.065)	(.044)	(.109)
Family income	.016	.567***	.583
	(.001)	(.043)	(.044)
Number in college	.266	1.003*	1.269
	(.008)	(.031)	(.039)
College savings	.965	.605***	1.570**
	(.061)	(.038)	(.099)
Awareness of grants	.450	.308**	.758*
	(.060)	(.041)	(.101)
Awareness of loans	.234	.110	.344
	(.029)	(.014)	(.043)
Awareness of student employment	-1.145	-.003	-1.148
	(-.067)	(.000)	(.146)
Knows admission rules of colleges	-2.174	.000	2.174
	(.067)	(.000)	(.067)
Degree aspiration for the child	4.168***	.000	4.168***
	(.202)	(.000)	(.202)

* $p < .05$, ** $p < .01$, *** $p < .001$.

Upper row: metric coefficients. Lower row: standardized coefficients

College search variables

The final block of variables representing college search behaviors contains only direct effects. Although no significant direct effect is shown between knowledge of college admission rules and tuitions, significant positive effects emerge between the number of colleges mentioned by the parents and tuitions and also between degree aspirations for the child and tuitions. In both cases, having more college nominations and having higher degree aspirations influence families towards higher tuitions.

Discussion

The results of this study support two important conclusions about the effects of early awareness of financial aid programs on college choice. First, insofar as choice is defined in terms of higher levels of tuitions in the colleges preferred by the parents in this sample, parental awareness of student grant programs does appear to broaden choice. Moreover, the evidence from this study suggests that this effect occurs during the search phase-when college options are being explored but before the search crystallizes into a semi-final "application set." Second, not all types of financial aid appear to be equally effective in promoting choice, supporting a point made by James Heam and David

Longanecker: "A loan represents something different from work study, which in turn represents something different from a grant" (1985, 496).

Thomas Mortenson (1989, 1990) is even more explicit, emphasizing that student loans are revenue sources with hidden costs in the form of financing costs (loan fees) and risks (potential inability to repay the loan obligations). He argues that the shift of federal funding from grants to loans over the past decade is of no benefit to low-income families who have less favorable attitudes towards borrowing and are averse to paying these extra costs. Certainly, the effects of parental attitudes on their college-bound children are relevant here.

Since this study shows that financial aid awareness and college savings have an indirect effect on college choice, I suggest that efforts to promote aid awareness and savings may have a double payoff. Besides increasing choice, efforts to promote awareness of financial aid programs (or at least scholarships and grants) may have the added benefit of raising college degree aspirations, an achievement which will very likely increase enrollments, thereby promoting access as well as choice. Consequently, one might also conjecture that, dollar for dollar, financial incentives to encourage families to save for their children's college educations may be better at promoting access and choice in higher education than an equivalent investment in student loan programs. Eighteen states had started college savings bond programs by 1989 (Hansen 1989).

Growing recognition of the potential impact of early awareness programs on families and enrollments has led to proposed federal legislation to spearhead such efforts, in the form of the Student Counseling and Awareness Network (SCAN) Act of 1991 (H.R. 1524). Its provisions include grants to develop model programs for college student counseling on matters of precollege courses, admissions procedures, and financial aid opportunities. It would direct the Secretary of Education to disseminate information on successful programs in these areas, to establish a computerized database of public and private financial assistance programs, and to maintain a toll-free information line to provide parents and students with individualized financial aid information (National Association of College Admissions Counselors 1991, 1). High school students who dramatically overestimate college costs and misconstrue financial aid requirements underscore the urgent need for such measures (Council for Advancement and Support of Education 1990). Public information programs which successfully promote awareness and preventing misconceptions will enable us to have greater confidence in our research as we continue to study and debate the effects of student financial aid on college enrollments.

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Bibliography

Bishop, John. 1977. "The Effect of Public Policies on the Demand for Higher Education." *Journal of Human Resources 5*, 4:285–307.

Brouder, Kathleen. 1987. "Parental Attitudes toward Pre-College Planning." *Journal of Student Financial Aid 17*:5–13.

Chapman, Randall C., and Rex Jackson. 1987. *College Choices of Academically Able Students: The Influence of No-Need Financial Aid and Other Factors.* Research Monograph No. 10. New York: College Entrance Examination Board.

College Entrance Examination Board. 1977. *Making It Count: A Report on a Project to Provide Better Financial Aid Information to Students.* Princeton, NJ.: College Board Publications.

Conklin, Mary E., and Ann R. Dailey. 1981. "Does Consistency of Parental Encouragement Matter for Secondary Students?" *Sociology of Education 54* :254–62.

