

MEMORANDUM

TO: TOM FREEDMAN, MARY SMITH

FROM: JULIE MIKUTA

RE: UPWARD BOUND

DATE: AUGUST 18, 1997

SUMMARY

This memo gives background information on Upward Bound, a program that is regarded as successful in encouraging minority and low-income students to attend college. Upward Bound is one of the TRIO programs authorized under the Higher Education Act of 1965. The TRIO programs are described in the second part of this memo.

Upward Bound:

- Upward Bound helps low-income students prepare for higher education. Students receive academic instruction as well as counseling, mentoring and other support services throughout the school year and in an intensive five to eight week residential summer program.
- Upward Bound programs are funded under Title IV of the Higher Education Act of 1965 and are one of the TRIO Programs.
- Average grant award: \$285,967 (The minimum grant award amount is \$190,000).
- Number of grants (1997): 601
- Number of participants: 44740 students.
- Average cost per participant: \$3,838
- Funding for FY 1997: \$178,805,194
- Upward Bound projects are generally operated by two or four-year colleges.
- Students in the Upward Bound program are 4 times more likely to earn an undergraduate degree than those students from similar backgrounds who did not participate.
- Two-thirds of the students involved in Upward Bound programs are from families with low income (150% of poverty), and where neither parent graduated from college. The remaining students are either from low income families or are potential first-generation college students.

- Currently, there are 681 Upward Bound programs are throughout the United States serving over 42,000 students.
- A 1997 Department of Education report (based on surveys done in 1992 and 1994) of Upward Bound freshmen and sophomores found that participants and parents of participants had higher educational expectations than members of the control group. The Upward Bound students earned significantly more academic credits, particularly in English, social studies, science and math. The average participant was exposed to approximately 17% more academic instruction than the control group.

TRIO PROGRAMS

General Information

- TRIO Programs were established in 1965 to aid students from low-income families who needed “special services” to successfully finish high school and prepare for college.
- TRIO Programs are direct grant programs funded in rank order on the basis of competitive proposals. There is one federal employee for every 28,000 TRIO students served. Despite substantial increases in the number of TRIO students and programs, fewer federal employees are working with TRIO today than 20 years ago.
- Although 11 million Americans are eligible for TRIO Programs, there is federal funding for fewer than 5% of eligible youth and adults to be served.
- Over 1,900 TRIO Programs currently serve nearly 700,000 low-income Americans between the ages of 11 and 27. Many programs serve students in grades six through 12.
- 39% of TRIO students are White; 36 % are African-American; 16 % are Hispanic; 5 % are Native American and 4 % are Asian-American. 16,000 TRIO students are disabled.
- Over 1,200 colleges, universities, community colleges and agencies now offer TRIO Programs. TRIO funds are distributed to institutions through competitive grants.
- Since 1965 an estimated two million students have graduated from college with the assistance of TRIO Programs. The Ronald E. McNair Post-Baccalaureate Achievement Program is one of only a few programs in America that encourages low-income and minority undergraduates to prepare for doctoral study.

TRIO programs in addition to Upward Bound

Student Support Services:

- These programs help people from low-income families to stay in college until they earn their baccalaureate degree.
- Participants receive tutoring, counseling and remedial instruction.
- Over 707 colleges and universities nationwide participate.

- Students who participate in this program are more than twice as likely to remain in college than those students from similar backgrounds who did not participate in the program.

Talent Search

- These programs help young people in grades 6 through 12 better understand options in higher educational, and available financial assistance.
- Over 302,000 Americans are enrolled in 319 Talent Search TRIO programs.

Educational Opportunity Centers

- The Centers help workers from low-income families-- often women on welfare and displaced workers-- to choose a college and find financial aid.
- There are 74 Educational Opportunity Centers in America.

Ronald E. McNair Post-Baccalaureate Achievement

- Faculty mentors and research opportunities encourage people from low-income families and minority undergraduates to pursue college teaching careers or post-graduate education.

The Short-Term Impact of Upward Bound: An Interim Report (1997)

Analysis and Highlights

Background

Upward Bound, which was initiated in 1965 as part of the War on Poverty, is a federal precollege program designed to help economically disadvantaged students complete high school, enter and succeed in postsecondary education. It is the oldest and largest (based on total funding) of the federal TRIO programs, all of which share the objective of helping disadvantaged students achieve success at the postsecondary level.

At present, there are more than 500 Upward Bound projects serving 42,000 students. At least two-thirds of each project's participants must be from households that have low income (under 150% of poverty) and where neither parent has graduated from college. In practice, about 80 percent of Upward Bound applicants satisfy both criteria, with the remainder from either low income or first-generation college families.

Upward Bound projects offer extensive academic instruction as well as counseling, mentoring and other support services. Students meet throughout the school year and generally participate in an intensive residential summer program that last from five to eight weeks. Most students--about 90 percent -- enter Upward Bound while in 9th or 10th grade, and some remain with the program through 12th grade. Upward Bound projects are generally operated by two or four-year colleges. The annual average cost per participant is about \$3,600.

Evaluation Objectives and Methods

This evaluation report describes the short-term impact of Upward Bound during the first year or two of high school. Data is currently being collected to assess longer term effects of Upward Bound on high school graduation, college entry and achievement, and will be addressed in subsequent reports. The main questions addressed in this report are:

- ☐ What types of students are attracted to Upward Bound and how long do they participate in the program?
- ☐ What services do students receive?
- ☐ What is the impact of Upward Bound on students' education related outcomes. Do some students benefit more than others from participation in Upward Bound?

