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ABSTRACT

A questionnaire survey mailed to all U.S. undergraduate institutions in October 1971 was conducted as part of an evaluation of support service programs for disadvantaged students funded through the Higher Education Amendments of 1968. The inventory contained 14 items that sought summary information about the institution's budget, number of students, percentage of student body disadvantaged (from deprived educational, cultural, or economic background or physically handicapped), Special Service or similar programs (e.g. counseling, tutoring, career guidance, placement), number of involved faculty and staff, nature of programmatic activities, and extent and source of financial support. Of the 2,991 institutions contacted, 59 percent responded. Several procedures were employed to check for biases among respondents. Major findings: About 14 percent of enrolled undergraduates are estimated to be disadvantaged, with considerable variability among percentages in different types of colleges and geographic regions. Half of the institutions reported special support programs, one in three with federal support, one in seven state or local, one in seven institutional, and one in 20 private foundation. Federal funding has been given to those institutions with larger proportions of disadvantaged students. Services provided and their effects depend more on institutional factors than on support program factors. (JT)

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A CENSUS OF SPECIAL SUPPORT PROGRAMS FOR "DISADVANTAGED" STUDENTS IN AMERICAN INSTITUTIONS OF HIGHER EDUCATION, 1971-72

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A CENSUS OF SPECIAL SUPPORT PROGRAMS FOR "DISADVANTAGED" STUDENTS IN AMERICAN INSTITUTIONS OF HIGHER EDUCATION, 1971-72[1]

The Higher Education Amendments of 1968 established a legal basis and funding authorization for the U. S. Office of Education to establish, in institutions of higher education, "Special Services Programs"--counseling, tutoring, career guidance, placement--for enrolling "students with academic potential...who, by reason of deprived educational, cultural, or economic background, or physical handicap, are in need of such services to assist them to initiate, continue, or resume their post-secondary education."

For the academic year 1971-72, the second year of operation, 187 programs or projects involving 206 institutions or organizations were funded through the Division of Student Assistance, USOE, at a cost of approximately $14,925,000 (internal report of the Division of Student Assistance dated October 12, 1971).

In August 1971, Educational Testing Service was contracted to conduct an evaluation study of the impact of these programs. The stated objectives of the study were "to provide an assessment of the broad need for special services for disadvantaged students in institutions of higher education, develop an information base for use in future evaluation activities, and provide useful program management information to the Division of Special Student Services."

A basic and initial step in the study was an inventory of supporting programs concerned with the disadvantaged--whether Special Services Programs

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[1] This is a special report of a questionnaire survey mailed to 2,991 institutions of higher education in October 1971, as a part of an evaluation of support service programs for disadvantaged students, conducted by Educational Testing Service for the U. S. Office of Education under Contract No. OEC-0-72-0116.

or not--at all U. S. undergraduate institutions of higher education. To accomplish this task, a brief questionnaire was developed. The questionnaire contained 14 items that sought summary information about the institution's budget, number of students, percentage of student body disadvantaged, Special Services or similar programs, number of involved faculty and staff, nature of programmatic activities, and extent and source of financial support. This questionnaire was to be directed to all institutions of higher education in the United States, to provide a 1971-72 census of the kinds of programs and numbers of students served. A copy of the questionnaire is shown in Appendix A of this report.

A. Procedures, Response, and Limitations

1. Description of the Population and the Respondents

The all-institution census was mailed to 2,991 institutions of higher education in late October 1971. After intensive and vigorous follow-up of nonresponding institutions (by letter on December 10, 1971 and by mailgram on January 21, 1972--see Appendix B), responses were received (by March 15, 1972) from 1,766 (or 59%) of the institutions polled.[2] Institutions responding by telephone were polled by phone where possible, using the form shown in Appendix C.

Unfortunately, the 1,766 census forms returned by March 15 were not of uniform quality. For this reason, returned forms were categorized into six major categories: (1) No information provided due to inclusion of

[2] Vigorous follow-up of nonresponding SSDS institutions continued through September 1972, with final effort phone calls made by a research team member working out of USOE. By November 16, 1972, all but 11 of the SSDS institutions had responded.

institutional information in census completed by parent institution; (2) No information provided due to the fact that the institution was closed or closing; (3) No information provided except notation that institution had no programs for the disadvantaged; (4) Data provided was conflicting (e.g., more money spent on programs for the disadvantaged than entire institutional budget); (5) Many census items incomplete or not answered; and (6) Relatively complete census forms with credible data. The return rate by this qualitative category of returned questionnaires is given in Table 1. From the table it can be seen that usable data were available from only 1,498 institutions (85% of all returned forms and slightly more than 50% of the original 2,991 institutions). Complete data were obtained from only 39% of the 2,991 original institutions.

Table 1

Response Rates for Institutional Census

Category of Response	Frequency	Percent of All Institutions	Percent of Responding Institutions
1. No information (Provided by parent institution)	35	1.2	2.0
2. No information (Closed or closing)	29	1.0	1.6
3. No information (No programs)	204	6.8	11.6
4. Conflicting information	99	3.3	5.6
5. Considerable missing data	232	7.8	13.1
6. Relatively complete	1,167	39.0	66.1
Total	1,766	59.1	100.0

The return rate was, on the whole, lower than hoped for. This, of course, may have been a function of several factors, such as the ready availability of the information requested or the attitude of some college administrators to surveys in general and/or to the special subject of this survey.

2. Biases in Sample of Institutions Returning Census Forms

In any survey study where the rate of return is not 100%, there is bias due to the self-selective nature of such a sample. It is possible, however, that the sample may have been reasonably representative on some set of variables considered critical in terms of the study; or, if they were not, one may have been able to determine the nature of the bias and any implications as to how such biases may have affected the findings. Two avenues were available by which to examine such biases in the sample of institutions returning the census form.

The first avenue was the comparison of responding institutions with nonresponding institutions on such matters of record as: (a) region in which institution is located, (b) status of participation of institution in the federal SSDS program, (c) institutional control, (d) predominant racial makeup of student body, (e) highest offering of institution, and (f) accreditation of institution. The second avenue was the drawing of a sample of nonrespondents, obtaining the critical information by telephone, and comparing that group with the respondents.

Comparison of respondents and nonrespondents on facts of record. Tables 2 through 7 show the distribution of responding institutions in terms of these factors as compared to the population distribution;

Table 2

Response Rate of Institutions by USOE Regions[a]

Region	Number Responding	Response Rate	Percent in Sample	Percent in Population
1	60	.600	3.4	3.3
2	150	.534	8.5	9.4
3	193	.607	10.9	10.6
4	210	.590	11.9	11.9
5	332	.605	18.8	18.4
6	321	.575	18.2	18.7
7	144	.578	8.2	8.3
8	149	.693	8.4	7.2
9	67	.650	3.8	3.4
10	139	.535	7.9	8.7

Total schools classified = 2,989.[b]

$\chi^2 = 7.989$ with 9 df, $p > .05$

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[a]See Appendix D for USOE regions.

[b]The total in Tables 2-7 will not always be 2,991 due to (1) inability to classify institution a priori and/or (2) data transformation errors.

Table 3

Response Rate of Institutions by Degree of Past Participation in SSDS Program

Degree of Participation	Number Responding	Response Rate	Percent in Sample	Percent in Population
Funded, past or present	141	.678	8.0	7.0
Applied but never funded	356	.672	20.2	17.7
Never applied	1,268	.563	71.8	75.3

Total schools classified = 2,990.

$\chi^2 = 11.485$ with 2 df, $p < .005$.

Table 4

Response Rate of Institutions by Institutional Control

Type of Control	Number Responding	Response Rate	Percent in Sample	Percent in Population
Federal, state or local	829	.630	50.4	49.6
Private nonchurch related	443	.612	26.9	27.3
Private church related	373	.607	22.7	23.2

Total institutions classified = 2,655.

χ^2 = .4673 with 2 df, $p > .05$

Table 5

Response Rate of Institutions by Predominant Student Racial Makeup

Predominant Race	Number Responding	Response Rate	Percent in Sample	Percent in Population
White	1,561	.624	95.4	94.5
Black or other ethnic group	75	.514	4.6	5.5

Total schools classified = 2,647.

$\chi^2 = 2.548^a$ with 1 df, $p > .05$

[a]Corrected.

Table 6

Response Rate of Institutions by Highest Offering

Highest Offering	Number Responding	Response Rate	Percent in Sample	Percent in Population
Less than 4 years	575	.537	35.1	40.4
4-5 year program	513	.660	31.3	29.4
First professional degree or masters program	351	.678	21.4	19.6
Doctoral program	198	.702	12.1	10.7

Total institutions classified = 2,647.

$\chi^2 = 19.689$ with 3 df, $p < .001$

Table 7

Response Rate of Institutions by Accreditation

Accreditation	Number Responding	Response Rate	Percent in Sample	Percent in Population
Accredited	1,372	.642	84.1	81.3
Not accredited	259	.527	15.9	18.7

Total institutions classified = 2,628.

$\chi^2 = 8.256^a$ with 1 df, $p < .005$

[a]Corrected.

additionally, the tables give a chi-square value computed to test the assumption that the responding institutions could be considered as a random sample from the population (i.e., if the bias introduced in terms of these factors is greater than one that could be expected by chance as a result of random sampling). As can be seen from the tables, the responding sample of institutions was not biased (or no more biased than one would expect in a random sample) in terms of region (instead of arbitrary geographical regions, USOE regions, which reflect geography, were used), institutional control, or predominant student racial makeup. The responding institutions were, however, a biased sample in terms of degree of involvement in federal SSDS programs, highest degree offering, and accreditation.

Institutions that had participated (either in terms of having a funded program or having applied for one) in the federal program were overrepresented in the sample, and those institutions that had never applied for such programs were underrepresented. While it may be argued that one reason for this difference is that institutions currently funded for such programs felt implicit pressures to respond, this supposition is not supported by the data (note that the response rate for such institutions is almost exactly the same as for those institutions that had applied for funding but had been turned down). A more reasonable explanation for this disparity in the response rate is related to whether or not an institution did or did not have special programs for the disadvantaged. A personal communication to one member of the research team from a dean of a large state university, prohibited by state law

from developing "special programs," indicated that the institution did not respond due to the fact that it did not want to "look bad" in comparison to comparable institutions in the study not so hampered by law. Other letters and phone calls from institutions that ultimately did not return the census form substantiated this assumption to some degree. Since institutions that applied for SSDS funds have typically been found to have extant programs for the disadvantaged or assumed to have some real interest in developing such programs, it is reasonable to assume that, of those schools which have applied for such funds, the proportion having extant programs would be greater than the proportion within the subset of institutions never having applied for such funds. If, in addition, our hypothesis that response probability is positively related to having a program on campus, then the disparity in response rates is quite reasonable. Further, this type of disparity is not particularly critical to the study for most critical questions asked of the data, in that under our supposition the bias in the sample is in the direction of including a greater proportion of institutions with special programs. A linear projection of what the total national programs must be, from the sample, would provide overestimates.

Of more potential importance to the study, however, is the fact that the responding sample was biased in terms of highest degree offering; the bias is in the direction of greater representation with higher degree offering. This, of course, means that the community colleges and technical institutes are underrepresented. Since prior studies have indicated (and as this census indicates as seen below) that such institutions have

much higher proportions of disadvantaged students, these two facts taken together suggest that programmatic efforts at two-year institutions, which serve the majority of disadvantaged students, are underrepresented.

Finally, the sample is biased towards an overrepresentation of accredited institutions and an underrepresentation of nonaccredited institutions. While this bias is less critical than the previous one, if for no other reasons than the low base rate in the population and the tendency for nonaccredited institutions to be relatively new, it is possible that some very innovative programs for disadvantaged students have been missed due to this bias (some of the newer, nonaccredited institutions may have demonstrated considerable innovation in the operation of such programs).

3. The Comparison of Respondents with a Sample of Nonrespondents on Survey Data

The second method available for testing for possible biases in the sample of institutions returning the census forms is a comparison of those institutions responding naturally with those institutions surveyed by telephone.[3] Two critical variables for possible comparisons are: (1) the proportion of disadvantaged students on campus; and (2) the degree to which these students are served by the institution, as reflected in numbers of disadvantaged graduating and in numbers of disadvantaged continuing for graduate education.

A word of caution regarding these comparisons should be mentioned at this point. If appropriate officials at all of the 200 institutions had been contacted by telephone, if additionally, all those contacted could

[3]The form used for collecting data by phone from nonresponding institutions is given in Appendix C.

have given all appropriate information, and if all institutions returning census forms had provided all appropriate information, then a comparison between the sample of institutions returning census forms and those contacted by telephone would have provided a true test of possible sample bias. Unfortunately, none of the conditions for such a true test were met. As noted previously, since appropriate officials, in many instances, could not be contacted by the telephone interviewers, a bias was introduced in the telephone returns. Further, as can be seen in the following tables, not all officials contacted could (or would) give the requested information. Finally, as noted previously, returned census forms varied markedly in terms of completeness. With these limitations in mind, the results of the comparisons are presented.

Proportions of disadvantaged on campus at the institutions responding to the telephone survey are given in Table 8. This table provides an additional breakdown of the institutions by their participation in SSDS programs. As noted previously, this survey was in fact a stratified sampling of nonresponding institutions--stratified by SSDS participation--and any comparisons made should be made within SSDS participation category. A chi-square test for homogeneity of proportion of disadvantaged students on campus between the two groups of institutions (those returning the census form and those responding to the telephone survey) that were participating in SSDS programs showed no significant differences ($\chi^2 = 6.68$, $df = 6$). Likewise, for those institutions not participating in SSDS programs, a similar analysis showed no significant differences ($\chi^2 = 6.33$, $df = 6$).

Table 8

Estimate of Current Undergraduates
from Families with Annual Income Less Than $4,000
or National Poverty Criterion--Nonrespondent Sample

Category of Response	SSDS Institution (N = 46)[a]		Non-SSDS Institution (N = 88)[b]		Total	
	Frequency	Percent[c]	Frequency	Percent[c]	Frequency	Percent[c]
No information provided	6		13		19	
0-5%	2	5.0	28	37.3	30	26.1
6-10%	5	12.5	12	16.0	17	14.8
11-15%	5	12.5	9	12.0	14	12.2
16-20%	5	12.5	4	5.3	9	7.8
21-25%	2	5.0	6	8.0	8	7.0
26-50%	8	20.0	13	17.3	21	18.3
51% or more	13	32.5	3	4.0	16	13.9

[a]Response rate of 45.5%.

[b]Response rate of 88.9%.

[c]Data given as a percentage of institutions providing information.

The proportions of entering disadvantaged students who graduate, at the institutions surveyed by telephone, are given in Table 9. Comparisons of the responses of these institutions with those of institutions responding to the census show that responses are homogeneous in the two sets of institutions not participating in SSDS programs ($\chi^2 = 1.48$, df = 3); however, in SSDS participating institutions, a significant difference in responses is noted ($\chi^2 = 14.22$, df = 3, $p < .005$). The direction of this discrepancy

is toward greater numbers of admitted disadvantaged graduating in the SSDS participating institutions surveyed by telephone than in those SSDS participating institutions responding to the census, if telephone report is equally as credible as written report.