Council for Advancement and Support of Education (CASE). 1990. *Attitudes About American Colleges, 1990.* Washington, D.C.: CASE.

Cowart, Susan C. 1988. *College Choice and the Student Transition Process.* Iowa City: Research Report of the American College Testing National Center for the Advancement of Educational Practices.

Dey, Eric L., Alexander W. Astin, and William S. Korn. 1991. *The American Freshman: Twenty-Five Year Trends.* Los Angeles: Higher Education Research Institute/UCLA.

Review of Higher Education, Spring 1993, Volume 16, No. 3, pp 309–327

Dixon, Rhonda. 1986. *Parents of Illinois Eighth Graders: A Survey of Their Knowledge about Academic and Financial Planning for Their Child's Education Beyond High School.* Springfield: Illinois State Scholarship Commission.

____. 1988. "Parents of Illinois Eighth Graders: A Survey of Their Knowledge About Academic and Financial Planning for Their Child's Education Beyond High School." *Journal of Student Financial Aid 18*, 1:29–36.

Erdmann, David G. 1983. "An Examination of Factors Influencing Student Choice in the College Selection Process." *Journal of College Admissions 100*: 3–6.

Ethington, Corinna A., John C. Smart, and Ernest T. Pascarella. 1988. "Influences on Women's Entry into Male-Dominated Occupations." *Higher Education 17*:545–62.

Fenske, Robert H. 1983. "Student Aid Past and Present." Chapter 1 in *Handbook of Student Financial Aid*, edited by Robert H. Fenske, Robert P. Huff, and associates, 5–26. San Francisco, Calif.: Jossey-Bass.

Flint, Thomas A. 1991a. "Does Financial Aid Make Students Consider Colleges with a Wider Cost Range?" *Journal of Student Financial Aid 21*, 2:21–32.

____. 1991b. "Parental and Planning Influences Upon the Formation of Student College Choice Sets." Unpublished manuscript, University of Illinois at Chicago.

Gilmour, James, Louis M. Spiro, and Ira J. Dolich. 1978. *How High School Students Select a College.* Pennsylvania: Pennsylvania State University. (ED 208 705)

Hansen, Janet S. 1989. "Student Financial Aid: Old Commitments, New Challenges." *College Board Review 152* (Summer):26–31.

Hearn, James C. 1984. "The Relative Roles of Academic, Ascribed, and Socio-economic Characteristics in College Destination." *Sociology of Education 57*:22–30.

____. 1988. Attendance at Higher-Cost Colleges: Ascribed, Socioeconomic, and Academic Influences on Student Enrollment Patterns." *Economics of Education Review 7*:65–76.

Hearn, James C., and David Longanecker. "Enrollment Effects of Alternative Postsecondary Pricing Policies." *Journal of Higher Education 56*, no. 5 (1985): 485–508.

Higgins, A. Stephen. 1984. "Who Knows and Who Goes? Student Knowledge of Federal Financial Aid Programs and College Attendance." *Journal of Student Financial Aid 14* :19–26.

Hossler, Don, John Braxton, and Georgia Coopersmith. 1989. "Understanding Student College Choice." In *Higher Education: Handbook of Theory and Research, Vol. 5*, edited by John Smart, 231–88. New York: Agathon Press.

Hossler, Don, and Karen S. Gallagher. 1987. "Studying Student College Choice: A Three-Phase Model and the implications for Policymakers. *College and University 2*, 3:207–21.

Hossler, Don, and Jack Schmit. 1990. "A Progress Report: A Longitudinal Study of the Postsecondary Plans and Activities of Indiana High School Students and Their Parents." Unpublished report of the Department of Educational Leadership and Policy Studies, Indiana University.

Hossler, Don, Jack Schmit, and Gary Bouse. 1991. "Family Knowledge of Postsecondary Costs and Financial Aid." *Journal of Student Financial Aid 21*, 1:4–17.

Hossler, Don, Jack Schmit, Gary Bouse, and Nick Vesper. May 1990. "Family Knowledge of Postsecondary Costs and Financial Aid and Their Relationships with Family Saving Behavior." Washington, D.C.: Paper presented at the seventh annual meeting of the Student Financial Aid Research Network Conference.

Hossler, Don, Jack Schmit, and Gary Bouse. 1991. "Family Knowledge of Postsecondary Costs and Financial Aid." *Journal of Student Financial Aid 21* (Winter):4–17.

Jackson, Gregory A. 1978. "Financial Aid and Student Enrollment." *Journal of Higher Education 49*:548–74.