Impact findings are based upon a nationally representative sample of 67 Upward Bound¹ projects hosted by two and four year colleges, from which 2700 eligible applicants were randomly assigned to Upward Bound or to a control group. Short-term impacts are estimated by comparing students in the two groups on a range of measures, including grades, course-taking, attitudes and educational expectations. A baseline survey was conducted beginning in December 1992, with a follow-up survey undertaken in Spring 1994. High school transcripts were collected following the 1993-94 school year.



Findings

Enrollment and Persistence

- Comparing Upward Bound applicants with other students from similar grades and from families with low socioeconomic status shows that Upward Bound applicants have higher educational attainment expectations, are better prepared academically, and have parents who are generally more involved in their children's school related activities.
- Most students (about 90 percent) enter Upward Bound in the 9th or 10th grade, but about 20 percent of the applicants offered program openings choose not to participate, and almost 40 percent of those who accept an offer drop out of Upward Bound within 12 months. The most common reason for leaving Upward Bound is to take a job. Participants planning to complete college are more likely to remain in Upward Bound than are other participants.

Services

- In addition to tutoring and counseling services, Upward Bound participants receive considerable academic instruction from the projects -- particularly in English, math and science. Overall, the typical participant attends more than 270 sessions throughout the year.

Short-Term Impacts

- Participants and parents of participants had higher educational expectations than members of the control group.
- Upward Bound participants earned significantly more academic credits during the period covered by this study, particularly in English, social studies and science and math. The average participants was exposed to approximately 17 percent more academic instruction than the control group.

Impacts related to credits are in part a product of some high schools offering credits for completing courses offered through Upward Bound, and in part a product of students earning additional credits for high school courses.

- Participants who persist in Upward Bound for a longer period earn more credits in high school than other participants.
- Certain sub-groups are more likely to experience short-term benefits from Upward Bound than others. Although Upward Bound participants with high and low educational expectations (do not expect to complete at least a four-year college degree) both earn more academic credits, students with low educational expectations experience a much larger gain. The study also found positive short-term effects for Hispanic students.
- Other student-related outcomes such as grade point average, attitudes, parental involvement and students' behavior in school were not affected by participation in Upward Bound.

Conclusions

Results in this report describe the short-term impacts of Upward Bound while most students are high school freshmen and sophomores. The students in this study have not yet progressed far enough in school to estimate the program's effects on high school graduation, college entry or college attainment. However, findings about the positive effects of Upward Bound upon academic course-taking are encouraging, particularly given concerns raised in the past about the academic preparation provided Upward Bound students.

Footnotes

1. The evaluation is limited to regular Upward Bound projects. It does not include Veterans projects or projects focused on math-science curriculum.

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mail to paved@ed.gov

Last updated -- July 1997 (swz)

Biennial Evaluation Report - FY 93-94

Chapter 508

Upward Bound

(CFDA No. 84.047)

I. Program Profile

Legislation: Higher Education Act (HEA) of 1965, as amended, Title IV, Part A (20 U.S.C. 1070a-11 and 1070a-13) (expires September 30, 1997).

Purpose: To generate among low-income youths and potential first-generation college students enrolled in high school the skills and motivation necessary for success in education beyond high school. The goal of the program is to increase the academic performance and motivation of eligible participants so that they may complete secondary school and successfully pursue postsecondary educational programs.

Funding History

Fiscal Year	Appropriation I/	Fiscal Year	Appropriation I/
1967	\$28,000,000	1986	\$ 72,338,636
1970	29,600,000	1987	74,548,185
1975	38,331,000	1988	80,413,638
1980	62,500,000	1989	93,584,398
1981	66,501,000	1990	100,781,325
1982	63,720,000	1991	131,643,731
1983	68,366,514	1992	158,759,000
1984	70,754,376	1993	157,589,899
1985	73,614,193	1994	162,500,000

I/ The allocations represent the amount allocated administratively by the Department from funds appropriate jointly for all six Federal TRIO programs: Upward Bound, Talent Search, Educational Opportunity Centers, Student Support Services, Ronald E. McNair Post-baccalaureate Achievement program, and the Training Program for Special Programs Staff and Leadership Personnel.

II. Program Information and Analysis

Performance Indicators

One performance measure is the effect of Upward Bound on participants' academic preparation for college. Evidence from the High School and Beyond (HS&B) survey shows positive effects of Upward Bound participation on reading achievement and educational expectations, but no effects on math achievement (Table 1).

Table 1
Results From HS&B: Program Effects

SELECTION RULES	Reading¹	Math (less demanding test)	Math (more² demanding test)	Educational³ Expectations
Random Selection	2.92*	2.77	-.30	2.76*
Normal Selection	1.79	2.23	-2.73*	3.57*

*Statistically significant at .05 level.

¹Refers to the number of correct answers on a scale of 1-20. For example, if randomly selected into Upward Bound or a control group, UB participants scored almost 3 points higher on a scale of 1-20.

²Refers to number of correct math answers on a scale of 1-10.

³Refers to years of education expected to attain.

Another program performance measure is the percentage of Upward Bound seniors who enter college. Although projects report this information to ED annually, it has not been aggregated.

Population Targeting

To participate in Upward Bound (UB), students must be between the ages of 13 and 19 (except for veterans), have completed 8-years of elementary education, need academic support to successfully pursue a program of education beyond high school, be planning to go to college, and need the services in order to fulfill their goals. Participants are selected based upon recommendations from their counselors, teachers, and social agencies. Two-thirds of the project participants must be low-income persons (defined as less than 150 percent of poverty level) who are also potential first-generation college students. The remaining one-third must be either low-income or potential first-generation college students.

There are approximately 530 Upward Bound grantees serving over 40,000 students. Grants are usually for four years. However, applicants whose grant proposals are scored in the top 10 percent of a competition are awarded 5-year grants. In FY 1992, the Department also awarded additional funds to 75 Upward Bound regional centers to establish summer residential programs emphasizing math and science learning. These grants will be continued through 1994.