Table 9

Disadvantaged Students Entering the Institution Who Graduate--Nonrespondent Sample

Category of Response	SSDS Institution (N = 46)[a]		Non-SSDS Institution (N = 88)[b]		Total	
	Frequency	Percent[c]	Frequency	Percent[c]	Frequency	Percent[c]
No information provided	14		42		56	
0-24%	3	9.3	6	13.0	9	11.5
25-49%	4	12.5	10	21.7	14	18.0
50-74%	12	37.5	20	43.5	32	41.0
75-100%	13	40.6	10	21.7	23	29.5

[a]Response rate of 45.5%.

[b]Response rate of 88.9%.

[c]Data given as a percentage of institutions providing information.

The proportions of entering disadvantaged students who continue for graduate training at those institutions surveyed by telephone are given in Table 10. These responses did not differ significantly from the responses of institutions returning census data for either the nonparticipating institutions ($\chi^2 = 1.85$, df = 2) or the SSDS institutions ($\chi^2 = .20$, df = 2).

Table 10

Disadvantaged Students Entering the Institution
Who Go on to Graduate School--Nonrespondent Sample

Category of Response	SSDS Institution (N = 46)[a]		Non-SSDS Institution (N = 88)[b]		Total	
	Frequency	Percent[c]	Frequency	Percent[c]	Frequency	Percent[c]
No information provided	21		67		88	
0-5%	9	36.0	9	42.9	8	39.1
6-15%	7	28.0	4	19.0	11	23.9
16-100%	9	36.0	8	38.1	17	37.0

[a]Response rate of 45.5%.

[b]Response rate of 88.9%.

[c]Data given as a percentage of institutions providing information.

Thus, for purposes of describing biases in the sample of institutions responding to the census on those variables testable through the telephone survey results, the additional bias that emerged was that SSDS participating institutions in the sample may have been overrepresentative of institutions that had less success in graduating disadvantaged students that were admitted. Lower proportions of admitted students who graduate may indicate lack of program success or may only reflect less selectivity in admission. Any further implications as to the meaning of this sampling bias would, however, be highly speculative.

4. Summary of Kinds of Biases Detected in the Responding Sample

In summary, with regard to the identification of biases in the sample, and their impact on generalizations therefrom, responding institutions did not appear to be different from the total population of institutions with regard to USOE region in which located, institutional control (public, private, church related), or predominant race of student body. On the other hand, the sample was biased with regard to participation in SSDS (funded, or applied--never funded, were overrepresented in the sample) and highest degree offering (sample underrepresented two-year colleges, overrepresented four-year colleges, colleges with first professional degree or masters program, and universities with doctoral programs), and accreditation (non-accredited colleges were underrepresented). The most important biases for the present purposes would seem to be that institutions with special programs for disadvantaged students may have been overrepresented and two-year institutions (where proportions of disadvantaged students may be greater) were underrepresented. Extensions to a national picture from the sample data may have overestimated federally supported programs, but have given lenient estimates of the numbers of disadvantaged undergraduates.

Unfortunately, in spite of the time and expense devoted to the follow-up of nonresponding SSDS institutions and the random sample of nonresponding, non-SSDS institutions, the incompleteness of the information made this a thoroughly unsatisfactory source of detecting bias. Nevertheless, some speculations may be derived from the exercise.

It was noted in the preceding discussion of information presented in Table 8 that there were no significant differences between follow-up SSDS

and responding SSDS institutions (or between non-SSDS follow-up and responding institutions) in the distribution of proportion of undergraduates estimated to be disadvantaged.

Inspection of the frequencies in the various categories for the non-SSDS follow-up vs. responding institutions (data provided elsewhere in this report) shows not only the absence of statistically significant differences, but also virtually identical proportions throughout the range. For the SSDS institutions, the proportions can be compared by the figures in the first columns of Table 8, above, and Table 19, in the following section.

Although the numbers in the follow-up or nonresponding sample are small and the distributions are not significantly different, it is interesting to note the smaller proportion of institutions in the nonresponding sample with from 0-5% disadvantaged (5% as compared to 17% for census respondents), and the larger proportion with 51% or more disadvantaged (33% as compared to 19% for census respondents). This hints at the possibility that the study sample may have had more SSDS institutions with less than 5% disadvantaged--probably the more affluent institutions where disadvantaged have a token foothold--and may have had fewer institutions where the majority of students are disadvantaged. It was also noted that for SSDS institutions, nonresponding ones tended to report a significantly larger proportion of disadvantaged students graduating, but not a different proportion entering graduate study. Again, the suggestion is that the study sample may have provided underestimates of the numbers of disadvantaged in college. But also, kind and extent of programmatic attention on campuses with the majority of the disadvantaged

students may also have been obscured. A possible explanation, though, comes from the comments several nonresponding presidents made to the effect that all programs at the institution were special services of one kind or another, and it was difficult to know where, if anywhere, a line could be drawn.

A final possible bias may be inferred from the situation rather than the data. With the survey and rather vigorous follow-up attempts directed to the presidents of the institutions, and with some data of record requested, those institutions with presidents who had difficulty attending to their in-baskets or those with record keeping problems are surely underrepresented. Whether this would affect the sample data, and, if so, how, is hard to determine.

B. Findings

1. The Census of Disadvantaged Students in Higher Education

The proportion of financially disadvantaged students enrolled at those institutions responding to the census is given in Table 11. From this table, it can be seen that although about one-third of the institutions report 0-5% and about one-fifth report 6-10%, almost 50% of the institutions report they enroll 11% or more financially disadvantaged undergraduates, suggesting that the number of financially disadvantaged students in the college undergraduate population is substantial. Using the mid-point of the intervals in Table 11 and correcting for size of institution, it can be determined that of those institutions responding, 14% of the undergraduate enrollment is financially disadvantaged. Because of the nature of the survey, and the difficulties of the institutions in ascertaining the number of undergraduates from within the poverty classification, these estimates may be high.

Table 11

Level of Poverty of Student Body for Sample Institutions

Percent of Student Body Meeting Poverty Criteria	Number of Institutions	Percent within Total Sample	Adjusted Percent[a]
0-5%	422	28.2	32.2
6-10%	293	19.6	22.3
11-15%	169	11.3	12.9
16-20%	113	7.5	8.6
21-25%	88	5.9	6.7
26-50%	148	9.9	11.3
51% or more	79	5.3	5.9
No response	186	12.4	
Total	1,498	100	100

[a]Percentage of responding institutions providing information on this question.

2. Distribution of Disadvantaged by USOE Region

A natural question to ask of the data at this point would be: What, if any, differences exist among the institutions in the study in the proportion of disadvantaged undergraduates enrolled? Table 12 shows a cross-tabulation of institutional proportion of undergraduates who are disadvantaged by USOE region of institutions. Within this contingency table, a chi-square test for homogeneity of percent of disadvantaged students within USOE region indicated a highly significant difference. It can be seen from the table that institutions within USOE region 6 (Louisiana, Arkansas, Oklahoma, Texas, and New Mexico) and those within USOE region 4

Table 12

Proportion of Disadvantaged Undergraduates Enrolled by USOE Region

Percent of Disadvantaged Students		USOE Region: USOE uses a more condensed grouping that could simplify this table										Row Total/ Percent
		1	2	3	4	5	6	7	8	9	10	
0-5%	Frequency	60	54	57	55	85	16	36	9	33	17	422
	Row Percent	14.2	12.8	13.5	13.0	20.1	3.8	8.5	2.1	7.8	4.0	32.2
	Column Percent	54.1	38.0	39.0	21.9	35.6	15.2	33.0	17.0	30.3	36.2	
6-10%	Frequency	27	36	32	42	60	18	25	15	28	10	293
	Row Percent	9.2	12.3	10.9	14.3	20.5	6.1	8.5	5.1	9.6	3.4	22.3
	Column Percent	24.3	25.4	21.9	16.7	25.1	17.1	22.9	28.3	25.7	21.3	
11-15%	Frequency	9	20	21	36	40	10	14	4	8	7	169
	Row Percent	5.3	11.8	12.4	21.3	23.7	5.9	8.3	2.4	4.7	4.1	12.9
	Column Percent	8.1	14.1	14.4	14.3	16.7	9.5	12.8	7.5	7.3	14.9	
16-20%	Frequency	8	10	9	17	24	7	13	7	15	3	113
	Row Percent	7.1	8.8	8.0	15.0	21.2	6.2	11.5	6.2	13.3	2.7	8.6
	Column Percent	7.2	7.0	6.2	6.8	10.0	6.7	11.9	13.2	13.8	6.4	
21-25%	Frequency	2	8	7	20	13	10	5	7	11	5	88
	Row Percent	2.3	9.1	8.0	22.7	14.8	11.4	5.7	8.0	12.5	5.7	6.7
	Column Percent	1.8	5.6	4.8	8.0	5.4	9.5	4.6	13.2	10.1	10.6	
26-50%	Frequency	4	7	17	37	12	34	12	9	11	5	148
	Row Percent	2.7	4.7	11.5	25.0	8.1	23.0	8.1	6.1	7.4	3.4	11.3
	Column Percent	3.6	4.9	11.6	14.7	5.0	32.4	11.0	17.0	10.1	10.6	
51% or more	Frequency	1	7	3	44	5	10	4	2	3	0	79
	Row Percent	1.3	8.9	3.8	55.7	6.3	12.7	5.1	2.5	3.8	0.0	6.0
	Column Percent	0.9	4.9	2.1	17.5	2.1	9.5	3.7	3.8	2.8	0.0	
Column Total		111	142	146	251	239	105	109	53	109	47	1312
Percent		8.5	10.8	11.1	19.1	18.2	8.0	8.3	4.0	8.3	3.6	100.0

$\chi^2 = 299.08$ with 54 df, $p < .001$

(Kentucky, Tennessee, North Carolina, South Carolina, Alabama, Georgia, Mississippi, and Florida) tend to enroll greater proportions of disadvantaged students than the other regions.

Region 4, with 19% of the institutions in the total sample, has 56% of all institutions reporting 51% or more disadvantaged students; although 6% of the institutions in the total sample report 51% or more disadvantaged students, Region 4 has 18% of its institutions in this category. Region 6 has 32% of its institutions reporting 26-50% disadvantaged (against 11% of all institutions reporting in the 26-50% range) and another 10% of the Region 6 institutions report 51% or more disadvantaged students.

At the other extreme, more than half (54%) of the institutions in Region 1 (the New England states) report only 0-5% disadvantaged (the all-respondent average is 32%). Only one Region 1 institution, of 111, reported 51% or more disadvantaged.

It is interesting to note that Region 9, with California in addition to Nevada, Arizona and Hawaii, has relatively few institutions--only 3 of the 109 reporting--with estimates of 51% or more disadvantaged. If the estimates provided by the institutions have any credibility, the data suggest that per-capita income within the region is a stronger factor in inflating the proportions of disadvantaged in college than the provision of a state-wide open-door system. Also, as will be seen in other data to be presented, traditionally black institutions, found in frequent number in the Southeast, report high proportions of disadvantaged.

3. Institutional Factors Related to Proportion of Disadvantaged Students

As would be expected, institutional selectivity is a factor in the proportion of disadvantaged undergraduates enrolled. This is supported by the data presented in Table 13, which shows a cross-tabulation of institutional selectivity by percentage of disadvantaged students enrolled. The chi-square test for homogeneity within selectivity categories is highly significant, with proportion of disadvantaged students enrolled being an inverse function of selectivity of the institution, as can be observed from the table. Of the High Selectivity Institutions, 53% enroll 5% or fewer disadvantaged. This finding is not particularly surprising given the well-documented relationship between socioeconomic status and admissions tests or achievement in secondary school. Also, there is probably a moderate positive relationship between selectivity and costs to student, another factor that would depress the proportion of disadvantaged in selective institutions. Finally, selectivity, however justified, is a form of elitism that may set up other subtle barriers to the very poor.

Another factor that seems to be related to the proportion of financially disadvantaged undergraduates enrolled in an institution is institutional control. Table 14 consists of a contingency table with percent of disadvantaged students enrolled cross-tabulated with type of institutional control. For purposes of this paper public institutions are institutions controlled by the federal government, by the various states or territories or by city or county government units; privately controlled institutions are subdivided into those that are church related and those

Table 13[a]

Proportion of Disadvantaged Undergraduates Enrolled by Selectivity of Institution

Percent of Disadvantaged Students		Selectivity of Institution: Low Selectivity	Moderately Low Selectivity	Moderately High Selectivity	High Selectivity	Row Total/ Percent
0 - 5%	Frequency	77	63	200	78	418
	Row Percent	18.4	15.1	47.9	18.7	32.2
	Column Percent	17.7	27.5	41.2	53.4	
6 - 10%	Frequency	83	54	111	42	290
	Row Percent	28.6	18.6	38.3	14.5	22.4
	Column Percent	19.0	23.6	22.8	28.8	
11 - 15%	Frequency	55	35	72	7	169
	Row Percent	32.5	20.7	42.6	4.1	13.0
	Column Percent	12.6	15.3	14.8	4.8	
16 - 20%	Frequency	46	22	34	6	108
	Row Percent	42.6	20.4	31.5	5.6	8.3
	Column Percent	10.6	9.6	7.0	4.1	
21 - 25%	Frequency	53	14	15	6	88
	Row Percent	60.2	15.9	17.1	6.8	6.8
	Column Percent	12.2	6.1	3.1	4.1	
26 - 50%	Frequency	87	22	30	6	145
	Row Percent	60.0	15.2	20.7	4.1	11.2
	Column Percent	20.0	9.6	6.2	4.1	
51% or more	Frequency	35	19	24	1	79
	Row Percent	44.3	24.0	30.4	1.3	6.1
	Column Percent	8.0	8.3	4.9	0.7	
Column Total		436	229	486	146	1297
Percent		33.6	17.7	37.5	11.3	100.0

$\chi^2 = 175.22$ with 18 df, $p < .001$

[a]See explanatory notes on following page.

Explanatory Notes for Interpretation of Table 13

1. Selectivity refers to a scale value derived from the reported data and is explained in detail in Appendix D (pp. D4-D5). Low selectivity generally means that the institution is either completely open-door or requires only high school graduation. Moderately low generally means some selection in terms of high school grades, but with requirements of top 1/2 of class or less. Moderately high selectivity institutions generally are those having minimum requirements of top 1/3 of high school class and/or use of admissions test for some, but not all, applicants, while high selectivity institutions are generally those reporting minimum requirements for admission as standing in top 1/4 of class or higher and admission test scores required for some or all applicants.

2. The total number of institutions on which this table is based, or 1,297, shrinks from the number of 1,312 previously reported as providing proportion of disadvantaged, due to failure of some institutions to provide selectivity data. Shrinkage from similar causes will show on subsequent cross-tabular data presented in this report.