____. 1982. "Public Efficiency and Private Choice in Higher Education." *Educational Evaluation and Policy Analysis 4*, 2:237–47.

Kaye, K. R., and J. H. Hunter. 1983a. *Peterson's Annual Guides/Undergraduate Study: Guide to Four-Year Colleges 1984.* 14th ed. Princeton, NJ.: Peterson's Guides.

____. 1983b. *Peterson's Annual Guides/Undergraduate Study: Guide to Two-Year Colleges 1984.* 14th ed. Princeton, NJ.: Peterson's Guides.

Leslie, Larry L., Gary P. Johnson, and James Carlson. 1977. "The Impact of Needbased Student Aid upon the College Attendance Decision." *Journal of Education Finance 2*:269–86.

Leslie, Larry L., and Paul T. Brinkman. 1988. *The Economic Value of Higher Education.* New York: American Council on Education/Macmillan.

Litten, Larry H. 1991. *Ivy Bound: High-Ability Students and College Choice.* New York: College Entrance Examination Board.

Little, Larry, and Jay L. Chronister. 1983. "Self-Reported Public Understanding of Student Financial Aid Programs." *Journal of Student Financial Aid 13*:29–34.

MacDermott, Kristine G., Paula A. Conn, and John W. Owen. 1987. "The Influence of Parental Education Level on College Choice." *Journal of College Admissions 115*:3–10.

Manski, Charles F., and David A. Wise. 1983. *College Choice in America.* Cambridge, Mass: Harvard University Press.

Mortenson, Thomas G. 1987. "Why Student Financial Aid?" ACT Student Financial Aid Research Report, Series 87-1. Iowa City: American College Testing Program.

____. 1989. "Missing College Attendance Costs: Opportunity, Financing, and Risk." ACT Student Financial Aid Research Report Series, 89-3. Iowa City: American College Testing Program.

____. 1990. "The Impact of Increased Loan Utilization Among Low Family Income Students." ACT Student Financial Aid Research Report, Series 90-1, Iowa City: American College Testing Program.

____. 1991. "Equity of Higher Educational Opportunity for Women, Black, Hispanic, and Low Income Students." ACT Student Financial Aid Research Report, Series 91-1. Iowa City: American College Testing Program.

Muffett, Diane, Marvin Smith, and Lee Gordon. 1990. "The Parents' Perspective on Financing their Child's College Education." *Journal of Student Financial Aid 20*:32–41.

Murphy, Patrick E. 1981. "Consumer Buying Roles in College Choice: Parents' and Students' Perceptions." *College and University 56*, 2:140–50.

National Association of College Admissions Counselors. 1991. "House Includes SCAN Legislation in Higher Education Reauthorization." *NACAC Bulletin 29*, 9:1.

Olson, Lorayn, and Rachel A. Rosenfeld. 1984. "Parents and the Process of Gaining Access to Student Financial Aid." *Journal of Higher Education 55*:455–80.

____. 1985. "Parents, Students, and Knowledge of College Costs." *Journal of Student Financial Aid 15*:42–55.

Pascarella, Ernest T., John C. Smart, and Mark A. Smylie. 1991. "College Tuition and Early Career Socioeconomic Achievement: Do You Get What You Pay For?". Unpublished manuscript, University of Illinois at Chicago.

Pascarella, Ernest T., and Patrick T. Terenzini. 1991. *How College Affects Students.* San Francisco: Jossey-Bass.

Paulsen, Michael B. 1990. *College Choice: Understanding Student Enrollment Behavior.* ASHE-ERIC Higher Education Report, No. 6. Washington, D.C.: School of Education and Human Development/George Washington University.

Pennsylvania Association of Colleges and Universities. 1984. *Parents, Programs, and Pennsylvania Students' Plans.* Harrisburg: Pennsylvania Association of Colleges and Universities.

Reynolds, Helene. 1980. "The Dilemma of College Choice: How Parents See It." *College Board Review 118*:26–28.

Smart, John C. 1986. "College Effects on Occupational Attainment." *Research in Higher Education 24*, 1:73–95.

Smith, Kerry, and Trudy H. Bers. 1989. "Parents and the College Choice Decisions of Community College Students." *College and University 63*:335–48.

St. John, Edward P. "The Effects of Student Financial Aid on Access to Higher Education: An Analysis of Progress with Special Consideration of Minority Enrollment." *Research in Higher Education 30*, no. 6 (1989): 563–81.

____. 1991. "What Really influences Minority Attendance? Sequential Analyses of the High School and Beyond Cohort." *Research in Higher Education 32*, 2:141–58.