Services

FY 1993 Awards	Regular	Math/Science Summer Program
Number of projects	534	75
Average award	\$267,540	\$195,782
Number of persons served	41,835	3,542
Average Federal cost per participant	\$3,416	\$4,146

Students are recruited for participation in Upward Bound through their high schools, known as "target schools." These target schools are listed in the application; there are approximately 3,300 such schools served by UB projects throughout the country. Students in UB programs generally participate in an intensive 6-week summer residential or non-residential program held on a college campus. They continue to receive academic and support services during the school year, typically on weekends or after school.

All Upward Bound project must provide instruction in the following areas:

- ☐ math (through pre-calculus)
- ☐ laboratory science
- ☐ foreign language
- ☐ English
- ☐ composition

In addition, the following services are typically provided in the academic year and summer components of the project:

- ☐ instruction in study skills and other subjects necessary for success in education beyond high school
- ☐ academic or personal counseling
- ☐ exposure to cultural events
- ☐ tutorial services
- ☐ information on student financial assistance assistance in completing college applications, financial aid applications, preparation for admissions tests and
- ☐ exposure to a range of career options.

Program Administration

Programs may be sponsored by institutions of higher education, public and private nonprofit agencies, or combinations of such entities. In exceptional cases, secondary schools may sponsor a project or be part of a combination of entities sponsoring a project. Grants are generally four years in length, with the best proposals receiving 5-year grants.

Prior experience points are earned by grantees that have conducted an Upward Bound project during the three years prior to the year in which a new application is submitted. Up to 15 points can be awarded based on the applicant's prior program performance as an Upward Bound grantee. The goal is to promote continuity in the delivery of services.

Outcomes

ED recently began an evaluation of Upward Bound that involves a randomly chosen sample of eligible program participants and a control group. This study involves a representative sample of 70 Upward

Bound projects. Initial findings on program impact will be available in March 1995.

Upward Bound has been evaluated several times in the past. The most comprehensive evaluation of the program was undertaken by Research Triangle Institute between 1973 and 1979 (III.2). This study followed a sample of approximately 3,700 Upward Bound participants from 54 sampled projects and 2,300 non-participating matched comparison group students. Two follow-up surveys were conducted. The chief findings from this study were that:

- ☐ Upward Bound participants had substantially higher education expectations than non-participants, and these differences increased with the length of Upward Bound participation.
- ☐ Upward Bound had no effect on high school graduation rates, but significantly more participants entered postsecondary education. Those who enrolled in college were more likely to attend a four-year institution than non-participants. They were also more likely to attend colleges with high minority enrollment and that hosted an Upward Bound or Student Support Services project.
- ☐ Minorities, economically disadvantaged students and students classified as academic risks were particularly more likely to enter college from among Upward Bound participants than from the comparison group.
- ☐ Upward Bound participants were more likely to apply for financial aid, and although the probability of receiving aid did not differ from non-participants, aid packages for Upward Bound participants were more likely to include large grants.
- ☐ The duration of program participation was associated with an increased likelihood of postsecondary entry. Those in Upward Bound for 2 or 2 years were significantly more likely to enter college than those with a single year of program participation.
- ☐ No systematic differences were observed between former Upward Bound participants and non-participants on measures of postsecondary persistence. Similarly, there were few differences on measures of educational performance, although Upward Bound participants had lower grade point averages.

An analysis (III.3) of students in the High School and Beyond Senior survey found similar effects of program participation. Upward Bound participants were more likely to enter college and earned more credits than non-participants, but within 18 months after high school graduation, differences in postsecondary persistence were no longer significant.

A more recent examination (III.4) of data in the High School and Beyond surveys (sophomores and seniors) included an analysis of high school and postsecondary transcripts. The study found that when students are matched on the basis of type of high school attended, race/ethnicity, and family socioeconomic status:

- ☐ Upward Bound participants, prior to program entry, earned more math credits and had higher education aspirations than non-participants. Although the differences were not statistically significant, program participants also had slightly higher grade point averages, more science credits, and higher achievement test scores prior to program entry.
- ☐ Upward Bound enrollment increases the educational aspirations of students and reading achievement test scores.

- Upward Bound participants were more likely to enter postsecondary education, but two or three years after high school graduation, differences in postsecondary persistence had largely disappeared. There were no systematic differences in rates of college graduation or credits earned.

Management Improvement Strategies

The Department has recently begun to develop a revised set of regulations that will incorporate recent legislative changes. The new regulations will also improve the reliability of selection criteria, and prior experience point allocation criteria used by the Department. The regulations will improve project accountability and help the Department develop a better working relationship with the Upward Bound grantees.

III. Sources of Information

1. Program files.
2. Graham Burkheimer, John Riccobono, Joseph Wisenbaker, *Final Report: Evaluation Study of the Upward Bound Program--A Second Follow-up*, (Research Triangle Park, NC: Research Triangle Institute, 1979).
3. Steven M. Jung and Applied Systems Institute, *Reanalysis of High School and Beyond Data to Estimate the Impact of Upward Bound* (Washington, DC: Applied Systems Institute, 1984).
4. David Myers, "The Effects of Upward Bound and Supplemental Service Programs: Findings From Extant Data" (Rockville, MD: Westat, Inc., 1991).

IV. Planned Studies

The Department of Education has begun a major evaluation of Upward Bound. The first phase of the evaluation will assess the impact on participants during high school. The evaluation will use a random assignment experimental design.