Table 14

Proportion of Disadvantaged Undergraduates Enrolled by Institutional Control

Percent of Disadvantaged Students		Type of Control: Public	Private	Church-Related	Row Total/ Percent
0-5%	Frequency	119	154	134	407
	Row Percent	29.2	37.8	32.9	32.5
	Column Percent	18.0	58.3	40.6	
6-10%	Frequency	156	53	75	284
	Row Percent	54.9	18.7	26.4	22.6
	Column Percent	23.6	20.1	22.7	
11-15%	Frequency	93	26	49	168
	Row Percent	55.4	15.5	29.2	13.4
	Column Percent	14.1	9.8	14.8	
16-20%	Frequency	86	9	16	111
	Row Percent	77.5	8.1	14.4	8.9
	Column Percent	13.0	3.4	4.8	
21-25%	Frequency	61	3	12	76
	Row Percent	80.3	3.9	15.8	6.1
	Column Percent	9.2	1.1	3.6	
26-50%	Frequency	106	9	22	137
	Row Percent	77.4	6.6	16.1	10.9
	Column Percent	16.1	3.4	6.7	
51% or more	Frequency	39	10	22	71
	Row Percent	54.9	14.1	31.0	5.7
	Column Percent	5.9	3.8	6.7	
Column Total		660	264	330	1254
Percent		52.6	21.1	26.3	100.0

$\chi^2 = 197.81$ with 12 df, $p < .001$

that are not church related. As can be seen from Table 14, public institutions tend to enroll greater proportions of disadvantaged students than do private institutions. Within private institutions, those that are church related tend to enroll greater proportions of disadvantaged students than those that are not church related. For example, though 4% of the private institutions enroll 51% or more disadvantaged, these represent only 14% of all institutions enrolling 51% or more disadvantaged. The church-related account for another 31% of the 51% plus institutions, and the public for the remaining 55%. This relationship can be explained to some extent by a confounding of type of control with selectivity of institution; however, when selectivity of institution was controlled, basically the same enrollment pattern as seen in Table 14 was observed at each of the various levels of selectivity, although the strength of the relationship was not as great.

Another institutional factor related to the proportion of disadvantaged undergraduates enrolled is the highest degree offering of the institution, as shown in Table 15. The chi-square test for homogeneity of percent of disadvantaged students enrolled within each specific offering group indicates a highly significant difference. As indicated in Table 15, considerably larger proportions of disadvantaged students are enrolled at two-year institutions than at institutions offering four-year programs or more. Those institutions offering higher degrees tend to enroll greater proportions of disadvantaged undergraduates than do those institutions offering only the baccalaureate degree. As may be expected, selectivity is confounded with highest degree offering; and while the same basic enrollment pattern as exhibited in Table 15 is evident when selectivity is

Table 15

Proportion of Disadvantaged Undergraduates Enrolled by Highest Offering of Institution

Percent of Disadvantaged Students		Highest Offering: 2 Year	4-5 Year Undergraduate Degree	Masters Degree or Higher	Row Total/ Percent
0-5%	Frequency	81	164	158	403
	Row Percent	20.1	40.7	39.2	32.3
	Column Percent	18.1	43.4	37.3	
6-10%	Frequency	92	86	106	284
	Row Percent	32.4	30.3	37.3	22.7
	Column Percent	20.6	22.8	25.0	
11-15%	Frequency	63	44	60	167
	Row Percent	37.7	26.3	35.9	13.4
	Column Percent	14.1	11.6	14.2	
16-20%	Frequency	53	26	32	111
	Row Percent	47.7	23.4	28.8	8.9
	Column Percent	11.9	6.9	7.5	
21-25%	Frequency	48	10	18	76
	Row Percent	63.2	13.2	23.7	6.1
	Column Percent	10.7	2.6	4.2	
26-50%	Frequency	80	28	29	137
	Row Percent	58.4	20.4	21.2	11.0
	Column Percent	17.9	7.4	6.8	
51% or more	Frequency	30	20	21	71
	Row Percent	42.3	28.2	29.6	5.7
	Column Percent	6.7	5.3	5.0	
Column Total		447	378	424	1249
Percent		35.8	30.3	33.9	100.0

$\chi^2 = 113.05$ with 12 df, $p < .001$

controlled, the relationships do not approach statistical significance at any specified level of selectivity.

As would be expected, the predominant ethnicity of the student population of an institution is highly related to the proportion of disadvantaged undergraduates enrolled. This relationship is depicted in Table 16. Institutions with predominantly white student bodies enroll considerably smaller percentages of financially disadvantaged students than those institutions whose student body is predominantly of some other ethnic group (these are, for the most part, the traditionally black institutions, or the "new" black institutions). This particular relationship would be expected, if for no other reason than the fact that the predominance of financial disadvantagement is disproportionately large in the black, Chicano, and native American subgroups. Selectivity does not appear to be a moderating factor here; the relationship maintains its form and strength for all levels of selectivity.

The accreditation of an institution also appears to be a factor in the percentage of disadvantaged undergraduates enrolled, as can be seen from Table 17. From this table we see, for example, that while 35% of the accredited institutions enroll less than 6% disadvantaged, only 18% of the nonaccredited institutions enroll such small proportions. Within selectivity categories, the same basic enrollment pattern still exists; however, insufficient numbers of nonaccredited institutions existing in the higher selectivity categories make such comparisons meaningless.

Table 18 depicts the relationship between proportion of disadvantaged undergraduates enrolled and residentiality of institution. For purposes of this report, a "primarily residential" institution is one in which

Table 16

Proportion of Disadvantaged Undergraduates Enrolled by Predominant Ethnicity of Student Population

Percent of Disadvantaged Students		Predominant Ethnicity at Institution: White	Nonwhite	Row Total/ Percent
0-5%	Frequency	403	0	403
	Row Percent	100.0	0.0	32.3
	Column Percent	34.0	0.0	
6-10%	Frequency	283	1	284
	Row Percent	99.6	0.4	22.8
	Column Percent	23.9	1.6	
11-15%	Frequency	164	3	167
	Row Percent	98.2	1.8	13.4
	Column Percent	13.8	4.8	
16-20%	Frequency	109	2	111
	Row Percent	98.2	1.8	8.9
	Column Percent	9.2	3.2	
21-25%	Frequency	75	1	76
	Row Percent	98.7	1.3	6.1
	Column Percent	6.3	1.6	
26-50%	Frequency	117	19	136
	Row Percent	86.0	14.0	10.9
	Column Percent	9.9	30.6	
51% or more	Frequency	35	36	71
	Row Percent	49.3	50.7	5.7
	Column Percent	3.0	58.1	
Column Total		1186	62	1248
Percent		95.0	5.0	100.0

$\chi^2 = 379.87$ with 6 df, $p < .001$

Table 17

Proportion of Disadvantaged Undergraduates Enrolled by Accreditation of Institutions

Percent of Disadvantaged Students		Accreditation: Accredited Institution	Accreditation: Nonaccredited Institution	Row Total/ Percent
0-5%	Frequency	368	35	403
	Row Percent	91.3	8.7	32.3
	Column Percent	34.9	18.0	
6-10%	Frequency	241	43	284
	Row Percent	84.9	15.1	22.8
	Column Percent	22.9	22.2	
11-15%	Frequency	137	29	166
	Row Percent	82.5	17.5	13.3
	Column Percent	13.0	14.9	
16-20%	Frequency	87	24	111
	Row Percent	78.4	21.6	8.9
	Column Percent	8.3	12.4	
21-25%	Frequency	57	19	76
	Row Percent	75.0	25.0	6.1
	Column Percent	5.4	9.8	
26-50%	Frequency	110	26	136
	Row Percent	80.9	19.1	10.9
	Column Percent	10.4	13.4	
51% or more	Frequency	53	18	71
	Row Percent	74.6	25.4	5.7
	Column Percent	5.0	9.3	
Column Total		1053	194	1247
Percent		84.4	15.6	100.0

$\chi^2 = 29.75$ with 6 df, $p < .001$

Table 18

Proportion of Disadvantaged Undergraduates Enrolled by Residentiality of Institutions

Percent of Disadvantaged Students		Residentiality: Primarily Residential	Residentiality: Primarily Nonresidential	Row Total/ Percent
0-5%	Frequency	244	168	412
	Row Percent	59.2	40.8	32.0
	Column Percent	42.2	23.7	
6-10%	Frequency	131	158	289
	Row Percent	45.3	54.7	22.5
	Column Percent	22.7	22.3	
11-15%	Frequency	63	101	164
	Row Percent	38.4	61.6	12.7
	Column Percent	10.9	14.2	
16-20%	Frequency	34	78	112
	Row Percent	30.4	69.6	8.7
	Column Percent	5.9	11.0	
21-25%	Frequency	21	65	86
	Row Percent	24.4	75.6	6.7
	Column Percent	3.6	9.2	
26-50%	Frequency	44	102	146
	Row Percent	30.1	69.9	11.3
	Column Percent	7.6	14.4	
51% or more	Frequency	41	37	78
	Row Percent	52.6	47.4	6.1
	Column Percent	7.1	5.2	
Column Total		578	709	1287
Percent		44.9	55.1	100.0

$\chi^2 = 75.84$ with 6 df, $p < .001$

residential facilities are provided for 50% or more of the undergraduate population, whereas a "primarily nonresidential" institution is one which provides less than 50% of its undergraduates with available residential facilities. As indicated in Table 18, the relationship is toward a greater proportion of disadvantaged students enrolled in nonresidential institutions. For example, 42% of the primarily residential institutions report 0-5% disadvantaged, while only 24% of the primarily nonresidential institutions fall in this category. When the confounding factor of selectivity is controlled, the same basic enrollment pattern persists, although the relationships are not quite as strong. This finding is not particularly surprising, in that other studies[4] have indicated a propensity on the part of the financially disadvantaged to enroll in nonresidential institutions, particularly the community colleges and the urban institutions.

4. Relation of Federal Funding of SSDS Programs to Proportion of Disadvantaged Students

As might be expected, those institutions with USOE-funded SSDS programs enroll larger proportions of disadvantaged students than those not participating in these federal programs. Likewise, of the remaining institutions, those that had applied unsuccessfully for funding of an SSDS program on campus enroll smaller proportions than SSDS institutions, but larger proportions of the financially disadvantaged than do those that had never applied. For example, 39% of the SSDS institutions have at least 26% of

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[4]For example, see W. Willingham, Free-access higher education. New York: College Board, 1970.

their undergraduates in the disadvantaged category. Those applying unsuccessfully for SSDS programs show about 19% of the institutions in this category, against 14% of the institutions never applying. The relationship between proportion of disadvantaged and SSDS program status is shown in Table 19. Both the nature of the guidelines for such federal programs and the selection procedure for funding such programs would tend to account for the enrollment pattern shown in Table 19 in and of itself. Selectivity of institutions does not appear to be a confounding factor in determining this relationship; when selectivity is held constant, the same enrollment pattern exists and the relationship maintains its strength at each level of selectivity except the very lowest, where the relationship is only slightly weakened.

In summary, then, the responding institutions provide estimates that yield a projection of 14% of enrolled undergraduates as falling within the definition of financially disadvantaged provided by the Higher Education Amendments of 1968. About half of the institutions report from 0 to 10% of their undergraduate enrollment to be disadvantaged, and the other half from 11 to 100%. Significantly greater proportions of disadvantaged are reported by institutions in the Southeastern USOE regions; in institutions relatively nonselective; in public or church-related institutions; in two-year institutions; in traditionally nonwhite institutions; in nonaccredited institutions; and in nonresidential institutions. Institutions with the higher proportions of disadvantaged undergraduates are those that have applied for and won contracts from the Division of Student Assistance, suggesting that funds have gone to institutions traditionally committed to the disadvantaged, rather than toward creating inroads for them in institutions not so traditionally committed.

Table 19

Proportion of Disadvantaged Undergraduates Enrolled by SSDS Participation

Percent of Disadvantaged Students		SSDS Participation: Participated in SSDS	Applied But Not Funded	Never Applied	Row Total/ Percent
0-5%	Frequency	24	60	338	422
	Row Percent	5.7	14.2	80.1	32.2
	Column Percent	17.1	20.4	38.5	
6-10%	Frequency	19	87	187	293
	Row Percent	6.5	29.7	63.8	22.3
	Column Percent	13.6	29.6	21.3	
11-15%	Frequency	14	47	108	169
	Row Percent	8.3	27.8	63.9	12.9
	Column Percent	10.0	16.0	12.3	
16-20%	Frequency	17	26	70	113
	Row Percent	15.0	23.0	61.9	8.6
	Column Percent	12.1	8.8	8.0	
21-25%	Frequency	12	19	57	88
	Row Percent	13.6	21.6	64.8	6.7
	Column Percent	8.6	6.5	6.5	
26-50%	Frequency	28	30	90	148
	Row Percent	18.9	20.3	60.8	11.3
	Column Percent	20.0	10.2	10.3	
51% or more	Frequency	26	25	28	79
	Row Percent	32.9	31.6	35.4	6.0
	Column Percent	18.6	8.5	3.2	
Column Total		140	294	878	1312
Percent		10.7	22.4	66.9	100.0

$\chi^2 = 114.06$ with 12 df, $p < .001$

5. Availability of Programs for the Financially Disadvantaged Undergraduate

Of those institutions returning the census form, and for which such information could be determined, better than half indicated that they had one or more programs of some sort for the financially disadvantaged undergraduate at their institution. Of those institutions reporting programs, almost half had only one such program. The distribution of number of programs for the responding institutions is given in Table 20. As suggested above, the distribution has a marked positive skew. It should be noted that in Table 20 the 204 institutions which returned a blank census form with the comment or notation that they had no program are included.

Table 21 shows the relationship between the number of programs existing at an institution and the number of disadvantaged undergraduates enrolled by that institution. While the data of Table 21 support the hypothesis that more programs for the disadvantaged exist at those institutions enrolling greater proportions of disadvantaged undergraduates, the table also points out the relationship between programmatic attention to disadvantaged and proportion of disadvantaged enrolled is far from a perfect one. It can be seen from Table 21, for example, that of those institutions having less than 6% financially disadvantaged among their undergraduate population, better than 10% have three or more programs for such disadvantaged students. On the other hand, of those institutions having better than 50% of their undergraduate population considered as financially disadvantaged, better than 15% have no programs extant on campus. These are extreme examples, of course, but similar disparities may be noted throughout Table 21. There are many possible reasons to explain why programs for the disadvantaged are not more

Table 20

Number of Programs for Disadvantaged for Sample Institutions[a]

Number of Programs	Number Responding	Percent	Adjusted Percent[b]
0.00	801	47.1	
1.00	415	24.4	45.9
2.00	188	11.0	20.8
3.00	98	5.8	10.8
4.00	63	3.7	7.0
5.00	34	2.0	3.8
6.00	23	1.4	2.5
7.00	22	1.3	2.4
8.00	19	1.1	2.1
9.00	11	0.6	1.2
10.00	10	0.6	1.1
11.00	4	0.2	0.4
12.00	5	0.3	0.6
13.00	4	0.2	0.4
14.00	4	0.2	0.4
19.00	1	0.1	0.1

Mean = 1.40 Adjusted Mean[b] = 2.64

Median = .62 Adjusted Median[b] = 1.69

[a]For this table, the 204 institutions providing no information, other than they had no programs, are included.

[b]Based on institutions having programs.