Stage, Frances K., and Don Hossler. 1989. "Differences in Family Influences on College Attendance Plans for Male and Female Ninth Graders." *Research in Higher Education 30*, 3:301–15.

U.S. General Accounting Office. 1990. *Higher Education: Gaps in Parents' and Students' Knowledge of School Costs and Federal Aid.* (GAO/PEMD-90-20BR) Washington, D.C.: United States General Accounting Office.

Wolfle, Lee M., and Corinna A. Ethington. 1985. "GEMINI: Program for Analysis of Structural Equations with Standard Errors of Indirect Effects." *Behavior Research Methods, Instruments, Computers 17*:581–84.

Zemsky, Robert, and Penney Oedel. 1983. *The Structure of College Choice.* New York: College Entrance Examination Board.

Appendix

EARLY CAREER AND POSTSECONDARY AWARENESS PROGRAMS FOR MIDDLE SCHOOL STUDENTS

A List of Model Programs, Research Reports,and Informational Materials for Students and Parents

Dr. Ann S. Coles
Senior Vice President, Education Information Service

Bibliography of early awareness programs for middle school students

HIGHER EDUCATION INFORMATION CENTER PROGRAMS

For more information about these programs, contact:
Patti Horvath
Educational Awareness Specialist
Higher Education Information Center
The Education Resources Institute (TERI)
330 Stuart Street, Suite 500
Boston, MA 02116
(617) 426-0681, ext. 239

Kids to College

Kids to College introduces sixth graders to the concept of higher education. Begun in the 1992-93 academic year under a grant from the Student Loan Marketing Association in Washington D.C. (Sallie Mae), Kids to College utilizes hands-on, interactive activities to inform students about their career and postsecondary options. Local colleges and universities form partnerships with sixth grade classes, whose students take part in a six session curriculum that focuses on how to prepare for higher education. The curriculum is followed by a day at the partner campus, the highlight of which is a hands-on, age appropriate activity. Kids to College includes a teacher training in-service component and outreach activities to parents/guardians. Forty-seven Massachusetts colleges participate in Kids to College and the program is being replicated nationally.

Dreams and Discoveries

Dreams and Discoveries is a workshop series designed to increase eighth graders' awareness of their career options. The program consists of several components that, taken together, help students make the connection between their career goals and higher education. Students take part in both the "Dream A Little" pre-test, which starts them thinking about the kind of lifestyle they want as adults, and "The Career Game," a "quiz" that matches their interests with various careers. They also meet with career speakers and take field trips to a business site and a local college.

Statewide Youth Educational Awareness Program

Since 1986, the Statewide Youth Educational Awareness Program has been working with volunteers from public schools, higher education, community agencies and businesses in twenty Massachusetts cities to help inform middle and high school students about postsecondary education, career options and financial aid. As the activities are coordinated at the local level, specific events vary in each city. Programs for middle school students include a Career Day for eighth grade students at Gardner High School; "College Pursuit," a college fair for middle school students that is based on the game "Trivial Pursuit," and held at the Lawrence Public Library; and a bilingual financial aid awareness night for Chelsea students and their families.

Other Noteworthy Career/Postsecondary Awareness Programs for Middle School Students

Arizona

Think Tank

Maricopa County Community Colleges District
2411 West 14th Street
Tempe, AZ 85281
(602) 731-8028
Attn: Janet Beauchamp
Executive Director

Established in 1988, the Think Tank is a school/college/community coalition that strives to influence school and system wide educational improvement in Phoenix, AZ. The coalition includes nine elementary school districts, eight high school districts, the Maricopa Community Colleges, Arizona State University and Phoenix business and community representatives. The Think Tank's mission is to use the collective thinking of its members to ensure that Phoenix students remain in school and pursue post-secondary education.

MariMuse is the Think Tank's pilot program for students in grades K-8. College students serve as mentors, via Internet, to elementary school students, who also can communicate via Internet with their peers in other countries. Currently, Think Tank members are researching educational practices, i.e., parents in the classrooms, teacher training, school/college partnerships, mentoring, etc., and how these impact students.