V. Contacts for Further Information

Program Operations:

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Program Studies:

David Goodwin, (202) 401-0182

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ed.dl





CENTER FOR EDUCATIONAL RESEARCH AND EVALUATION

RTI Project No. 22U-1605

November 1979

Executive Summary

EVALUATION STUDY OF THE UPWARD BOUND PROGRAM: A SECOND FOLLOW-UP

by

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U.S. Office of Education

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Executive Summary

Evaluation Study of the Upward Bound Program: A Second Follow-Up

I. BACKGROUND AND PURPOSE

Under authority of the Economic Opportunity Act of 1964, as amended (42 U.S.C. 2809), the Office of Economic Opportunity (OEO) funded 17 Upward Bound (UB) projects as a pilot program in the summer of 1965. In 1966, UB was authorized as a national program under Title II.A of the Economic Opportunity Act. In 1969, the UB program was transferred from OEO to the U.S. Office of Education (USOE), Department of Health, Education, and Welfare. The present legislative authority is Section 408 of the Higher Education Act of 1965, as amended.

The program was designed for low-income high school students with potential for successfully completing a postsecondary program, but who, due to inadequate preparation and/or lack of motivation, do not meet conventional criteria for admission to a postsecondary program. Through various intervention strategies (e.g., remedial instruction, exposure to new or altered curricula, tutoring, cultural enrichment activities, counseling, and encouragement), the program is designed to generate in participants the skills and motivation necessary to enter and successfully complete postsecondary education (PSE). During the summer, UB participants typically reside on a postsecondary campus for an intensive six- to eight-week session. In the academic year, they typically receive less intensive attention. During their junior and senior years of high school, participants receive guidance in exploring options for PSE preparation.

In July 1973, USOE contracted with Research Triangle Institute (RTI) to conduct an evaluation of the UB program. This base-year study provided a comprehensive description of the UB program as it existed in program year 1973-74, investigated the relationships of UB participation to short-term educational outcomes, and examined the relative effectiveness of different types of UB projects in respect to these outcomes. A first follow-up (FFU) study was conducted between October 1976 and September 1977. The FFU study examined educational progress and persistence as related to extent of prior participation in the UB program, and investigated student educational expectations and problems experienced through that time for base-year sample members.

The present, second follow-up (SFU), study was conducted between April 1978 and September 1979 to investigate long-term educational outcomes, concentrating on the PSE experience, that were not fully addressed in the previous studies. Particular emphasis was placed on investigating PSE persistence, progress, and performance as related to prior UB program participation pattern; however, other relevant educational outcomes (e.g., receipt of financial aid, use of support services) and educational deterrents were also examined.

II. DESIGN AND METHODOLOGY

The design of the SFU study was necessarily constrained by the base-year design. From the 333 regular UB projects operating in coterminous United States

student ethnicity, number of students served, project location, type of project, and type of host institution. All participants in grades 10, 11, or 12 of sampled projects were selected, yielding 3,710 UB participants in the final sample. An average of two high schools providing students to sampled UB project were selected. From a sample of classrooms in these schools, 2,340 nonparticipating comparison students were selected, after stratification on grade level, ethnicity, low-income status, and academic risk.

SFU data were collected in two stages during the 1978-79 academic year. The first stage was a mail survey of eligible sample members during fall and winter, followed by telephone interviews of a subsample of mail nonrespondents. The second stage was a spring mail request of transcripts from PSE institutions last attended by questionnaire respondents. Other data were obtained from base-year and FFU files, a PSE institutional data file, and USOE records. Overall study response rate was 73 percent; effective sample coverage was 88 percent; and 87 percent of the transcript requests were honored. The extent of data indeterminacy and inconsistency was small, and estimated data reliability was acceptable.

Two different approaches to analysis were undertaken, both differing from techniques employed in previous studies. The first was a hypothesis-testing approach, addressing questions of national program impact by comparing outcomes of former UB participant groups with those of a statistically adjusted nonparticipant group. The second approach, which is characterized as relational, was exploratory and more assumption-bound. Modeling techniques were employed to examine selected educational outcomes as related to individual background factors, temporal/contextual factors, and pattern of UB participation.

III. FINDINGS

The findings of the three studies are consistent in suggesting UB program impact on educational aspirations or expectations, PSE progress and persistence. Moreover, the indicated program impact seems to be focused at the transition step between high school completion and postsecondary entry. There was no clear indication of program effect on high school completion, although overall rates are high. Further, progress/persistence, subsequent to entering PSE, reflect the higher rate of entry or the influence of PSE context factors (which differed for program participants and nonparticipants) more than any influence attributable uniquely to UB participation.

Suggested program impact is also related to pattern of former participation in UB. Individuals with typical participation patterns (i.e., participation in grades 11 and 12 or grades 10, 11, and 12) generally exhibited more positive outcomes than those with atypical participation patterns, for whom outcomes more closely resembled the nonparticipant group. An exception involved those participating only in the twelfth grade, for whom outcomes were generally more like those of typical participants than of other atypical participant groups.

The educational progress of typical UB participants and nonparticipants is presented in Figure 1. The values reported are composites from results for those in the twelfth-grade cohort, who were over four years removed from high

school. The values in parentheses between boxes are the conditional rates of advancing to a subsequent educational level, given attainment of a previous level. The values in brackets within boxes are the percentages of the original group attaining each educational level. While neither group exhibits normal educational progress, the greater overall progress of typical participants is primarily attributable to the greater rates at which they enter PSE and to their greater propensity to attend four-year institutions. In general, other differences between these groups in conditional rates of progress are not significant. Similar patterns were observed for the tenth and eleventh grade cohorts, although overall progress was generally less. (Although not shown in Figure 1, within both groups, 10 percent of those who graduated from a four-year institution had entered postgraduate training.)