Table 21

Number of Programs for Disadvantaged Undergraduates by Percent of Undergraduates Who Are Disadvantaged

Percent of Disadvantaged Students		Number of Programs					Row Total/ Percent
		None	1	2	3 or 4	5 or more	
0 - 5%	Frequency	220	112	45	28	17	422
	Row Percent	52.1	26.5	10.7	6.6	4.0	32.2
	Column Percent	44.8	29.2	25.9	18.9	14.6	
6 - 10%	Frequency	111	85	35	36	26	293
	Row Percent	37.9	29.0	11.9	12.3	8.9	22.3
	Column Percent	22.6	22.2	20.1	24.3	22.4	
11 - 15%	Frequency	55	57	19	20	18	169
	Row Percent	32.5	33.7	11.2	11.8	10.8	12.9
	Column Percent	11.2	14.9	10.9	13.5	15.5	
16 - 20%	Frequency	27	42	16	13	15	113
	Row Percent	23.9	37.2	14.2	11.5	13.3	8.6
	Column Percent	5.5	11.0	9.2	8.8	12.9	
21 - 25%	Frequency	30	25	11	9	13	88
	Row Percent	34.1	28.4	12.5	10.2	14.8	6.7
	Column Percent	6.1	6.5	6.3	6.1	11.2	
26 - 50%	Frequency	35	39	27	27	20	148
	Row Percent	23.6	26.4	18.2	18.2	13.5	11.3
	Column Percent	7.1	10.2	15.5	18.2	17.2	
51 -100%	Frequency	13	23	21	15	7	79
	Row Percent	16.5	29.1	26.6	19.0	8.9	6.0
	Column Percent	2.6	6.0	12.1	10.1	8.0	
Column Total		491	383	174	148	116	1312
Percent		37.4	29.2	13.3	11.3	8.8	100.0

$\chi^2 = 110.05$ with 24 df, $p < .001$

closely related to proportions of disadvantaged on campus, ranging from institutional philosophy in dealing with the financially disadvantaged student to lack of sufficient funds to operate such programs. One possible explanation of the data presented in Table 21 could be that the proportion of disadvantaged on a particular campus does not truly reflect the numbers of disadvantaged on such campuses. To determine the relationship between numbers of programs and numbers of disadvantaged on a particular campus the variable of institutional size must be considered. The relationship expressed in Table 21 was further examined controlling for size, using quantized institutional size categories. Unfortunately, this additional breakdown of the data produced extremely small cell frequencies in the resultant contingency tables, making quantitative analysis more or less meaningless in most instances. Qualitatively, however, it did not appear that the relationship between proportions of disadvantaged on campus and number of programs on campus for these disadvantaged students increased greatly when size of institution was held constant. While size of institution, as measured by number of full time equivalent undergraduates, was significantly related to number of programs for disadvantaged undergraduates at an institution ($r = .36$; $N = 1467$), the relationship is certainly not an extremely strong one. This relation is described in Table 22, for the quantized categories listed therein. The significance of the relationship and its direction is not particularly surprising. The relationship between quantized size and proportion of enrolled disadvantaged undergraduates was not significant ($\chi^2 = 64.56$, $df = 54$).

Table 22

Number of Programs for Disadvantaged Undergraduates by Size of Institution

Number of Programs		Number of FTE Undergraduates: Less Than 500	500-999	1000-1499	1500-1999	2000-2999	3000-4999	5000-7999	8000-11999	12000 or More	Row Total/ Percent
None	Frequency	176	174	94	54	36	29	10	12	1	586
	Row Percent	30.0	29.7	16.0	9.2	6.1	4.9	1.7	2.0	0.2	39.9
	Column Percent	64.9	50.1	46.1	44.6	24.7	19.0	9.9	17.9	1.7	
1	Frequency	58	94	57	31	44	57	29	23	11	404
	Row Percent	14.4	23.3	14.1	7.7	10.9	14.1	7.2	5.7	2.7	27.5
	Column Percent	21.4	27.1	27.9	25.6	30.1	37.5	28.7	34.3	19.0	
2	Frequency	13	36	26	15	33	21	18	9	14	185
	Row Percent	7.0	19.5	14.1	8.1	17.8	11.4	9.7	4.9	7.6	12.6
	Column Percent	4.8	10.4	12.7	12.4	22.6	13.8	17.8	13.4	24.1	
3 or 4	Frequency	13	26	15	17	18	27	21	8	12	157
	Row Percent	8.3	16.6	9.6	10.8	11.5	17.2	13.4	5.1	7.6	10.7
	Column Percent	4.8	7.5	7.4	14.1	12.3	17.8	20.8	11.9	20.7	
5 or more	Frequency	11	17	12	4	15	18	23	15	20	135
	Row Percent	8.2	12.6	8.9	3.0	11.1	13.3	17.0	11.1	14.8	9.3
	Column Percent	4.1	4.9	5.9	3.3	10.3	11.8	22.8	22.4	34.5	
Column Total		271	347	204	121	146	152	101	67	58	1467
Percent		18.5	23.7	13.9	8.2	10.0	10.4	6.9	4.6	4.0	100.0

$\chi^2 = 332.13$ with 32 df, $p < .001$

6. Distribution of Support Programs by USOE Region

Table 23 shows a cross-tabulation of number of programs for disadvantaged undergraduates by USOE region. As indicated by the χ^2 test for homogeneity of distribution of number of programs within region, programs for the disadvantaged are not equitably distributed among the various regions. Regions with the highest proportion of institutions (reporting 5 or more) are USOE region 8 (North Dakota, South Dakota, Montana, Wyoming, Utah, and Colorado), region 9 (California, Nevada, Arizona, and Hawaii), and region 10 (Washington, Oregon, Idaho, and Alaska). Approximately one out of five institutions in these three regions have five or more extant programs for disadvantaged undergraduates. Table 23 also indicates that while about 40% of all institutions report no programs, only 21% of the institutions in USOE region 2 (New York, New Jersey, Puerto Rico, and the Virgin Islands) and only 24% of the institutions in region 9 (California, Nevada, Arizona, and Hawaii) have no programs for disadvantaged undergraduates. This, undoubtedly, is a function of the "EOG" and "EOP" programs operated by the larger states in these two regions. The data of Table 23 again point out that programs for the disadvantaged are not always where the greater proportions of disadvantaged students are enrolled, notably USOE regions 4 and 6.

7. Institutional Factors Related to Number of Support Programs

Number of programs for disadvantaged students also appears to be related to selectivity of institutions, as indicated in Table 24. This relationship is similar, but not identical, to the relationship between selectivity and numbers of disadvantaged enrolled, as discussed in the

Table 23

Number of Programs for Disadvantaged Undergraduates by USOE Region

Number of Programs		USOE Region 1	2	3	4	5	6	7	8	9	10	Row Total/ Percent
None	Frequency	60	34	79	111	122	53	59	29	30	20	597
	Row Percent	10.1	5.7	13.2	18.6	20.4	8.9	9.9	4.9	5.0	3.4	39.9
	Column Percent	46.9	21.0	46.7	39.9	44.7	42.1	48.0	49.2	24.2	35.7	
1	Frequency	41	72	47	79	63	25	30	6	39	13	415
	Row Percent	9.9	17.3	11.3	19.0	15.2	6.0	7.2	1.4	9.4	3.1	27.7
	Column Percent	32.0	44.4	27.8	28.4	23.1	19.8	24.4	10.2	31.5	23.2	
2	Frequency	15	26	19	40	27	15	15	6	18	7	188
	Row Percent	8.0	13.8	10.1	21.3	14.4	8.0	8.0	3.2	9.6	3.7	12.6
	Column Percent	11.7	16.0	11.2	14.4	9.9	11.9	12.2	10.2	14.5	12.5	
3 or 4	Frequency	11	20	14	33	27	22	12	4	12	6	161
	Row Percent	6.8	12.4	8.7	20.5	16.8	13.7	7.5	2.5	7.5	3.7	10.8
	Column Percent	8.6	12.4	8.3	11.9	9.9	17.5	9.8	6.8	9.7	10.7	
5 or more	Frequency	1	10	10	15	34	11	7	14	25	10	137
	Row Percent	0.7	7.3	7.3	11.0	24.8	8.0	5.1	10.2	18.3	7.3	9.2
	Column Percent	0.8	6.2	5.9	5.4	12.5	8.7	5.7	23.7	20.2	17.9	
Column Total		128	162	169	278	273	126	123	59	124	56	1498
Percent		8.5	10.8	11.3	18.6	18.2	8.4	8.2	3.9	8.3	3.7	100.0

$\chi^2 = 133.63$, with 36 df, $p < .001$

Table 24

Number of Programs for Disadvantaged Undergraduates by Institutional Selectivity

Number of Programs		Selectivity: Low Selectivity	Moderately Low Selectivity	Moderately High Selectivity	High Selectivity	Row Total/ Percent
None	Frequency	189	101	235	62	587
	Row Percent	32.2	17.2	40.0	10.6	39.9
	Column Percent	37.3	39.2	43.5	37.3	
1	Frequency	116	68	170	50	404
	Row Percent	28.7	16.8	42.1	12.4	27.5
	Column Percent	22.9	26.4	31.5	30.1	
2	Frequency	57	42	61	27	187
	Row Percent	30.5	22.5	32.6	14.4	12.7
	Column Percent	11.2	16.3	11.3	16.3	
3 or 4	Frequency	71	26	44	16	157
	Row Percent	45.2	16.6	28.0	10.2	10.7
	Column Percent	14.0	10.1	8.2	9.6	
5 or more	Frequency	74	21	30	11	136
	Row Percent	54.4	15.4	22.1	8.1	9.3
	Column Percent	14.6	8.1	5.6	6.6	
Column Total		507	258	540	166	1471
Percent		34.5	17.5	36.7	11.3	100.0

$\chi^2 = 50.36$ with 12 df, $p < .007$

previous section. While numbers and proportions of programs for disadvantaged undergraduates are greatest in institutions of low selectivity, the smallest proportions of institutions that have two or more programs are those moderately high in selectivity. Institutions of high selectivity and those of moderately low selectivity exhibit a marked homogeneity in distribution of number of programs. A comparison of this table to Table 13 shows that while 53% of the institutions in the high selectivity category enroll 5% or fewer disadvantaged students among their undergraduate population, 63% of these institutions have one or more programs for their disadvantaged students.

Institutional control is also related to numbers of programs for undergraduates at an institution. This relationship is shown in Table 25. Within public institutions, there tend to be proportionally greater numbers of programs for the disadvantaged undergraduate than within the private institutions. Of the private institutions, there appears to be very little difference in distributions of number of programs for disadvantaged students between church-related institutions and nonchurch-related institutions. In this connection, it should be remembered that church-related institutions report higher proportions of disadvantaged undergraduates than do other private institutions. Controlling for selectivity, the same relational pattern persisted, but the strength of the relationship was somewhat diminished, except at the lowest level of selectivity where the differences between public and private institutions became even more pronounced.

Table 26 shows the relationship between number of programs for disadvantaged undergraduates and the highest offering of the institutions.

Table 25

Numbers of Programs for Disadvantaged Undergraduates

by Institutional Control

Number of Programs		Type of Control: Public	Private	Church Related	Row Total/ Percent
None	Frequency	197	154	204	555
	Row Percent	35.5	27.7	36.8	39.2
	Column Percent	26.4	50.8	55.7	
1	Frequency	225	76	95	396
	Row Percent	56.8	19.2	24.0	28.0
	Column Percent	30.1	25.1	26.0	
2	Frequency	119	33	30	182
	Row Percent	65.4	18.1	16.5	12.9
	Column Percent	15.9	10.9	8.2	
3	Frequency	62	16	16	94
	Row Percent	66.0	17.0	17.0	6.6
	Column Percent	8.3	5.3	4.4	
4	Frequency	42	10	8	60
	Row Percent	70.0	16.7	13.3	4.2
	Column Percent	5.6	3.3	2.2	
5-7	Frequency	54	9	11	74
	Row Percent	73.0	12.2	14.9	5.2
	Column Percent	7.2	3.0	3.0	
8 or more	Frequency	48	5	2	55
	Row Percent	87.3	9.1	3.6	3.9
	Column Percent	6.4	1.7	0.5	
Column Total		747	303	366	1416
Percent		52.8	21.4	25.8	100.0

$\chi^2 = 135.98$, with 12 df, $p < .001$

Table 26

Number of Programs for Disadvantaged Undergraduates

by Highest Degree Offering

Number of Programs		Highest Offering: Two-Year Undergraduate Degree	4-5 Year Undergraduate Degree	Masters Degree or Higher	Row Total/ Percent
None	Frequency	183	227	141	551
	Row Percent	33.2	41.2	25.6	39.1
	Column Percent	37.0	53.0	29.0	
1	Frequency	124	114	157	395
	Row Percent	31.4	28.9	39.7	28.0
	Column Percent	25.1	26.6	32.2	
2	Frequency	65	41	75	181
	Row Percent	35.9	22.7	41.4	12.8
	Column Percent	13.2	9.6	15.4	
3	Frequency	29	18	46	93
	Row Percent	31.2	19.4	49.5	6.6
	Column Percent	5.9	4.2	9.4	
4	Frequency	25	13	22	60
	Row Percent	41.7	21.7	36.7	4.3
	Column Percent	5.1	3.0	4.5	
5-7	Frequency	36	13	25	74
	Row Percent	48.6	17.6	33.8	5.3
	Column Percent	7.3	3.0	5.1	
8 or more	Frequency	32	2	21	55
	Row Percent	58.2	3.6	38.2	3.9
	Column Percent	6.5	0.5	4.3	
Column Total		494	428	487	1409
Percent		35.1	30.4	34.6	100.0

$\chi^2 = 87.42781$ with 12 df, $p < .001$

The pattern of distribution of number of programs, within offering group, is quite similar to that exhibited in Table 15 for distribution of proportion of disadvantaged undergraduates enrolled within offering group. Institutions offering a two-year program tend to have proportionally greater numbers of programs than either of the other two groups, with those institutions offering higher degrees having proportionally greater numbers of programs than the institutions offering only four- or five-year undergraduate degrees. This differential distribution of programs for disadvantaged undergraduates maintains itself when institutional selectivity is controlled, except in the case of the moderately selective institution. Within this selectivity category, no meaningful pattern of differences exists in the distribution of numbers of programs for disadvantaged undergraduates between the three highest-offering categories.

The predominant ethnicity of the student body at an institution is also related to the distribution of number of programs within an institution. The relationship between these two factors is depicted in Table 27. While programs do not exist in 41% of the institutions with predominantly white student bodies, 90% of the institutions with predominantly nonwhite student bodies have one or more programs for disadvantaged undergraduates. This relationship maintains its strength and direction within level of selectivity.