California

I'm Going to College

California State University at San Marcos
Student Affirmative Action
San Marcos, CA 92096
(619) 752-4872
Attn: Carolina Cardenas
Coordinator of Student Affirmative Action

In 1990, the California Association of Student Financial Aid Administrators' (CASFAA) Early Awareness Committee developed "I'm Going to College" to increase the representation of low income and minority students in the state's postsecondary educational system. The Project introduces fourth grade students to basic concepts of college through hands-on activities using a specially designed "I'm Going to College" Activity Book. Students complete mock admissions and financial aid applications and receive an "acceptance" letter for their day on campus. The campus visit is designed to simulate the first day of a college student. Students receive photo IDs, backpacks, a dictionary and their "class schedule." They also visit the financial aid office, where they receive their "scholarship check" which is redeemable at the campus bookstore for an age-appropriate book. Each student takes two "classes," one of which is a computer class. Parents are invited to attend this day on campus; in addition, a follow up assembly at the elementary school provides parents with information on how to support their children academically. Students' educational progress is tracked through their high school graduation.

District of Columbia

College Knowledge Club

Educational Opportunity Center of Washington, D.C.
2124 Martin Luther King Jr. Avenue
Washington, D.C. 20020
(202) 889-5300
Attn: Paulette Morgan Program Director

Begun in 1991 with funding from the Massachusetts Higher Education Assistance Corporation (now American Student Assistance), College Knowledge encourages students to make the right decisions for their futures now. The

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program takes a comprehensive approach to early awareness by forming partnerships between area colleges, college students, parents, middle schools, and community agencies. Five District middle schools with high drop out rates have been organized into College Knowledge "clubhouses." EOC program staff meet with students at these schools twice a month and conduct workshops related to the program's four "modules": Self-Awareness, Career Awareness, Educational Attainment, and Decision Making. At the end of the year, each group of students visits two or three colleges. Parents are invited to participate in seminars, college tours and regular club meetings. In addition, a year end meeting informs parents how to help their child make the transition into the next grade. Approximately 125 students, in grades 7–9, participate in College Knowledge.

Hispanic Opportunities through Parent Educational Support (High HOPES) Pilot (a national program)
The ASPIRA Association, Inc.
1112 16th Street, N.W., Suite 340
Washington, D.C. 20036
(202) 835-3600
Attn: Oscar Zunica
Program Director

The ASPIRA Association, Inc. is the only national nonprofit organization devoted solely to serving Hispanic youth through leadership development and education.

From 1992–1994, when the program was defunded, High Hopes helped parents of Hispanic students in Chicago and New York plan for their children's college education. In each city, an educational resource center provided parents with information and materials on colleges, application procedures, entrance exams and financial aid. The program provided direct outreach to parents through one-to-one counseling sessions, field trips, seminars and workshops that were conducted through a three-volume series of publications entitled Making the Most of Your Child's Education: What About College? These publications specifically target Hispanic parents and are available from ASPIRA for $5.00 per booklet, or $12.50 for all three volumes. The publications are currently available only in English; however, Spanish versions are planned for 1995. High Hopes was funded by Philip Morris Companies, Inc.

INDIANA
Future Academic Scholars' Track (FAST) Program
Indiana University-Purdue University
Multicultural Services
Walb Memorial Union, Room 118
2101 Coliseum Blvd. East
Fort Wayne, IN 46805-1499
(219) 481-6608
Attn: Marsha Sanders
Program Director

FAST is a year-round effort involving Saturday academics on two half days per month and an intensive three week summer component that are conducted at Indiana University. The program targets at risk sixth grade students, who stay enrolled in FAST until their high school graduation. Each year, 20 new sixth graders join FAST; current enrollment is 138. The FAST curriculum consists of three phases or "tracks": Awareness (middle school); Formation and Application (high school); and Pre-College/Freshman Orientation. Middle school program activities include academic instruction, PSAT practice sessions, field trips to cultural institutions and business sites, mentoring from high school students, and visits by program staff to the students' schools and homes. There is also a teacher training component and a parent component, "Parents Plus." The latter includes an orientation session, classes in parenting, computer literacy and financial aid awareness, and a volunteer parent advisory committee. FAST is funded by the Lilly Foundation and the Foellinger Foundation.

Maryland
Maryland National Early Intervention Scholarship Program
Maryland Board of Higher Education
16 Francis Street
Annapolis, MD 21401
(410) 974-297 1, ext. 104
Attn: Lynn Tyler
Director of Special Projects

The Maryland National Early Intervention Scholarship Program receives funding from the U.S. Department of Education and the State of Maryland to assist Maryland universities and educational consortiums with their outreach efforts to low income middle school students. The six sites selected to participate in the program form partnerships with area middle schools; students are identified through their participation in the free lunch program. Activities include financial aid and academic preparation workshops for parents; student workshops on high school course selection; college tours; university based summer programs and Saturday academies; and after school outreach clubs. The program has been in place since 1990. Last year, 2,500 students, in grades 6-8, participated.