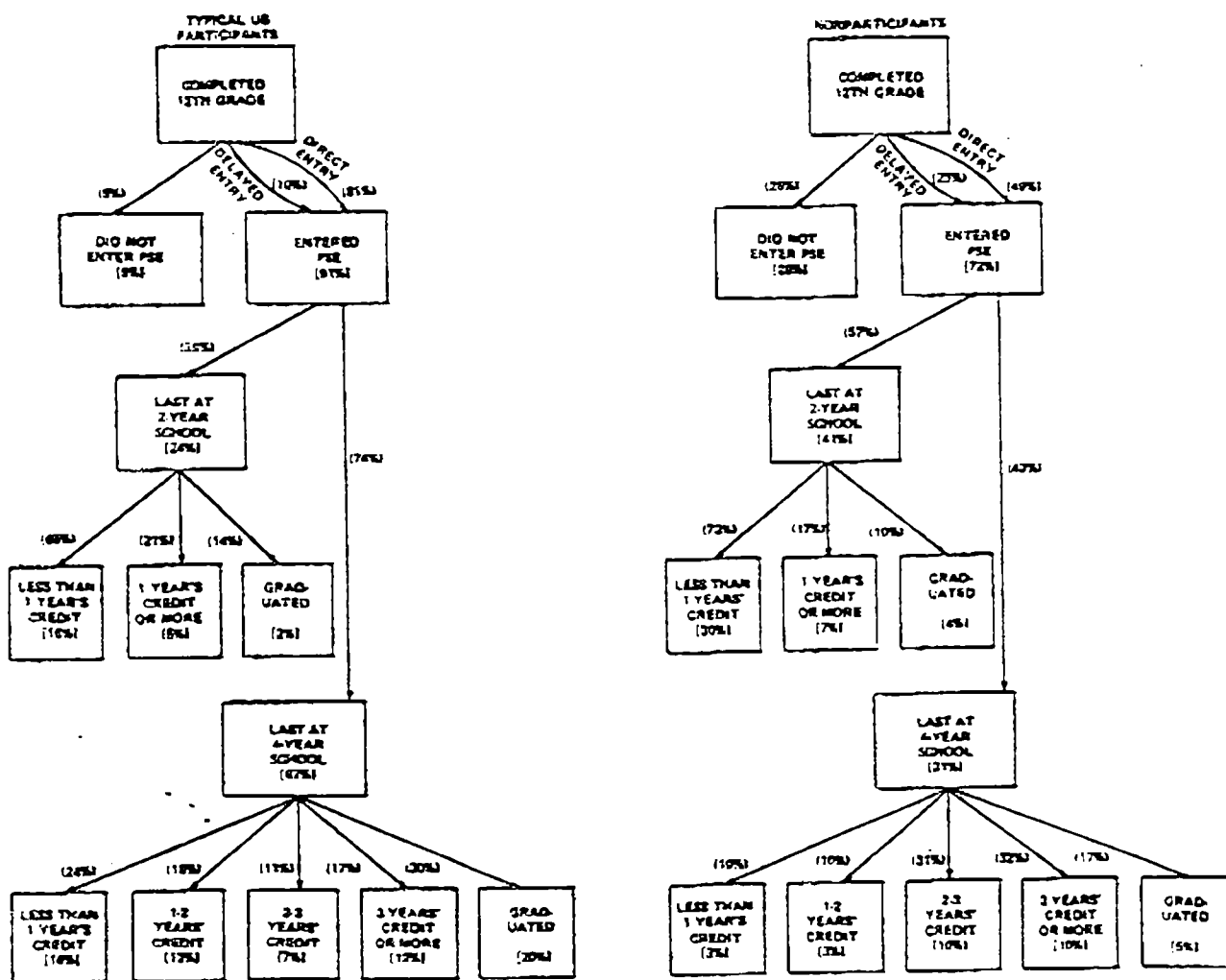


Figure 1. Educational progress of typical UB participants and nonparticipants.

Figure 2 also shows that typical UB participants enter four-year institutions at considerably higher rates than either atypical participants or nonparticipants. Typical participants also show greater attendance at institutions with traditional or predominant ethnic minority student bodies, more selective institutions, and institutions hosting UB and SSDS programs, which is consistent with prior findings.