Table 28 shows a cross-tabulation of numbers of programs for disadvantaged undergraduates by accreditation of institution. The chi-square test for homogeneity of distribution of programs within the two accreditation groups indicates that the distribution of programs within these

Table 27

Number of Programs for Disadvantaged Undergraduates

by Predominant Ethnicity of Student Population

Number of Programs		Predominant Ethnicity of Institution: White	Nonwhite	Row Total/ Percent
None	Frequency	544	7	551
	Row Percent	98.7	1.3	39.1
	Column Percent	40.6	10.1	
1	Frequency	374	20	394
	Row Percent	94.9	5.1	28.0
	Column Percent	27.9	29.0	
2	Frequency	158	23	181
	Row Percent	87.3	12.7	12.9
	Column Percent	11.8	33.3	
3	Frequency	84	9	93
	Row Percent	90.3	9.7	6.6
	Column Percent	6.3	13.0	
4	Frequency	58	2	60
	Row Percent	96.7	3.3	4.3
	Column Percent	4.3	2.9	
5-7	Frequency	68	6	74
	Row Percent	91.9	8.1	5.3
	Column Percent	5.1	8.7	
8 or more	Frequency	53	2	55
	Row Percent	96.4	3.6	3.9
	Column Percent	4.0	2.9	
Column Total		1339	69	1408
Percent		95.1	4.9	100.0

$\chi^2 = 45.97$ with 6 df, $p < .001$

Table 28

Number of Programs for Disadvantaged Undergraduates

by Accreditation of Institutions

Number of Programs		Accreditation: Accredited Institution	Accreditation: Nonaccredited Institution	Row Total/ Percent
None	Frequency	436	114	550
	Row Percent	79.3	20.7	39.1
	Column Percent	36.7	52.3	
1	Frequency	346	48	394
	Row Percent	87.8	12.2	28.0
	Column Percent	29.1	22.0	
2	Frequency	159	22	181
	Row Percent	87.8	12.2	12.9
	Column Percent	13.4	10.1	
3	Frequency	83	10	93
	Row Percent	89.2	10.8	6.6
	Column Percent	7.0	4.6	
4	Frequency	55	5	60
	Row Percent	91.7	8.3	4.3
	Column Percent	4.6	2.3	
5-7	Frequency	60	14	74
	Row Percent	81.1	18.9	5.3
	Column Percent	5.0	6.4	
8 or more	Frequency	50	5	55
	Row Percent	90.9	9.1	3.9
	Column Percent	4.2	2.3	
Column Total		1189	218	1407
Percent		84.5	15.5	100.0

$\chi^2 = 22.68$, with 6 df, $p < .001$

two groups cannot be considered the same. Table 28, however, is almost a complete reversal of Table 17; a comparison of these two tables indicates that, while better than 80% of the nonaccredited institutions have 6% or greater financially disadvantaged students in their undergraduate population, less than 50% of these institutions have programs for these disadvantaged students. This could be a function of several factors: lack of an established financial base among the nonaccredited institutions, inability to attract outside funding of such programs, etc. The same pattern of distribution of programs for the disadvantaged, as seen in Table 28, was observed in each of the levels of selectivity; however, insufficient numbers of nonaccredited institutions in the higher selectivity categories precluded any meaningful quantitative comparison of strength of the relationship.

The relationship between residentiality of institution and number of programs for disadvantaged students is shown in Table 29. From this table, it can be seen that the nonresidential institutions have proportionally greater numbers of programs than the residential institutions. This relationship persists and is not weakened at the various levels of selectivity.

Table 29

Number of Programs for Disadvantaged Undergraduates

by Residentiality of Institutions

Number of Programs		Residentiality: Primarily Residential	Residentiality: Primarily Nonresidential	Row Total/ Percent
None	Frequency	322	258	580
	Row Percent	55.5	44.5	39.9
	Column Percent	49.8	31.9	
1	Frequency	180	219	399
	Row Percent	45.1	54.9	27.4
	Column Percent	27.8	27.1	
2	Frequency	73	110	183
	Row Percent	39.9	60.1	12.6
	Column Percent	11.3	13.6	
3	Frequency	33	63	96
	Row Percent	34.4	65.6	6.6
	Column Percent	5.1	7.8	
4	Frequency	19	43	62
	Row Percent	30.6	69.4	4.3
	Column Percent	2.9	5.3	
5-7	Frequency	14	65	79
	Row Percent	17.7	82.3	5.4
	Column Percent	2.2	8.0	
8 or more	Frequency	6	50	56
	Row Percent	10.7	89.3	3.8
	Column Percent	0.9	6.2	
Column Total		647	808	1455
Percent		44.5	55.5	100.0

$\chi^2 = 87.78$, with 6 df, $p < .001$

Table 30 shows the relationship between number of programs for disadvantaged undergraduates and various other institutional variables (as expressed by the zero-order product-moment correlation coefficient). While all relationships except that for "cost per student" are statistically significant, the relationships described by the correlations are very weak and of limited practical significance with the exception of the positive relationship between number of programs with size of institution as measured by total full-time equivalent students, previously mentioned. The positive relationship between number of programs and institutional Current Funds Expenditures is quite credible.

Table 30

Correlations of Number of Programs with Various Other Institutional Variables

Variable	Correlation with Number of Programs	Variable	Correlation with Number of Programs
Degree Credit Proportion	-.11 (N = 1464)	Cost per Student	-.01 (N = 1315)
Current Funds Expenditures	.15 (N = 1335)	Total FTE Students	.37 (N = 1467)

8. Number of Support Programs at Federally Supported SSDS Program Institutions

As would be expected, institutions that have participated in the USOE-funded SSDS program have proportionally greater numbers of programs than those that have not. This is shown in Table 31. Further, institutions that had applied unsuccessfully for federally funded SSDS programs have proportionally greater numbers of programs for disadvantaged undergraduates than institutions that had never applied for such funding. The direction and strength of this relationship is relatively constant regardless of levels of selectivity. Since USOE guidelines for application for funding under the SSDS program specify that applying institutions should have a demonstrable commitment to disadvantaged students, the disparities in the distributions of number of programs exhibited in Table 30 is not particularly surprising. The fact that six of the institutions listed as having participated in the SSDS program indicated that they had no programs may be surprising to some readers. It should be kept in mind, however, that institutions classified in this category include both institutions participating in the program under a planning grant and institutions which had participated in the program but have subsequently been dropped.

9. Characteristics of Programs for Disadvantaged Undergraduates

Within those institutions having programs for disadvantaged undergraduates, a total of 2381 separate programs were identified. The characteristics of these programs are given in this section.

Table 31

Number of Programs for Disadvantaged Undergraduates

by SSDS Participation

Number of Programs		SSDS Participation: Participated in SSDS	Applied But Not Funded	Never Applied	Row Total/ Percent
None	Frequency	6	60	531	597
	Row Percent	1.0	10.1	88.9	39.9
	Column Percent	3.9	18.3	52.2	
1	Frequency	34	121	260	415
	Row Percent	8.2	29.2	62.7	27.7
	Column Percent	22.2	37.0	25.5	
2	Frequency	46	56	86	188
	Row Percent	24.5	29.8	45.7	12.6
	Column Percent	30.1	17.1	8.4	
3	Frequency	20	34	44	98
	Row Percent	20.4	34.7	44.9	6.5
	Column Percent	13.1	10.4	4.3	
4	Frequency	12	18	33	63
	Row Percent	19.0	28.6	52.4	4.2
	Column Percent	7.8	5.5	3.2	
5-7	Frequency	18	20	41	79
	Row Percent	22.8	25.3	51.9	5.3
	Column Percent	11.8	6.1	4.0	
8 or more	Frequency	17	18	23	58
	Row Percent	29.3	31.0	39.7	3.9
	Column Percent	11.1	5.5	2.3	
Column Total		153	327	1018	1498
Percent		10.2	21.8	68.0	100.0

$\chi^2 = 275.20$, with 12 df, $p < .001$

That specific programs for disadvantaged undergraduates are relative newcomers on college campuses is supported by the number of years that the programs uncovered in this study had been in operation (mean number of years = 3.418; median number of years = 2.639). There were, of course, some notable exceptions, but only 2.5 percent of the 2253 programs for which this information was available had been in operation for ten years or more. Almost 40%, or 1834 of the reported programs, were so-called "bridge programs" (i.e., programs providing a "bridge" for the high school student into the college environment--Upward Bound, etc.). For the 2150 programs providing such information, less than 10% of the programs were operated during summer school only. Better than 40% of the programs were operated during the entire academic year (i.e., in the regular term and summer school sessions).

Table 32 gives sources of funding for the extant programs. As can be seen from this table, almost one in three of the reported programs are funded exclusively through USOE. Another third of the programs are funded by state or local government or by institutional funds exclusively, while a little more than one-fifth of the programs draw funds from two or more agencies. Programs that are funded exclusively by other agencies of the U. S. Government or by private foundations account for only a little better than 10% of the total.

Table 33 gives the various elements listed as integral parts of the programs for disadvantaged undergraduates. From this table, it can be seen that the most frequently listed element was that of special academic counseling, guidance or advisory assistance, with almost three out of every

Table 32

Sources of Funding for Programs for Disadvantaged Undergraduates

Source of Funding	Frequency	Percent	Adjusted Percent[a]
USOE Trio	275	11.5	12.1
Other USOE	449	18.9	19.8
OEO	38	1.6	1.7
Other Federal Agency	96	4.0	4.2
State or Local	354	14.9	15.6
Institutional	406	17.1	17.9
Foundation	134	5.6	5.9
Two Agencies	348	14.6	15.4
Three or More Agencies	165	6.9	7.3
No Source Given	116	4.9	
Total	2381	100.0	100.0

[a]Percentage of those giving source.

Table 33

Program Elements of Programs for

Disadvantaged Undergraduates

Program Element	Percent of Programs Listing This Element (N = 2381)
1. Special academic counseling, guidance, or advisory assistance	74.0
2. Special recruiting effort or strategy	61.4
3. Special facilities or activities for diagnosing academic difficulties	53.7
4. Special tutorial service by faculty or students	62.9
5. Schools sending students	32.1
6. Involvement of or with other colleges	18.4
7. Involvement of community agencies, organizations	46.6
8. Involvement of business or industry	20.7
9. Extracurricular support	34.9
10. Remedial courses	56.3
11. Special instructional media	43.7
12. Special classroom instructional strategies	44.2
13. Loans	52.3
14. Grants	60.1
15. Work study	55.1
16. Job placement	45.6
17. Guidance for graduate study	22.0
18. Other	8.3

four programs containing this component. Almost two of three institutions report special recruiting effort or strategy--a figure inflated, no doubt, by the fact that 40% of the programs reported are bridge programs, but of special interest in that DSA Special Services Programs do not permit funds for recruiting. Tutoring components are reported in 63% of the programs; a little more than half provide for diagnosis of learning difficulties or provide remedial courses. About 44% of the programs report components of special instructional media or of special instructional strategies. Taking these frequently provided academically-oriented elements--counseling, diagnostic work, tutoring, remedial courses, and special instructional media or strategies--only 341, or about 14% of the programs, consist exclusively of one or more of these elements. In other words, a vigorous majority of the programs include some nonacademic elements.

For financial aid, grants are the most frequently reported (60%), though work-study (55%) and loans (52%) are almost as popular.

The most frequent extra-institutional resource activity is with community agencies or organizations, with almost half of the programs containing such a component. About one-third report activities with schools sending students, while work with other colleges or with business and industry is found in only one of every five programs.

Toward assisting disadvantaged students with post-college plans and activities, job placement (in 46% of the programs) is found about twice as frequently as guidance for graduate study (in 22% of the programs).

There was considerable variability among the programs in terms of numbers of students, faculty, and staff involved and in terms of cost of program. Table 34 gives mean and median values for full-time equivalent faculty, staff and students, program costs, cost per student, and student to faculty ratio.. It should be noted that the median is probably the "better" statistic for consideration due to extremely high variance and marked positive skew for all of the variables listed in Table 34. Additionally, the mean is more influenced by certain limitations in reporting or imposed on coding the data and by possible coding error. (For example, some schools defined programs as including financial aid funds; others left this usually significant amount of money out of the reported budgets.) The figures in Table 34 should also be treated with caution due to the fact that the data provided on programs was far from complete (particularly in the areas of numbers of faculty and staff involved). With these cautions in mind, the average program (median values) consists of about two faculty and two staff members serving approximately 50 full-time equivalent students at a cost per full-time equivalent student of around $700 per year.

10. Relationships between Source of Funding, Numbers of Faculty and Students, and Program Costs

Of interest, at this juncture, is the possibility of program differences between various categories of programs, or between programs existing at different types of institutions. Of particular interest would be differences in terms of full-time equivalent faculty, full-time equivalent staff, full-time equivalent students served, expenditure per student, and student to faculty ratio.

Table 34

Cost-Related Variables in Programs for

Disadvantaged Undergraduates

Variable	N	Mean[a]	Median
FTE Faculty	1356	4.50	2.12
FTE Staff	1368	4.23	2.03
FTE Students	2010	205.31	50.39
Yearly Program Costs	2136	$83,157.00	
Cost per FTE Student[b]	1826	$ 1,465.00	$673.00
FTE Student to FTE Faculty Ratio[b]	1209	67.5	19.8

[a] Figures given are not perfectly accurate due to rounding and to coding category limitations.

[b] Computed for each program, where both pieces of information were provided, before averaging.

Tables 35 to 39 depict differences between programs for disadvantaged undergraduates in terms of source of program funding. The variables of full-time equivalent faculty, etc., have been dichotomized into categories representing numbers which do, or do not, exceed the median value, respectively. As such, the chi-square values given in Tables 35 to 39 represent the results of a median test across the 10 program-area-of-funding categories (i.e., a test to determine the tenability of the assumption that the programs within each of the various funding categories can be considered as samples from populations with a common median). This nonparametric technique, the median test, is used instead of its parametric counterpart, for much the same reasons given for our preference for the median as a measure of central tendency when these variables were first introduced above. As can be seen from Tables 35 through 39, the hypothesis of common median is not supported in any of the five instances. It should be noted that the marginal proportions will not always equal .5 due to the fact that the variables of full-time equivalent faculty, etc., were rounded to the nearest integer.

Table 35 shows full-time equivalent faculty by source of program funding. Programs funded as SSDS programs and the other two Trio programs of USOE (Upward Bound and Talent Search) more frequently have a higher number of full-time equivalent faculty than the common median. On the other hand, other USOE-funded programs, programs funded by federal agencies other than USOE or OEO, and programs funded by private foundations are characterized by disproportionate numbers of programs having fewer full-time equivalent faculty than the common median.