Massachusetts
Lowell Early Awareness Program (LEAP)
Middlesex Community College
33 Kearney Square, 5th Floor
Lowell, MA 01852
(508) 656-3134
Attn: Helene Greenberg
Program Director

LEAP helps seventh and eighth grade students understand the link between higher education, career opportunities and quality of life. Through its many components, the program encourages students to remain in school and become familiar with the choices available to them beyond high school. Emphasis is placed on how these choices can affect the student's future. LEAP activities consist of:

- Teacher in-service training sessions
- In-class core program consisting of motivational kick-off session, classroom activities, career speakers, work site visit and day on campus at Middlesex Community College.
- Bilingual parent outreach
- College/career fair at Middlesex Community College
- After school mentoring program

Each year approximately 1,400 students in four middle schools participate in LEAP.

Futures 2000 (a national program)
Center for Corporate and Education Initiatives
The Health Institute
New England Medical Center
750 Washington Street
NEHMC 328
Boston, MA 02111
(617) 956-9151
Attn: F. Ruth Moore
Manager, Futures 2000

Futures 2000 (F2) is an effort to improve public school systems throughout the United States and to prepare students to make successful transitions into high school and beyond. The program began in 1992 in three communities: Portland, ME; Grants/Cibola County, NM and Junction City/Geary County, KS with 1,500 seventh graders and 150 teachers. Last year, F2 expanded to include the eighth grade. F2 infuses career and educational planning into the curriculum so that students can begin to set career goals by the time they enter high school. To assist students with

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this goal, the program has developed a set of career, life skills and service learning instructional activities to promote learning in all subject areas. These include:
Classroom Innovation Grant Awards—Students write grants for career related projects that they design and oversee. Projects include a cupcake factory, a school store, a landscaping project and a laser show.
Curriculum Enhancers—These are innovative, hands-on techniques designed to create career awareness and help students connect the skills they learn in class to the skills they will need in high school and beyond. Examples include a stock market game, creation of a school based salad bar, and a "Kids Guide to Portland, Maine," all of which were created by students. Futures 2000 is funded by the DeWitt Wallace-Reader's Digest Fund.

New York
CSS Early Awareness Initiative (a national program)
The College Board
45 Columbus Avenue
New York, NY 10023-6692
(212) 713-8182
Attn: Larry Coles
Project Manager

The mission of the CSS Early Awareness Initiative is to encourage low-income, minority students to consider higher education and to learn about financial aid options while they are still in middle school. To do this, the Project has:

- Conducted extensive student and parent focus groups in eight cities
- Developed strategies and activities to provide families with information about planning and paying for college and created a series of early awareness brochures
- Sponsored seven school/college partnerships as pilot projects to test these strategies.

Each partnership develops its own program to provide students and their families with information and activities that stress the importance of higher education and the availability of financial aid. The institutions involved in the program are Cornell University, Fairfield University, Pennsylvania State University, University of New Mexico, Texas Christian University, University of Rochester and New York State Higher Education Services Corporation. The CSS Early Awareness Initiative is funded by the Lilly Endowment.

Early Awareness of Student Financial Aid Program
New York State Higher Education Services Corp.
99 Washington Avenue, Room 1438
Albany, NY 12225
(518) 486-4615
Attn: Delialah Reyes
Coordinator, Early Awareness Project

The New York State Higher Education Services Corporation (NYSHESC) and the New York State Education Department have joined together to fund and develop a middle school curriculum on student financial aid. Working directly with Home & Careers Skills teachers in 4,000 New York state middle schools, NYSHESC provides participating teachers with resource guides and curriculum packets that introduce students to basic financial aid information. Home and Career Skills was identified as the most appropriate area for integrating student financial aid awareness, as it is a required course for sixth, seventh, and eighth grade students in New York State. The resource guide, however, is applicable to any subject area. By forming a collaborative effort that includes students, parents and the financial aid community, this program promotes the concept that all students can have access to higher education. The CSS Early Awareness Initiative began in 1993 with funding from the College Board's Equity Awareness Initiative. Approximately 180,000 students in grades 6–8 participate in the program.

Ohio

College Can Be Elementary/Take A Coach To College

I KNOW I CAN
Columbus City School District
270 East State Street
Columbus, OH 43215
(614) 469-7044
Attn: MorraLee Holzapfel
Program Director

In 1991, the Ohio Department of Education awarded a grant to I KNOW I CAN, a nonprofit corporation, to develop College Can Be Elementary, a program that involves K-5 students, their parents and teachers in a series of activities designed to increase the number of at risk students who attend college. Seven elementary schools were chosen as pilot sites; the program is now offered to all fifth graders in the Columbus Public Schools. The program includes over 100 College Can Be Elementary Lesson Plans that teachers can incorporate directly into their classrooms, all of which create college awareness among students.