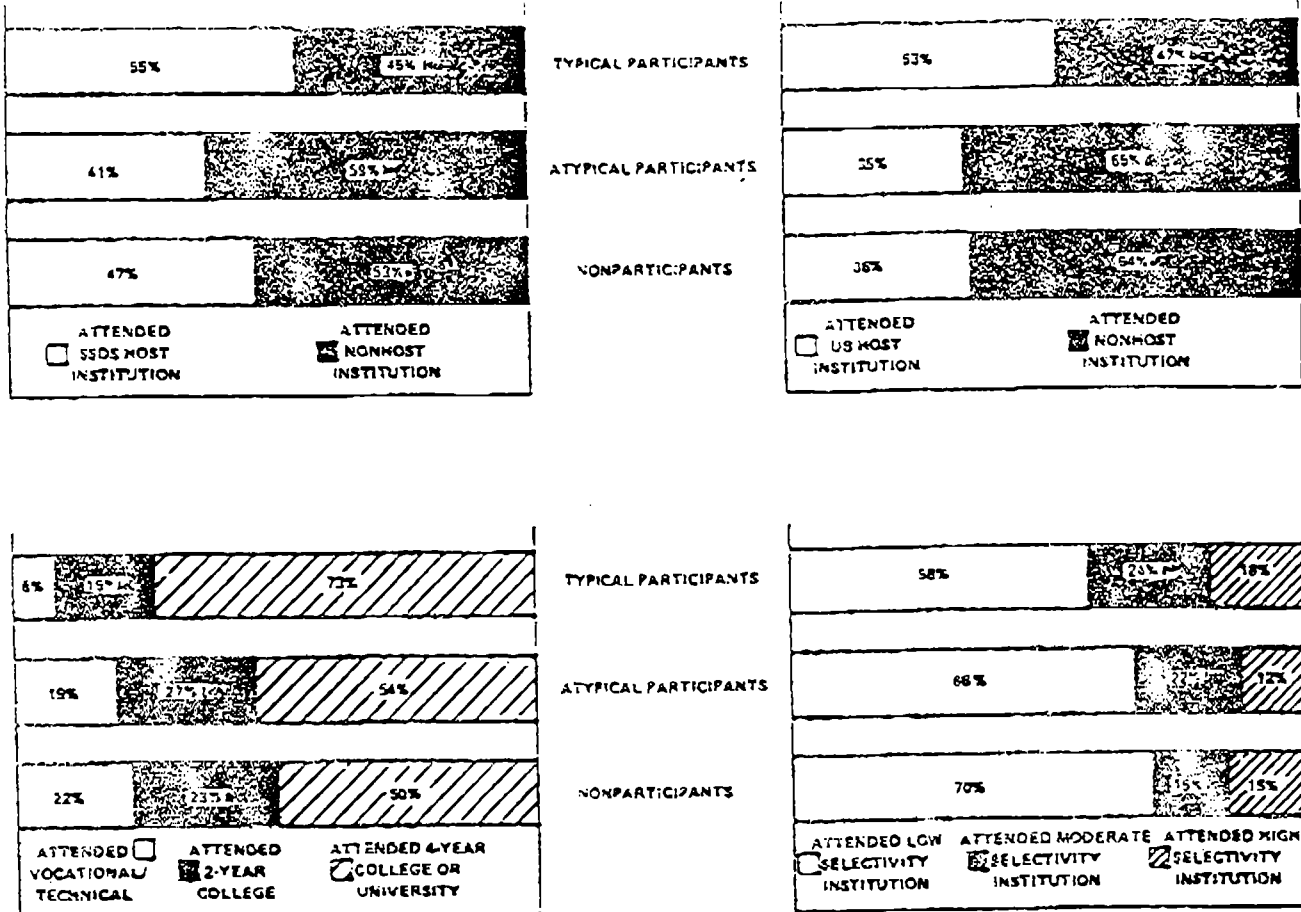


Figure 2. Types of PSE Institutions Attended as Related to Participation Pattern.

Over 80 percent of the typical UB participants aspired to at least a four-year college degree, but less than two-thirds of the atypical participants or nonparticipants reported such aspirations. Over 70 percent of the typical participants expected to complete a four-year program, compared to 60 percent of the atypical participants and 50 percent of the nonparticipants. These differences were principally attributable to greater percentages of typical participants aspiring to and expecting postgraduate study. UB participants also reported experiencing somewhat more difficulty than nonparticipants in obtaining their desired education level, including more problems with poor grades, poor high school preparation, and lack of personal or family finances. Similar results were obtained in the FFU study.

In view of the higher aspirations of typical UB participants, progress was examined relative to educational goals. The goal-related progress of typical participants was also greater than that of either atypical participants or nonparticipants. Within the twelfth-grade cohort typical participants had progressed, on the average, over half way toward their goals, while those in the other two groups showed significantly less progress. Progress toward goal was generally lower for the eleventh and tenth grade cohorts, but the differences between participation pattern groups remained stable. Differences in goal-

related progress were also attributable to the different PSE entry rates and types of institution attended.

No systematic differences were observed between former participants and nonparticipants on measures of PSE persistence. No differences in graduation rates were found within either vocational/technical schools, two-year colleges, or four-year institutions, although differences between different types of schools existed. About 70 percent of those who last attended vocational/technical schools or four-year institutions and about 50 percent of those who last attended two-year colleges were either currently enrolled or had graduated. Less than 20 percent of each participation pattern group reported leaving without graduating and with no intent to return.

Similarly, measures of educational performance showed few differences as a function of UB participation. No systematic differences in rates of being academically dismissed or placed on academic probation were observed as related to either UB participation or kind of school last attended. UB participants had a lower overall grade point average (GPA) than nonparticipants at both vocational/technical schools and four-year institutions, by .6 and .2 respectively. The average GPA for UB participants was about 2.0 (equivalent to a letter grade of C) at both types of schools.

Principal among the other PSE outcomes examined was financial aid. Figure 3 shows the average aid received by typical participants, atypical participants, and nonparticipants during their last year of PSE. Typical participants generally received more aid than atypical participants or nonparticipants, due mainly to receipt of larger grants and scholarships. The figures reported are combined over all types of schools, but the pattern presented was relatively stable across school types. The pattern of financial aid packaging varied somewhat with student class. Freshman and sophomore aid packages contained more grants and scholarships, and the aid packages of UB participants were more heavily weighted in this direction than nonparticipant packages. Aid