Table 35

Full-Time Equivalent Faculty by Source of Funding

Full-Time Equivalent Faculty Category		Funding Source										
		SSDS	Other Trio Programs	Other USOE	OEO	Other Federal	State or Local	Institutional	Foundation	Two Agencies	Three or More Agencies	Row Total/ Percent
Below Common Median	Frequency	27	56	143	13	34	133	113	44	120	63	746
	Row Pct.	3.6	7.5	19.2	1.7	4.6	17.8	15.1	5.9	16.1	8.4	57.0
	Col. Pct.	51.9	45.9	63.0	56.5	63.0	60.7	56.8	65.7	51.3	56.8	
Above Common Median	Frequency	25	66	84	10	20	86	86	23	114	48	562
	Row Pct.	4.4	11.7	14.9	1.8	3.6	15.3	15.3	4.1	20.3	8.5	43.0
	Col. Pct.	48.1	54.1	37.0	43.5	37.0	39.3	43.2	34.3	48.7	43.2	
	Column Total	52	122	227	23	54	219	199	67	234	111	1308
	Percent	4.0	9.3	17.4	1.8	4.1	16.7	15.2	5.1	17.9	8.5	100.0

χ^2=17.22 with 9 df, $p<.05$

Table 36

Full-Time Equivalent Staff by Source of Funding

Full-Time Equivalent Staff Category		Funding Source										
		SSDS	Other Trio Programs	Other USOE	OEO	Other Federal	State or Local	Insti-tutional	Foun-dation	Two Agencies	Three or More Agencies	Row Total/ Percent
Below Common Median	Frequency	19	39	143	7	26	99	92	25	97	40	587
	Row Pct.	3.2	6.6	24.4	1.2	4.4	16.9	15.7	4.3	16.5	6.8	55.6
	Col. Pct.	31.1	32.8	71.1	53.8	70.3	59.6	58.2	43.1	59.1	51.3	
Above Common Median	Frequency	42	80	58	6	11	67	66	33	67	38	468
	Row Pct.	9.0	17.1	12.4	1.3	2.4	14.3	14.1	7.1	14.3	8.1	44.4
	Col. Pct.	68.9	67.2	28.9	46.2	29.7	40.4	41.8	56.9	40.9	48.7	
	Column Total	61	119	201	13	37	166	158	58	164	78	1055
	Percent	5.8	11.3	19.1	1.2	3.5	15.7	15.0	5.5	15.5	7.4	100.0

$\chi^2 = 69.45$ with 9 df, $p < .001$

Table 37

Full-Time Equivalent Students Served by Source of Funding

Full-Time Equivalent Student Category		Funding Source: SSDS	Other Trio Programs	Other USOE	OEO	Other Federal	State or Local	Institutional	Foundation	Two Agencies	Three or More Agencies	Row Total/ Percent
Below Common Median	Frequency	14	84	193	14	56	129	189	77	144	62	965
	Row Pct.	1.5	9.0	20.0	1.5	5.8	13.4	19.6	8.0	14.9	6.4	49.9
	Col. Pct.	16.5	54.4	52.6	42.4	69.1	42.2	57.3	64.7	47.4	41.3	
Above Common Median	Frequency	71	73	174	19	25	177	141	42	160	88	970
	Row Pct.	7.3	7.5	17.9	2.0	2.6	18.2	14.5	4.3	16.5	9.1	50.1
	Col. Pct.	83.5	45.6	47.4	57.6	30.9	57.8	42.7	35.3	52.6	58.7	
Column Total		85	160	367	33	81	306	330	119	304	150	1935
Percent		4.4	8.3	19.0	1.7	4.2	15.8	17.1	6.1	15.7	7.8	100.0

$\chi^2 = 83.20$ with 9 df, $p < .001$

Table 38

Cost per Full-Time Equivalent Student by Source of Funding

Cost per Full-Time Equivalent Student Category		Funding Source: SSDS	Other Trio Programs	Other USOE	OEO	Other Federal	State or Local	Institutional	Foundation	Two Agencies	Three or More Agencies	Row Total/ Percent
Below	Frequency	44	18	188	7	32	182	119	42	119	44	875
Common	Row Pct.	5.0	2.1	21.5	0.8	3.7	20.8	22.7	4.8	13.6	5.0	49.2
Median	Col. Pct.	55.7	12.0	53.1	21.2	45.1	61.7	70.3	37.8	45.2	31.4	
Above	Frequency	35	132	166	26	39	113	84	69	144	96	904
Common	Row Pct.	3.9	14.6	18.4	2.9	4.3	12.5	9.3	7.6	15.9	10.6	50.8
Median	Col. Pct.	44.3	88.0	46.9	78.8	54.9	38.3	29.7	62.2	54.8	68.6	
	Column Total	79	150	354	33	71	295	283	111	263	140	1779
	Percent	4.4	8.4	19.9	1.9	4.0	16.6	15.9	6.2	14.8	7.9	100.0

$\chi^2 = 191.37$ with 9-df, $p < .001$

Table 39

Student to Faculty Ratio[a] by Source of Funding

Student/ Faculty Ratio Category		Funding Source										
		SSDS	Other Trio Programs	Other USOE	OEO	Other Federal	State or Local	Insti-tutional	Foun-dation	Two Agencies	Three or More Agencies	Row Total/ Percent
Below Common Median	Frequency	6	78	104	11	24	75	84	34	101	44	561
	Row Pct.	1.1	13.9	18.5	2.0	4.3	13.4	15.0	6.1	18.0	7.8	48.2
	Col. Pct.	12.5	70.9	51.5	47.8	51.1	39.7	49.1	54.8	47.2	45.4	
Above Common Median	Frequency	42	32	98	12	23	114	87	28	113	53	602
	Row Pct.	7.0	5.3	16.3	2.0	3.8	18.9	14.5	4.7	18.8	8.8	51.8
	Col. Pct.	87.5	29.1	48.5	52.2	48.9	60.3	50.9	45.2	52.8	54.6	
Column Total		48	110	202	23	47	187	171	62	214	97	1163
Percent		4.1	9.5	17.4	2.0	4.0	16.3	14.7	5.3	18.4	8.3	100.0

$\chi^2 = 55.29$ with 9 df, $p < .001$

[a]Low Student/Faculty Ratios, or ratios below the common median, express smaller numbers of students per faculty member.

The pattern for faculty given in Table 35 generally holds for full-time equivalent staff by source of funding, as shown in Table 36. If anything, these data show that the pattern for Trio programs to have larger numbers of personnel is even more emphasized when members of staff are examined. An obvious impact of the programs administered by the Division of Student Assistance has been the support of additional faculty and staff assigned to disadvantaged student interests. Staff for foundation-supported programs, however, appear to be an exception to the pattern observed for faculty: these programs tend to show a higher median number of staff than that for all programs combined.

The relation between numbers of students served and source of program funding is given in Table 37. SSDS programs are characterized by an extremely disproportionate number of programs serving larger numbers of students than the common median number of students served by all programs. The reverse is true for programs funded by federal agencies other than OEO and USOE and for programs funded by private foundations.

Table 38 shows cost per full-time equivalent student by source of funding. Almost 90% of the Talent Search and Upward Bound programs ("Other Trio Programs") have greater cost per student than the common median for all programs. This is also true to a lesser extent for programs funded by OEO and for those funded by three or more agencies (which could and usually does include at least one governmental agency). On the other hand, programs characterized by cost per student less than the common median are found in relatively greater numbers among those programs funded by institutional, state, or local sources.

Student-to-faculty ratio by source of funding is given in Table 39. SSDS programs and other Trio programs differ markedly from programs funded by other sources and also differ quite markedly from one another. While the other Trio programs are characterized by relatively large numbers of programs with low (below the common median) full-time equivalent student to full-time equivalent faculty ratios, SSDS programs are characterized by relatively large numbers of programs with greater than median student to faculty ratios. That is, the SSDS programs involve larger numbers of students per faculty member. This may be due to the differential specified aims of SSDS programs as compared to other Trio programs; or, faculty that must be contained within the other Trio programs may serve disadvantaged students outside program budgets in Special Services programs. Differences in program goals and settings make comparisons less meaningful.

In all, however, SSDS programs come out rather well in these cost efficiency kinds of comparisons. They tend to serve greater numbers of students than other programs, with a greater number of staff, a slightly greater number of faculty, and at a cost per student which is slightly less than the median cost per student for all programs in the sample.

11. Relationships between Programmatic and Institutional Variables

Of additional interest are possible relationships between the program-specific variables--FTE students served, FTE faculty assigned to program, etc.--and selected institutional indices. Although these comparisons can be made, they should be interpreted carefully, and in a different light than the relationships among different program specific variables. Due to the fact that some institutions have multiple programs, and one cannot

safely assume that programs within a given institution are independent in terms of specific program variables, use of the chi-square test may be inappropriate. To examine these relationships, therefore, the contingency coefficient (a measure of relationship in an r x k contingency table) is a more proper statistic. We dichotomize the program specific variables, as before, as either falling above the median or not falling above the median. The dichotomization, which effectively limits the range of the program specific variables to two possible values, may seem somewhat arbitrary and probably reduces the measured strength of any linear relationships that exist. Due to problems existing in the data--coding error, estimations, high variability, etc.--previously mentioned, and due to the fact that many institutional indices are in fact categorical (i.e., institutional control) rather than quantitative in nature, the quantization of the program specific variables seems justifiable.

Tables 40 through 44 depict the relationship between the program specific variables under consideration and the proportion of disadvantaged undergraduates at institutions having such programs. From Table 40, it can be seen that the number of full-time equivalent students served by programs for disadvantaged undergraduates is positively related to proportions of disadvantaged students in the undergraduate population of the institution. With the exception of the slight reversal in the 16-25% categories, the proportion of programs serving more disadvantaged than the median number served increases monotonically with increases in proportion of disadvantaged undergraduates at an institution.

The relationship between number of full-time equivalent faculty assigned to program and proportion of disadvantaged undergraduates at an

Table 40

Relationship between Number of Full-Time Equivalent Students Served by Program and Percentage of Undergraduates within Poverty Level at Institution

Full-Time Equivalent Student Category		Percent of Undergraduates within Poverty Level							Row Total/ Percent
		0-5%	6-10%	11-15%	16-20%	21-25%	26-50%	51% or More	
Below Common Median	Frequency	201	228	116	102	86	122	38	893
	Row Percent	22.5	25.5	13.0	11.4	9.6	13.7	4.3	49.9
	Column Percent	60.2	55.5	47.3	47.9	53.1	42.1	28.4	
Above Common Median	Frequency	133	183	129	111	76	168	96	896
	Row Percent	14.8	20.4	14.4	12.4	8.5	18.8	10.7	50.1
	Column Percent	39.8	44.5	52.7	52.1	46.9	57.9	71.6	
Column Total		334	411	245	213	162	290	134	1789
Percent		18.7	23.0	13.7	11.9	9.1	16.2	7.5	100.0

Contingency Coefficient = .17, $p < .001$

Table 41

Relationship between Number of Full-Time Equivalent Faculty in Program and Percentage of Undergraduates within Poverty Level at Institution

Full-Time Equivalent Faculty Category		Percent of Undergraduates within Poverty Level							Row Total/ Percent
		0-5%	6-10%	11-15%	16-20%	21-25%	26-50%	51% or More	
Below Common Median	Frequency	105	172	97	88	80	111	40	693
	Row Percent	15.2	24.8	14.0	12.7	11.5	16.0	5.8	57.4
	Column Percent	56.8	60.8	59.9	56.8	71.4	51.9	41.7	
Above Common Median	Frequency	80	111	65	67	32	103	56	514
	Row Percent	15.6	21.6	12.6	13.0	6.2	20.0	10.9	42.6
	Column Percent	43.2	39.2	40.1	43.2	28.6	48.1	58.3	
Column Total		185	283	162	155	112	214	96	1207
Percent		15.3	23.4	13.4	12.8	9.3	17.7	8.0	100.0

Contingency Coefficient = .14, $p < .001$

Table 42

Relationship between Number of Full-Time Equivalent Staff in Program and Percentage of Undergraduates within Poverty Level at Institution

Full-Time Equivalent Staff Category		Percent of Undergraduates within Poverty Level 1/							Row Total/ Percent
		0-5%	6-10%	11-15%	16-20%	21-25%	26-50%	51% or More	
Below Common Median	Frequency	144	177	108	74	61	108	45	717
	Row Percent	20.1	24.7	15.1	10.3	8.5	15.1	6.3	58.6
	Column Percent	58.5	61.2	70.1	48.4	59.2	58.4	47.9	
Above Common Median	Frequency	102	112	46	79	42	77	49	507
	Row Percent	20.1	22.1	9.1	15.6	8.3	15.2	9.7	41.4
	Column Percent	41.5	38.8	29.9	51.6	40.8	41.6	52.1	
Column Total		246	289	154	153	103	185	94	1224
Percent		20.1	23.6	12.6	12.5	8.4	15.1	7.7	100.0

Contingency Coefficient = .14, p< .005

Table 43

Relationship between Cost per Student of Programs by Undergraduate Level of Poverty at Institution

Cost per Student Category		Percent of Undergraduates within Poverty Level							Row Total/ Percent
		0-5%	6-10%	11-15%	16-20%	21-25%	26-50%	51% or More	
Below Common Median	Frequency	125	189	98	94	78	136	61	781
	Row Percent	16.0	24.2	12.5	12.0	10.0	17.4	7.8	47.9
	Column Percent	40.8	51.2	45.2	45.6	50.0	53.1	50.4	
Above Common Median	Frequency	181	180	119	112	78	120	60	850
	Row Percent	21.3	21.2	14.0	13.2	9.2	14.1	7.1	52.1
	Column Percent	59.2	48.8	54.8	54.4	50.0	46.9	49.6	
Column Total		306	369	217	206	156	256	121	1631
Percent		18.8	22.6	13.3	12.6	9.6	15.7	7.4	100.0

Contingency Coefficient = .09, nonsignificant

Table 44

Student-to-Faculty Ratio within Program

by Undergraduate Level of Poverty at Institution

Student-to-Faculty Ratio Category		Percent of Undergraduates within Poverty Level							Row Total/ Percent
		0-5%	6-10%	11-15%	16-20%	21-25%	26-50%	51% or More	
Below Common Median	Frequency	92	128	63	72	44	89	43	531
	Row Percent	17.3	24.1	11.9	13.6	8.3	16.8	8.1	49.5
	Column Percent	57.1	50.0	48.1	51.1	42.3	47.3	47.3	
Above Common Median	Frequency	69	128	68	69	60	99	48	541
	Row Percent	12.8	23.7	12.6	12.8	11.1	18.3	8.9	50.5
	Column Percent	42.9	50.0	51.9	48.9	57.7	52.7	52.7	
Column Total		161	256	131	141	104	188	91	1072
Percent		15.0	23.9	12.2	13.2	9.7	17.5	8.5	100.0

Contingency Coefficient = .08, nonsignificant

institution, as shown in Table 41, is difficult to interpret, even though the relationship is significant. The overall positive monotonic trend (as reflected in the extreme categories of proportions of disadvantaged undergraduates on campus) is weakened considerably by the instability of this trend in categories of from 6-25% disadvantaged undergraduates. This same situation exists, as shown in Table 42, when we consider the relationship between number of full-time equivalent staff attached to program and proportion of disadvantaged undergraduates at the institution.

Table 43 shows the relationship between cost per student within the program and proportion of disadvantaged undergraduates at the institution within which these programs are located. While there appears to be an overall negative trend in this data (the proportion of programs with cost per student greater than the median cost tends to decrease as proportion of disadvantaged undergraduates at an institution increases), the relationship expressed in this table is not significant. There is likewise no significant relationship between student-faculty ratio within a program and proportion of disadvantaged undergraduates at the institution within which the program is located, as indicated in Table 44.

The relationships between the program variables considered here and various other institutional indices, as reflected by the contingency coefficient, are given in Table 45. The contingency tables on which these coefficients were computed do not seem to justify the space required for their presentation; however, the contingency coefficient does not indicate the direction of relationship. From the raw data and the coefficients presented in Table 45, the following interpretations are in order.

Table 45

Relationships[a] of Program Specific Variables to Various Institutional Indices

Institutional Index	df[b]	Program Variable: Full-Time Equivalent Students	Full-Time Equivalent Faculty	Full-Time Equivalent Staff	Cost per Full-Time Equivalent Student	Student/ Faculty Ratio
Selectivity	3	.04 (N = 2010)	.09* (N = 1356)	.12** (N = 1368)	.13** (N = 1826)	.05 (N = 1209)
Size	7	.24 (N = 1967)	.11* (N = 1327)	.23** (N = 1349)	.04 (N = 1791)	.17** (N = 1183)
Control	2	.15** (N = 1915)	.04 (N = 1280)	.05 (N = 1317)	.13** (N = 1740)	.14** (N = 1136)
Highest Offering	2	.14** (N = 1909)	.06 (N = 1277)	.22** (N = 1315)	.15** (N = 1739)	.07 (N = 1133)
Ethnicity of Student Body	1	.12** (N = 1908)	.13** (N = 1277)	.10** (N = 1315)	.04 (N = 1738)	.00 (N = 1133)
Residentiality	1	.07** (N = 1964)	.06* (N = 1325)	.01 (N = 1347)	.03 (N = 1792)	.08* (N = 1179)
Accreditation	1	.08** (N = 1908)	.09** (N = 1277)	.08* (N = 1315)	.02 (N = 1738)	.06 (N = 1133)
Degree of SSDS Participation	2	.23** (N = 2010)	.06 (N = 1356)	.22** (N = 1368)	.07* (N = 1826)	.15** (N = 1209)

* $p < .05$
** $p < .005$

[a] As expressed by contingency coefficients.