Take A Coach To College began in 1992 as the follow up component to College Can Be Elementary. Throughout the spring, all Columbus fifth grade students take a bus, specially painted with the I KNOW I CAN logo, to one of ten area Higher Education Council of Columbus (H.E.C.C.) college campuses. At each elementary school's year end closing ceremony, the fifth graders and their parents receive a packet of materials that stresses how they can prepare for college. Some of the schools also identify a college student who is a graduate of that elementary school to serve as a graduation speaker.

Texas

University Outreach

The Center for Academic Enhancement
Texas A&M University
241 Blocker
College Station, TX 77843-4230
(409) 845-2724
Attn: Patricia Lehmann
Assistant Director

Established in 1987, University Outreach strives to increase the numbers of African American and Hispanic students enrolled in Texas postsecondary institutions. Participants begin the program in grade seven, and continue until they graduate from high school. To be eligible for participation, students agree to take college preparatory classes, maintain above-average grades, and participate in University Outreach activities. These include: a tutoring program, a Saturday College program with visits to local colleges, monthly parents' meetings and school based workshops. There is also a summer environmental science camp that combines instructional activities in math and science with Outward Bound activities at a campsite in Alamosa, Colorado. Last year, University Outreach was active in 88 schools in 12 school districts, with centers in six Texas cities.

Hispanic Mother Daughter Program

University of Texas at Austin
1600 Chican Street
Austin, TX 78702
(512) 472-3984
Attn: Dr. Maria Elena Reyes
Project Director

Begun in 1992 with a grant from AT&T and the University of Texas at Austin, the UTAustin Hispanic Mother Daughter Program (HMDP) targets female Hispanic students from five Austin middle schools and one high school. The program follows participants from seventh grade through high school graduation, while providing educational support to the mother-daughter teams in the program. To be eligible for participation, students must be low income,

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potential first generation college graduates and must maintain a 75 or better grade point average. Additionally, the student's mother must agree to participation the program. Students and their mothers receive academic and pre-college counseling, mentoring from college students, career information, math/science activities, tutoring, and parental advocacy workshops. Because the program was created to increase the number of female Hispanic college graduates in Texas, especially in fields where they are under represented, there is a special focus on science and math. Activities include biweekly meetings with the student participants; monthly Saturday morning meetings at the college for both students and their mothers; holiday events and a summer program. Last year, 150 students participated.

Paving The Way
Fort Worth Independent School District
3210 West Lancaster
Fort Worth, TX 76107
(817) 871-2800
Attn: Carolyn Greer
Program Director, Guidance and Counseling

In 1987 the College Board and the Fort Worth Independent School District, with funding from the Aetna Foundation, developed Paving The Way. The project brings together middle school students, parents, school administrators and college personnel to inform students and their families how to prepare for education beyond high school. Activities include student/parent workshops, college campus visits, enrollment of eighth graders in the Texas Higher Education Coordinating Board's "College Bound" data bank, and "Have You Asked a Student Today?", a promotional campaign, that uses buttons and brochures to promote college awareness. In addition, there is a special "Junior University" for 100 incoming seventh graders who spend a week during the summer on the campus of Texas Christian University. All 23 Fort Worth middle schools participate in Paving The Way.

VERMONT
Middle School Outreach Program
Vermont Student Assistance Corporation
P.O. Box 2000
Champlain Mill
Winsooki, VT 05404
(802) 655-9602
Attn: Linda Schiller
Program Director

The Vermont Student Assistance Corporation (VSAC) is a non-profit corporation created by the Vermont State Legislature to provide low income, first generation college bound students with information and counseling on financial aid, postsecondary options and career information. The middle school program focuses on familiarizing students with an understanding of their interests and values, increasing their self-awareness, and orienting them to career, vocational, technical and post-secondary options.

A VSAC Outreach Counselor meets with each participating student four times individually during the school year and conducts at least five group guidance counseling sessions. Parent contact is achieved through newsletters, school conferences and workshops, and home visits. VSAC's seventh grade curriculum focuses on self-concept, self-esteem building and career exploration; the eighth grade curriculum deals with self-assessment, interest, values and financial aid awareness. Students in both grades visit a local college and job site.

Approximately 200 students participate in the Middle School Outreach Program.