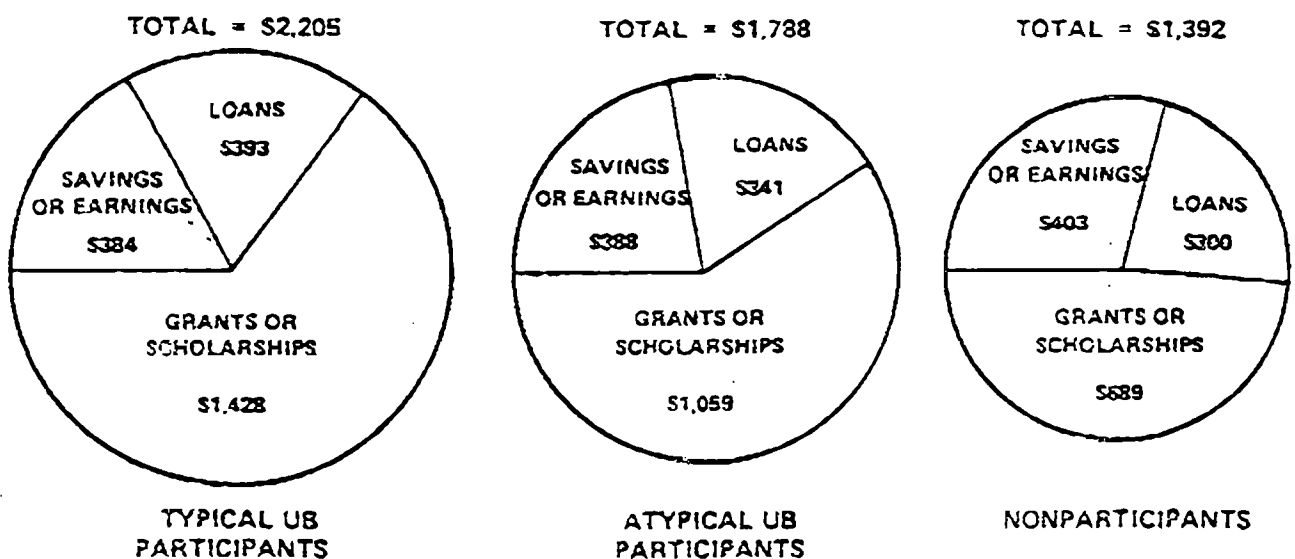


Figure 3. Financial Aid Received as Related to UB Participation Pattern.

packages for juniors and seniors contained more loans, with no difference in the proportional packaging of aid for participants and nonparticipants.

UB participants and nonparticipants also differed in the specific sources of financial aid. Typical participants (79 percent) received Basic Educational Opportunity Grants at higher rates than either atypical participants (70 percent) or nonparticipants (59 percent). Rates of receiving Supplemental Educational Opportunity Grants, National Direct Student Loans, and College Work-Study were also higher for participants (typical and atypical) than nonparticipants.

The greater financial aid received by former UB participants was reflected in a greater perceived adequacy of total financial aid package; however, this difference was only at schools with higher per-student costs. About two-thirds of each group at low-cost schools reported that support from the total aid package was adequate; at high-cost schools, the percentages were 76 and 59 for former participants and nonparticipants, respectively. Former participants reported inadequacy of family contributions at substantially higher rates than nonparticipants at each type of school, which is consistent with other findings.

UB participants also reported greater use of available tutoring services than nonparticipants. Available counseling services were used more frequently by UB participants only within SSDS host institutions. No differences were observed between the groups in use of available remedial services.

The educational model examined in this study is shown in Figure 4. The model posits PSE outcomes as related to UB participation pattern and background characteristics of the individual. Moreover, relational links are assumed between classes of PSE outcomes: context factors (school classification), use of services, financial aid elements, and educational attainment measures. The "effects" of one class of variable on another class are indicated by directional paths. The overall relationship between two classes of variables is decomposed into paths that are direct (a path directly from one variable class to a subsequent class) or indirect (a path from one class of variables, through one or more intermediate classes, to a subsequent class).

In the model examined, all but one of the direct paths (the path labeled 0) represented statistically significant relationships. The major direct and indirect effects of typical UB participation pattern, as compared to nonparticipation, on educational attainment outcomes are shown as darker lines, and the numbers associated with these lines show the magnitude of the direct or indirect effects. Estimated model parameters are well supported by results of the more rigorous hypothesis-testing analyses. The model solution indicates no direct effect of typical UB participation on number of terms in PSE, but an overall increase of over a full term attended through the fact that typical participants attend different types of schools (.89 additional terms), make greater use of support services (.06 additional terms), and receive more financial aid (.13 additional terms). The residual negative direct effect of typical participation on total terms of earned credits is mediated, through indirect effects, to an overall advantage of approximately two-thirds of a term's credit. The residual negative relationship to GPA is also partially offset by indirect effects.

These results should be interpreted with some caution, due to the large number of assumptions made. While the model is convenient in explaining the