[b] Degrees of freedom for contingency table (the same categories were used as previously for the institutional indices).

While institutional selectivity is not significantly related to number of full-time equivalent students served by programs within institutions or with student-faculty ratios within those programs, it is significantly related to full-time equivalent faculty, full-time equivalent staff, and program cost per full-time equivalent student in the program. Relationship of full-time equivalent program faculty to institutional selectivity is clearly positive, with proportion of programs with more FTE faculty than the average monotonically increasing with increasing selectivity category. The nature of the relationship of full-time equivalent program staff to institutional selectivity is similar to that for full-time equivalent faculty. Relationship between cost per full-time equivalent student and institutional selectivity is not so straightforward. Proportionally, the greatest number of programs with cost per student exceeding the common median exists in the moderately high selective schools (61%), while institutions in the other three categories of selectivity show approximately equal proportions of programs with greater than average (median value) costs. It should be noted at this point that while the relationships just described are statistically significant, they are not particularly strong ones. It should also be kept in mind that for small numbers of row and column categories--which is the case in the contingency tables from which all of the coefficients reported in Table 45 were computed--the contingency coefficient is bounded from above by a value considerably less than 1 (e.g., for a 3 x 3 table the contingency coefficient is bounded from above by .816).

Schools that are more selective tend to have more expensive libraries, laboratories, and other components of the educational experience; the

implication of the foregoing findings is most probably that programs for disadvantaged must share some of these costs, or, that a program in a given setting is to a minor degree a slave to more general institutional cost rates. Buying a counselor at an institution below a national median in salaries paid for such staff costs less than buying one at an institution with higher salary scales.

Institutional size is significantly related to all the program variables except cost per student, and the relationships, while not spectacular, are relatively strong. The relationships in all cases are basically positive, with proportions of programs in the higher than median category usually increasing as institutional size category increases. Only for full-time equivalent students, however, is this relationship strictly monotonic. The degree of monotonicity for the other program variables is more or less reflected in the magnitude of the contingency coefficient.

Institutional control is significantly related to full-time equivalent students served by program, program cost per student and program student-faculty ratio. The implication from these relationships is basically that while the public institutions tend to have greater proportion of programs serving a more than average number of students and greater proportion of programs with higher than average student-faculty ratio, they have proportionally fewer programs operating at above average cost per student. The private nonchurch-related institutions show that approximately two programs out of three are operating at above average cost per student.

In terms of highest offering, significant relationships exist with number of full-time equivalent students served, full-time equivalent staff

attached to the program, and cost per full-time equivalent student. It is somewhat surprising to note that institutions with the highest offering (offering masters degree--or equivalent--or higher) tend to have programs serving greater numbers of students; they also tend to have programs with greater than average numbers of staff members and with higher than average operational cost per student. Programs within the four-year degree offering category tend to serve the smallest number of students, whereas programs within the two-year offering category tend to have the fewest number of staff assigned and also tend to operate at the smallest cost per student.

Institutions with predominantly nonwhite student bodies tend to have proportionally greater numbers of programs serving more than the average number of students, and to have greater proportions of programs with above average numbers of faculty and staff assigned when compared to institutions with predominantly white student bodies. The student-faculty ratios within these programs at institutions with predominantly nonwhite student bodies is basically no different from that of programs at other institutions. Likewise, the cost per student at programs within predominantly nonwhite institutions is not different from that at other institutions.

The significant relationships between residentiality of institution and the various program variables are not particularly strong. Within the nonresidential institutions, there are proportionally greater numbers of programs serving a greater than average number of students and having a smaller than average number of full-time-equivalent faculty. This, of course, is again reflected in the fact that within nonresidential institutions a disproportionately large number of programs have higher than average student-faculty ratios.

The significant relationships between accreditation of institution and the various program variables are also rather weak. The basic trend in this relationship is that nonaccredited institutions typically have proportionally more programs serving a fewer than average number of students with a lower than average number of faculty and staff involved.

The final institutional index considered in Table 45 is degree of institutional participation in USOE-funded SSDS programs. It should be pointed out that this relationship, reflecting as it does association between an institutional factor and program specific factors, is related to, but certainly not identical with, the previous comparison of these program variables with source of program funding. The relationships expressed in connection with SSDS participation reflect not only the characteristics of the USOE-funded SSDS program, but also other programs that may exist at that institution. It can be seen from Table 45 that degree of institutional participation in SSDS program is significantly related to all of the program variables except that of full-time equivalent faculty. Further, these relationships are, in the main, relatively strong. The nature of these relationships are remarkably similar, with proportions of programs above the median monotonically decreasing over the three categories: (1) institutions participating in the program (highest proportions above median), (2) institutions applying but not funded for the program, and (3) institutions that had never applied for the program. This pattern held for all the program variables with which degree of institutional participation in SSDS programs was significantly related.

12. Relationships between Program Content and Selected Programmatic Variables

There remains, at this point, one further set of comparisons in our consideration of program specific variables. Such comparisons are concerned with the various program elements (those listed in Table 33 but excluding the category "other") in relation to other program specific variables (FTE Students Served, FTE Faculty Assigned to Program, FTE Staff Assigned to Program, Cost per Student in Program, and Student to Faculty Ratio) which have been considered elsewhere in this report, as well as to the institutional indices that have been under consideration. In comparing inclusion or noninclusion of one of the specific program elements to the various program specific variables (FTE Students in Program, etc.) 2 x 2 contingency tables were used, with the program specific variables again dichotomized into categories of falling above the common median and not falling above the common median. While most of the relationships revealed are not at all unexpected, they will be discussed briefly below.

Cost of program per student served was significantly and positively related to inclusion of all but two of the program elements listed in Table 33. (Positive relationship means inclusion of the elements within a program was associated with greater proportions of such programs with cost per student above the common median.) The two elements for which this relationship did not hold were the financial aid elements of loans and work-study. While this may appear, at first glance, to be contra-intuitive, lack of relationship in these cases is not particularly

surprising since the elements involve, respectively, repayment of expended capital (capital that, in most cases, is not that of the program or of the institution), or the return of services for capital expended outside the program. This finding is not surprising, but points to the need to examine more carefully, given good qualitative criteria, the most cost-efficient programs.

Significant relationships were also found between inclusion of all but two program elements and numbers of full-time equivalent staff assigned to program. It was again the case that all such relationships were positive (inclusion of the program element was associated with greater than average numbers of staff assigned to program). The two program elements not related to numbers of full-time equivalent staff assigned to program were those of remedial course offerings and awarding of grants. The inclusion of remedial courses as an element of a program involves additional faculty rather than additional staff. The absence of a clear-cut increase in staff when student grants are a program element is not immediately obvious, unless--as might be expected, and as is supported in our data--the inclusion of grants is closely related to the inclusions of either loans or work-study; or the probability that grants administration adds to the work of administrative offices outside the program.

Numbers of full-time equivalent faculty assigned to program is related to inclusion of specific program element for a majority of the elements in Table 33, but not to as large an extent as is numbers of full-time equivalent staff. It is again the case that all significant relationships are positive (inclusion of specific program element is associated with greater

proportions of programs with larger than average numbers of full-time equivalent faculty assigned). Numbers of full-time equivalent faculty assigned to programs is related to only one of the program elements concerned with involvement of extra-institutional institutions (elements 5 through 8 in Table 33), that being involvement of or with other colleges. Increased faculty involvement is also not significantly related to the primarily financial program elements of grant or work-study or with job placement or guidance for graduate study. Some of the relationships, or lack of relationships, are more intuitively reasonable than others. Particularly confusing is why inclusion of guidance for graduate study--an element strongly implying faculty involvement--is not significantly related to numbers of full-time equivalent faculty assigned to program. One possible explanation would be that while this may be a stated element of the program, it is performed by staff; guidance by faculty members takes place, if at all, in departmental rather than in program activities. Of course, it should be recalled that this program element was listed by only one in five programs.

The inclusion or noninclusion of one of the specific program elements is typically not related to number of full-time equivalent students served by the program. There are, of course, exceptions. Number of full-time equivalent students is positively related to the inclusion of the elements of extracurricular support, special classroom instructional strategies, loans, work-study, and guidance for graduate study (a positive relationship again implies greater than average number of students served in those programs which include the specific element). These relationships are, in

the main, not intuitively obvious. A negative relationship exists between number of full-time equivalent students served by the program and use of special recruiting effort or strategy by the program (i.e., programs listing this as an element of their program tend to serve fewer than average numbers of students). There is nothing particularly surprising in this relationship.

Student to faculty ratio is related significantly to the inclusion of only four of the specific program elements. In all but one of these instances, the relationship is a negative one (programs including these elements have lower than average student to faculty ratio, or fewer full-time students per full-time faculty member). The exception is the element of work-study. The negative relationships are with the elements of: (1) special recruiting effort or strategy, (2) extra-institutional involvement with schools sending students (feeder schools), and (3) extra-institutional involvement with community agencies or organizations. Recruiting efforts and sending school activity seem to occur where faculty can absorb additional students; involvement with community agencies may either substitute staff there for the faculty role, or may be carried with contributed faculty time or insignificant faculty time.

The various institutional indices are also related in varying degrees to the inclusion or noninclusion of specific program elements. The indices of institutional selectivity and institutional size are significantly related to each of the specific program elements considered above.

The relationships of inclusion of program elements to institutional size are in many cases rather complex ones (i.e., without obvious positive or negative monotonic or quadratic trends). Generally positive trends

(increase of proportion of programs containing the element with increasing institutional size) were observed for the extra-institutional involvement elements (elements 5 through 8 in Table 33), and for the elements of special academic counseling, special tutorial service, extracurricular support, job placement, and guidance for graduate study. Overall negative trends (smaller proportions of programs having this element with increasing institutional size) were observed for the elements of remedial courses and use of special instructional media. A generally quadratic relationship was observed in regard to the element of special classroom instructional strategy, with institutions within the mid-range of size having proportionally fewer programs with this element and with proportions of programs with this element generally increasing with movement toward either extreme of size.

The relationships of the various program elements to institutional selectivity were a bit more straightforward. Positive monotonic relationships (strictly increasing proportions of programs containing the element with increasing institutional selectivity) were observed for the elements of special academic counseling, special recruiting efforts or strategy, special tutorial services, extra-institutional involvement with feeder schools, and guidance for graduate study. Basically positive trends were also observed for the elements of extra-institutional involvement of community agencies or organizations, extracurricular support, grants, and work-study. This monotonic trend was not perfect, however, due to the fact that (1) institutions of "moderately low" selectivity had the smallest proportions of programs containing the extra-institutional

involvement element, and (2) institutions of "moderately high" selectivity had the greatest proportion of programs containing the remaining three elements. For the financial element of student loans, institutions of "low selectivity" had proportionately the fewest number of programs containing this element whereas the proportion of programs containing this element among the remaining selectivity categories was approximately the same. Negative monotonic relationships were observed between selectivity of institution and inclusion of the elements of extra-institutional involvement of business or industry and provision of remedial courses (i.e., the proportion of programs containing these elements was strictly decreasing with increasing institutional selectivity). For both the element of special classroom instructional strategies and that of job placement, programs within institutions of "high selectivity" were least likely to contain the element, while the proportions of programs containing these elements at institutions in other levels of selectivity were basically the same. The relationships between institutional selectivity and the inclusion or noninclusion of the program elements of special facilities for diagnosing academic difficulties, extra-institutional involvement with other colleges, and use of special instructional media were basically cubic. Institutions of "moderately low" selectivity were least likely to have programs containing these elements; institutions of "moderately high" selectivity were most likely to have programs containing these elements; and the proportion of programs containing these elements within institutions of either extreme category of selectivity were approximately the same.

Highest degree offering of an institution was significantly related to inclusion or noninclusion of all of the program elements except those

of a strictly financial aid nature (loans, grants, and work-study). Positive relationships (greater likelihood of a program to contain the element with increasing degree offering) were observed for the following elements: special academic counseling, special tutorial services, extra-institutional involvement with both feeder schools and other colleges, extracurricular support, and--as certainly would be expected--guidance for graduate study. Programs containing the elements of remedial course offerings, special instructional media, or special classroom instructional strategies were found in much higher proportion at the two-year institutions, and with about equal likelihood in the remaining offering categories. The remaining elements--special recruiting efforts, special facilities for diagnosing academic difficulties, extra-institutional involvement of both community agencies and business or industry, and job placement--were found in relatively larger numbers at institutions offering either a two-year program or at those offering a masters degree or higher. The proportion of programs containing such elements at institutions offering only a four- or five-year undergraduate degree were less than in either of the other two categories.

In relation to institutional control, the private institutions--both church-related and nonchurch-related--appear less likely than the public institutions to provide in their programs remedial courses, job placement, or involvement of community agencies; however, they are more likely than the public institution to include extracurricular support and guidance for graduate study (these disparities could be due to the two-year public college component of public institutions in general). Private nonchurch-related institutions are less likely to provide in their programs either

special instructional media or strategies than are public institutions or church-related private institutions; on the other hand, these nonchurch-related institutions are more likely than either the public institutions or the church-related private institutions to include as part of their programs involvements with feeder schools or with other colleges. Both public institutions and nonchurch-related private institutions, with the former more so than the latter, are more likely to provide as part of their programs involvement of business or industry.

Residentiality of an institution is also related to inclusion or noninclusion of various program elements of extant programs at the institution. Residential institutions are more likely to include in their programs special tutorial services, extracurricular support, work-study, and guidance for graduate study. Nonresidential institutions, on the other hand, are more likely to include in their programs involvement of community agencies and involvement of business or industry, remedial courses, use of special instructional media or strategies, and job placement. Accreditation of institution also tends to make a difference in terms of inclusion of certain program elements. Accredited institutions are more likely to include in their programs involvement with feeder schools and with other colleges, and extracurricular support, while nonaccredited institutions are more likely to include in their program remedial courses, use of special instructional media or strategies, grants, and work-study.

Predominant ethnic makeup of student body is unrelated in most cases to inclusion or noninclusion of specific program elements. Institutions with predominantly nonwhite student bodies are, however, more likely to provide in their programs extracurricular support and use of special

instructional media or classroom strategies. They are less likely to have as an element of their programs any special recruiting effort or strategy.

The degree of involvement of the institution with the federal SSDS program is markedly related to all but three of the specific program elements; these are remedial courses, loans, and work-study. For the remaining elements, with the exception of recruiting efforts and grants, the relationships are all pronounced and in precisely the same direction. SSDS-participating institutions are most likely, and institutions never applying for the program least likely, to provide each of these specific elements as parts of their programs. For the two exceptions mentioned above (recruiting efforts and grants), institutions applying for but not receiving federal assistance under the SSDS program are most likely to provide these elements in their programs, with the likelihood of these elements in programs of institutions in the other two categories approximately equal.

Inclusion or noninclusion of some program elements also appears to be related to the proportion of undergraduates who fall within the national poverty criteria. For the most part, these relationships are fairly straightforward. Basic positive trends (generally increasing likelihood of inclusion of the elements in a program with increasing proportion of disadvantaged students at an institution) were observed for involvement of business or industry, provision of remedial courses, use of special instructional media or strategies, and student loans. Inclusion of the element of job placement also showed a monotonic positive relationship with increasing proportion of disadvantaged except at those institutions

at which the financially disadvantaged made up more than half of the undergraduate population; where, surprisingly, job placement was least likely to be an included element. Relatively clear-cut negative trends (reduced likelihood of inclusion of the program element with increasing proportions of disadvantaged on campus) were observed in relation to the program elements of special recruiting efforts and guidance for graduate study. Proportions of financially disadvantaged undergraduates was also related to inclusion or noninclusion of extra-institutional involvement with feeder schools and with community agencies; however, the relationships were not simple and no meaningful pattern could be ascertained from them.