Appendix

Selected bibliographic materials re: postsecondary/career awareness

RESEARCH REPORTS/STUDIES

Center for Corporate and Education Initiatives, "Winter 1993 Survey of Futures 2000 Students, Teachers, and Family Members", The health Institute, New England Medical Center, NEMCH No. 328, Boston, MA 02111, 1994.

The Center for Human Resources. *Future Options Education*, Brandeis University, Waltham, MA 1990.

College Board, College Scholarship Service. "Phase One Report: Parent and Student Focus Groups". College Board, New York, NY, 1994.

College Board/National Association of College Admission Counselors. "Strengthening Educational Guidance and Counseling in Schools", College Board Publications, Box 886, New, York, NY 10101-0886, 1994.

Davis, Jerry S. "The Effectiveness of Early Awareness Program Information", Pennsylvania Higher Education Assistance Agency, Harrisburg, PA, 1989.

Hart, Phyllis. "Middle School: Crossroads on the Path to College", *The College Board Review*, No. 170, Winter 1993/94.

Hart, Phyllis J., and Jacobi, Maryann. *From Gatekeeper to Advocate: Transforming the Role of the School Counselor*, College Board Publications, Box 886, New York, NY 10101-0886, 1993.

Indiana Youth Opportunity Study. "High Hopes, Long Odds", Indiana Youth Institute, 333 North Alabama St., Suite 200, Indianapolis, IN 46204, 1993.

Mayer, Daniel. "Do Early Educational Awareness Programs Increase the Chances of Eighth Graders Reaching Higher Education?" Higher Education Information Center, 1991.

US Department of Education, Office of Educational Research and Improvement. "The Tested Achievement of the National Education Longitudinal Study of 1988 Eighth Grade Class." 1988.

Wheelock, Anne. "Transforming Your Middle Leave School to Prepare Nearly all Students to Pursue Some Form of Post-Secondary Education: Questions and Examples", Boston, MA, 1991.

INFORMATIONAL MATERIALS FOR STUDENTS AND PARENTS

"Let's Have a Conference: You and Your Child's Teacher" National Education Association, Washington, D.C. 1987.

"Make It Happen", Higher Education Information Center, The Education Resources Institute, 330 Stuart Street, Suite 500, Boston, MA 02116, 1989: A planning guide outlining the steps students need to follow from eight grade to twelfth grade to prepare for college.

"Making the Most of Your Child's Education: What About College?" ASPIRA Association, Inc., 1112 16th Street, NW, Suite 340, Washington, DC 20036. This three volume series of publications helps Hispanic parents plan for their child's college education. Each volume, "Preparing for College," "Planning for College," and "Paying for College," is available for $5.00; all three volumes are available for $12.50.

"Parents and Counselors Together", National Association of College Admission Counselors, Suite 430, 1800 Diagonal Rd., Alexandria, VA 22314, 1989: A curriculum to introduce parents to concepts of college planning.

"Widen Your Choices", College Board, 1993: A video created to motivate middle school students to think about and plan for college. It focuses on the importance of having a goal and taking responsibility for working toward that goal.

"You Can Go to College If You Want to: Activity Books I and II", College Board, 1992: Workbooks designed for use with middle school students to broaden their awareness of college and what they need to get there.

Bibliography

Bibliography

Coles, Ann S. (1993, October). *School to college transition programs for low income and minority youth.* Boston, MA: The Education Resources Institute.

The Education Resources Institute. (1997, December). *Missed opportunities: A new look at disadvantaged college aspirants.* Boston, MA: Author.

Hossler, Don, and Stage, Frances K. (1992, Summer). Family and high school experience influences on the postsecondary education plans of ninth-grade students. *American Educational Research Journal, 29,* 2, 425–451.

Freeman, Kassie. Increasing African Americans' participation in higher education: African American high-school students' perspectives. *Journal of Higher Education,* 523–550.

The Mortenson Research Seminar on Public Policy Analysis of Opportunity for Postsecondary Education. (1997, December). Academic preparation for college: 1983 to 1997. *Postsecondary Education Opportunity, 66.* Oskaloosa, IA: Author.

McDonough, Patricia M., Korn, Jessica, and Yamasaki, Erika. (1997, Spring). Access, equity, and the privatization of college counseling. *The Review of Higher Education, 20,* 3, 297–317.

Flint, Thomas A. (1993, Spring). Early awareness of college financial aid: Does it expand choice? *The Review of Higher Education, 16,* 3, 309–327.

The Education Resources Institute. *Early career and postsecondary awareness programs for middle school students.* Boston, MA: Author.

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