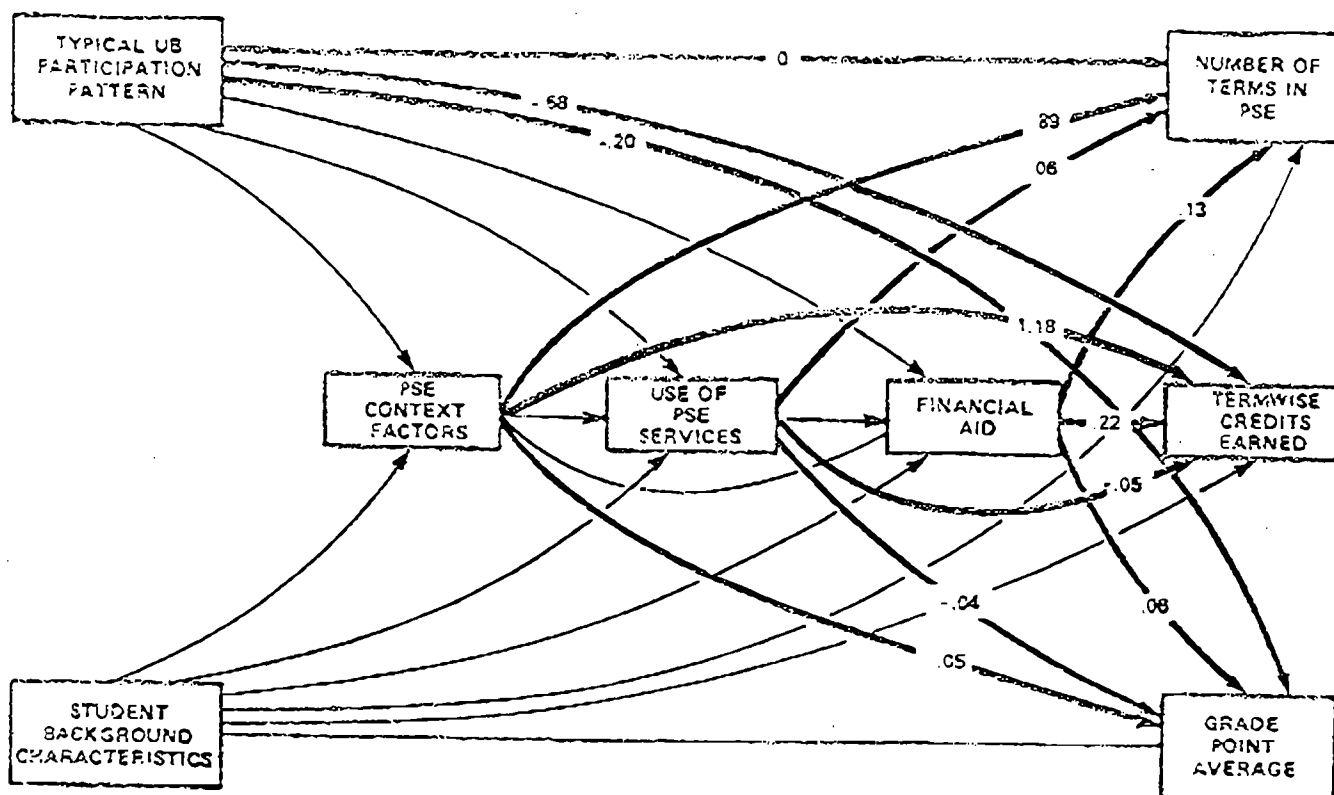


Figure 4. Conceptual Model of Educational Attainment.

data and may be appealing, there is some indication that the model is misspecified. There may be other models that could provide an equally good or better fit for the data. The effects indicated are not in any sense established by the model; rather, they are assumptions of the model.

IV. CONCLUSIONS

The results of this study, in conjunction with those of previous studies, offer rather consistent support for the general conclusion that the UB program is effectively meeting its mandated objective to provide participants with the skills and motivation necessary for entry and success in education beyond high school. Program impact is greatest on short-term outcomes, and evidence that UB is providing the skills, motivation, and assistance necessary for entry into PSE is substantial. While it is less clear that the program also provides the skills and motivation for success in PSE, there are several results to support the contention of an overall positive impact of UB participation on PSE success.

While it is impossible to state definitively that the greater aspirations, expectations, and PSE entry rates of UB participants were brought about (or caused) by their exposure to the program, this appears to be the most likely conclusion. The pattern of results is closely aligned with what would be expected in view of the common areas of program emphases and intervention strategies. The different outcomes for different patterns of program participation are also quite intuitive in light of program operations.

Almost all projects emphasize the importance of postsecondary entry and assist participants in applying for and gaining admission to some postsecondary institution, as well as in obtaining financial aid from that institution. It would be unusual if these efforts were not reflected in greater entry rates of participants and in their securing more attractive financial aid packages during the first years of PSE. Similarly, projects uniformly provide support and counseling to participants toward increasing self-confidence in their abilities and toward raising their educational sights. With these treatments and with the advantage realized in gaining postsecondary entry, greater aspirations and expectations of participants are also not surprising. Greater attendance by participants in four-year institutions, UB host institutions, and SSDS host institutions are also consistent with the implicit program placement emphases.

There is no indication that academic skills accrue in any greater extent by participation in UB, since change in high school GPA was not related to program participation (base year study), and no systematic relationship between UB participation and measures of PSE performance was indicated (SFU study). Given the limited instructional time available to projects, clear-cut impact on academic skills may be an unrealistic expectation. On the other hand, there are other coping or survival skills related to PSE success such as the facility to obtain more attractive and adequate financial aid packages, and the knowledge and use of available support services. The results suggest that such skills have been honed to a greater extent by UB participants.

There is no systematic indication that UB participants progress, persist, or perform any better than comparable nonparticipants, once they are in a specific PSE environment. These results may be somewhat misleading, since nonparticipants represent a group of survivors in the educational system who have not benefitted from the support provided to the former UB participants. Motivational factors related to this survival were not measured and statistical adjustments do not reflect such factors. While the legislative UB program objective clearly focuses on postsecondary success and while PSE progress, persistence, and performance are legitimate criteria for PSE success, projects are not afforded any direct strategies for intervention once a participant leaves the program to enter college. Additional follow-up intervention strategies within the entered PSE institution may be required to provide a sufficient set of conditions for success in PSE. Thus, measures of postsecondary success per se may not be appropriate or reasonable criteria for program evaluation.

Nonetheless, there is considerable evidence that placement of UB participants in particular PSE settings may lead indirectly to an overall advantage over PSE-entering nonparticipants. PSE placement of participants is a legitimate function of the UB program, and the differences in types of schools attended by former participants and nonparticipants suggest that many UB participants have been channeled into educational settings and challenges that they would have bypassed otherwise. Moreover, it is strongly suggested that substantial numbers of former UB participants enter PSE who would not have gone otherwise, and that a substantial percentage of these students will successfully complete a postsecondary program of study. Finally, it is reasonable to assume that, as a result, these young people will obtain better jobs and, in general, lead more productive and satisfying lives. Viewed from this broader perspective, an impact of the UB program is certainly indicated.