At this point, it would seem prudent to state that the relationships observed are more understandable in terms of the institutional characteristics and the stereotypes associated with different types or circumstances of institutions, than they are in terms of their special program efforts. For example: emphasis on continuing into graduate study may be pressed by a variety of programmatic emphases, but the impact can be felt in institutions where values and emphases push toward graduate study, not in those that traditionally see their students in technical roles in the community after two years of training in a highly pragmatic work role. The lesson at this point: given the limited time of program operation in most cases, it is more reasonable to assume that federal support amplifies existing institutional patterns. More time and longitudinal studies are needed to determine how programs may "transform" the institution.

13. Outcomes for the Financially Disadvantaged Undergraduate

Having examined the distribution of financially disadvantaged undergraduates in institutions of post-secondary education, programs directed toward these financially disadvantaged undergraduates, and the elements of such programs, we will now turn our attention to the critical matter of how well these disadvantaged undergraduates are served by the post-secondary educational institutions (the extent to which the institutions tend to facilitate these students in their adaptation to and perseverance in their chosen fields of study). Some insight into the answer to this question may be gained by examining the institutional records on student persistence and student entry into graduate study.

Institutional reports of the percentage of entering financially disadvantaged students who either graduate or continue their education after transfer to another institution are given in Table 46 and Table 47, respectively. It can be seen from these tables that on the average (median value) institutions graduate one-half of the financially disadvantaged undergraduates who enter; further, on the average (median value), institutions lose 10% of the entering financially disadvantaged by transfer to other institutions (which, of course, may or may not be accompanied by subsequent graduation from the institution to which transfer is made). While it may be tempting to add these values (since, in fact, the category of graduation and that of transfer are mutually exclusive, at least for four-year institutions), the values are not strictly additive, due to: (1) median values have been used, but more importantly (2) proportion of students listed as transferring may or may not be included in the

Table 46

Percentage of Entering "Disadvantaged" Students Who Graduate

Category	Frequency	Adjusted Percent[a]
0-9%	67	6.2
10-19%	79	7.3
20-29%	109	10.1
30-39%	106	9.9
40-49%	103	9.6
50-59%	182	16.9
60-69%	133	12.4
70-79%	139	12.9
80-89%	102	9.5
90-100%	55	5.1
No Response	423	

Median[a] = .50

[a]Based on those responding.

Table 47

Percentage of Entering "Disadvantaged" Students Who Transfer to Another Institution

Category	Frequency	Adjusted Percent[a]
0-9%	339	35.9
10-19%	269	28.5
20-29%	159	16.9
30-39%	63	6.7
40-49%	29	3.1
50-59%	29	3.1
60-69%	23	2.4
70-79%	17	1.8
80-89%	3	.3
90-100%	12	1.3
No Response	555	

Median[a] = .10

[a]Based on those responding.

proportion listed as graduating by another institution. Further, the figures given in Tables 46 and 47 do not necessarily reflect the fact that institutions differ in terms of both size and proportion of financially disadvantaged in the undergraduate population. In order to take these additional factors into consideration, an estimate of the total numbers of financially disadvantaged undergraduates was derived. These estimates were computed, using the mid-point of institutional size and proportion of financially disadvantaged categories. Then, an estimate of proportion of disadvantaged graduating was derived. A similar procedure was used to determine the overall percentage of entering disadvantaged undergraduates who transferred. This procedure yielded a value for all institutions in the sample of 48% of entering disadvantaged undergraduates who are reported to graduate from the institutions, and 11% of such undergraduates who transfer to another institution for continued undergraduate education. It should be stressed again that these two values are not necessarily additive. It should further be pointed out that these percentages were obtained by using figures based on <u>past</u> success (or lack of it) in graduating disadvantaged undergraduates and by applying these figures to undergraduates presently enrolled in institutions of post-secondary education.

Table 48 shows institutional responses to the proportion of their financially disadvantaged undergraduates who continued for graduate education. From the table it can be seen that the median response was about 1 in 10. Continuing for graduate education represents a goal of national importance for special programs, given the even greater inequities in enrollment of disadvantaged at this level. Since no relationship exists

Table 48

Percentage of "Disadvantaged" Students

Who Continue for Graduate Education

Category	Frequency	Adjusted Percent[a]
0-9%	310	45.5
10-19%	169	24.8
20-29%	76	11.1
30-39%	50	7.3
40-49%	25	3.7
50-59%	24	3.5
60-69%	11	1.6
70-79%	7	1.0
80-89%	4	.6
90-100%	6	.9
No Response	816	

Median[a] = .10

[a]Based on those responding.

between percentage of disadvantaged students continuing for graduate education and either size of institution or proportion of financially disadvantaged in the undergraduate population (see below), the procedure of computing estimated numbers, outlined in the previous paragraph, was not employed here.

14. Institutional Factors Related to Academic Success of Disadvantaged Students.

It is considered noteworthy at this point to include data reflecting possible relationships between these indices of outcomes for financially disadvantaged undergraduates and those institutional and programmatic indices previously considered; however, a strong note of caution must be stressed prior to introduction of these data. Even though the dangers of inferring causality from relational data are well known, the temptation to disregard these cautions is often very strong. Before yielding to this temptation, it would perhaps be prudent to recall that there is strong negative relationship between the number of mules per capita and the number of Ph.D.'s per capita in the various states. It would, however, be rather foolhardy on the part of state planners to attempt to increase the proportion of Ph.D.'s in their state population by the systematic elimination of mules. While this example is, by choice, quite ludicrous, it does have implications for this study. Three specific cautions should be kept in mind. First, the various relationships found are certainly influenced by additional institutional modifiers (e.g., as shown below, selectivity of institution is related to proportion of disadvantaged undergraduates who ultimately graduate and, to the extent that other

institutional indices are related to selectivity, these other indices will also reflect differences in proportions of disadvantaged undergraduates graduating). It is certainly no great enlightenment to find that institutions that handpick financially disadvantaged applicants on the basis of their indicated probability of success at the institution do, in fact, indicate that greater numbers of entering disadvantaged ultimately graduate. Second, within a given institution (or set of institutions grouped by some common institutional index) there is no basis for determining possible changes which may have taken place within the institution with regard to such indices as proportion of disadvantaged graduating, as a result of other institutionally initiated changes (e.g., modification of entrance requirements, provision of "special programs," increases in size or in proportions of disadvantaged in the undergraduate population, etc.). For example, it could well be the case (although it can certainly not be documented by the data of this study) that "special programs" for financially disadvantaged undergraduates were initiated due to very poor graduation rates for such students, and that, in fact, the graduation rates have since increased (or decreased). Finally, as we have documented above, special programmatic attention to the financially disadvantaged is a relatively new approach at a majority of institutions (for example, the USOE-funded SSDS program was beginning only its second year of operation at the time of the survey). To judge the success (or failure) of such programs on the basis of such a brief trial period, particularly when using the indices considered here and with a cross-sectional design, would be most imprudent.

The relationship between institutional selectivity and proportions of disadvantaged undergraduates graduating is shown in Table 49. The relationship shown in this table, with proportion of disadvantaged graduates increasing with institutional selectivity, makes good intuitive sense. While less than 44% of institutions within the low selectivity category graduate 50% or more of their disadvantaged undergraduates, over 81% of the institutions of high selectivity graduate one-half or more of the financially disadvantaged in their undergraduate population.

Table 50 shows that institutional size is also related to proportion of disadvantaged undergraduates graduating. The basic trend in Table 50 suggests that, given a financially disadvantaged student has gained admission, the likelihood of his graduation is generally greater the smaller the size of the institution within which he is enrolled. This is no doubt confounded by a relationship between institutional size and overall attrition.

Institutional control and highest offering of institution are also significantly related to proportion of disadvantaged graduating, as shown in Tables 51 and 52. From Table 51 it can be seen that private nonchurch-related institutions tend to graduate the greatest proportions of their enrolled disadvantaged undergraduates, while public institutions tend to graduate the lowest proportions of their disadvantaged undergraduates. From Table 52, we see that institutions offering a four-year degree or above tend to graduate greater proportions of enrolled disadvantaged than do institutions offering only a two-year degree. As has been noted

Table 49

Percentage of "Disadvantaged" Graduating by Selectivity of Institution

Percent Graduating		Selectivity: Low	Moderately Low	Moderately High	High	Row Total/ Percent
0-24%	Frequency	114	26	46	8	194
	Row Percent	58.8	13.4	23.7	4.1	18.3
	Column Percent	30.6	13.8	12.1	6.8	
25-49%	Frequency	96	63	88	14	261
	Row Percent	36.8	24.1	33.7	5.4	24.7
	Column Percent	25.8	33.3	23.2	12.0	
50-74%	Frequency	111	61	148	48	368
	Row Percent	30.2	16.6	40.2	13.0	34.8
	Column Percent	29.8	32.3	40.0	41.0	
75-100%	Frequency	51	39	98	47	235
	Row Percent	21.7	16.6	41.7	20.0	22.0
	Column Percent	13.7	20.6	25.8	40.2	
Column Total		372	189	380	117	1058
Percent		35.2	17.9	35.9	11.1	100.00

$\chi^2 = 101.08$ with 9 df, $p < .001$

Table 50

Percentage of "Disadvantaged" Graduating by Institutional Size

Percent Graduating		Full-Time Equivalent Undergraduates									
		Less Than 500	500-999	1000-1499	1500-1999	2000-2999	3000-4999	5000-7999	8000-11999	12000 or More	Row Total/ Percent
0-24%	Frequency	23	45	37	17	21	25	15	6	7	196
	Row Percent	11.7	23.0	18.9	8.7	10.7	12.8	7.7	3.1	3.6	18.5
	Column Percent	12.9	17.9	23.3	19.1	18.6	22.3	21.7	12.8	17.9	
25-49%	Frequency	33	49	34	22	39	27	18	21	15	258
	Row Percent	12.8	19.0	13.2	8.5	15.1	10.5	7.0	8.1	5.8	24.4
	Column Percent	18.5	19.5	21.4	24.7	34.5	24.1	26.1	44.7	38.5	
50-74%	Frequency	65	92	52	31	33	44	27	11	13	368
	Row Percent	17.7	25.0	14.1	8.4	9.0	12.0	7.3	3.0	3.5	34.8
	Column Percent	36.5	36.7	32.7	34.8	29.2	39.3	39.1	23.4	33.3	
75-100%	Frequency	57	65	36	19	20	16	9	9	4	235
	Row Percent	24.3	27.7	15.3	8.1	8.5	6.8	3.8	3.8	1.7	22.2
	Column Percent	32.0	25.9	22.6	21.3	17.7	14.3	13.0	19.1	10.3	
Column Total		178	251	159	89	113	112	69	47	39	1057
Percent		16.8	23.7	15.0	8.4	10.7	10.6	6.5	4.4	3.7	100.0

$\chi^2 = 51.77$ with 24 df, $p < .001$

Table 51

Percentage of "Disadvantaged" Graduating by Institutional Control

Percent Graduating		Control			Row Total/ Percent
		Public	Private	Church-related	
0-24%	Frequency	154	16	28	198
	Row Percent	77.8	8.1	14.1	19.2
	Column Percent	27.7	7.6	10.5	
25-49%	Frequency	168	36	51	255
	Row Percent	65.9	14.1	20.0	24.7
	Column Percent	30.3	17.1	19.2	
50-74%	Frequency	165	78	110	353
	Row Percent	46.7	22.1	31.2	34.2
	Column Percent	29.7	37.1	41.4	
75-100%	Frequency	68	80	77	225
	Row Percent	30.2	35.6	34.2	21.8
	Column Percent	12.3	38.1	28.9	
Column Total		555	210	266	1031
Percent		53.8	20.4	25.8	100.0

χ^2 = 124.00 with 6 df, $p < .001$

Table 52

Percentage of "Disadvantaged" Graduating by Highest Offering of Institution

Percent Graduating		Highest Offering: Two-Year	4-5 Year Undergraduate	Masters or Above	Row Total/ Percent
0-24%	Frequency	122	37	38	197
	Row Percent	61.9	18.8	19.3	19.2
	Column Percent	31.7	12.1	11.4	
25-49%	Frequency	104	71	80	255
	Row Percent	40.8	27.8	31.4	24.9
	Column Percent	27.0	23.3	24.0	
50-74%	Frequency	99	124	126	349
	Row Percent	28.4	35.5	36.1	34.1
	Column Percent	25.7	40.7	37.7	
75-100%	Frequency	60	73	90	223
	Row Percent	26.9	32.7	40.4	21.8
	Column Percent	15.6	23.9	26.9	
Column Total		385	305	334	1024
Percent		37.6	29.8	32.6	100.0

$\chi^2 = 75.50$ with 6 df, $p < .001$

previously, the inclusion of two-year community colleges among the publicly controlled institutions probably serves to depress the proportion of disadvantaged graduated by the public institutions as they are categorized in this study.

Table 53 shows the relationship of residentiality of institutions and proportions of disadvantaged graduating. From this table it can be seen that residential institutions are more likely to graduate greater proportions of their financially disadvantaged undergraduates than are nonresidential institutions. It is again the case that the inclusion of the two-year public community colleges in the nonresidential category may have a depressing effect. It is interesting to note that institutional accreditation and predominant ethnicity of student body were not significantly related to proportion of disadvantaged students graduating.

Table 54 shows the relationship between percentage of undergraduate population who are disadvantaged and proportion of disadvantaged graduating. Although the relationship described in this table is not immediately obvious, a plot of median proportion of disadvantaged graduated across the seven categories for percentage of disadvantaged in the undergraduate population gives a basically quadratic curve, with median proportion of disadvantaged graduating highest in the extreme categories and lowest in the category where 16-20% of undergraduates are disadvantaged. An explanation of this curvilinear relationship may be that institutions with high proportions of disadvantaged are not particularly stringent in grading standards, and that institutions with low proportions are both selective and lenient in attrition standards.

Table 53

Percentage of "Disadvantaged" Graduating

by Residentiality of Institution

Percent Graduating		Institutional Residentiality		Row Total/ Percent
		Residential	Nonresidential	
0-24%	Frequency	53	144	197
	Row Percent	26.9	73.1	18.7
	Column Percent	11.2	24.7	
25-49%	Frequency	107	152	259
	Row Percent	41.3	58.7	24.5
	Column Percent	22.6	26.1	
50-74%	Frequency	183	186	369
	Row Percent	49.6	50.4	34.9
	Column Percent	38.6	32.0	
75-100%	Frequency	131	100	231
	Row Percent	56.7	43.3	21.9
	Column Percent	27.6	17.2	
Column Total		474	582	1056
Percent		44.9	55.1	100.0

$\chi^2 = 43.45$ with 3 df, $p < .001$

Table 54

Percentage of "Disadvantaged" Graduating by Percentage of Undergraduates Who Are Disadvantaged

Percent Graduating		Percent of Undergraduate Population Who Are Disadvantaged							Row Total/ Percent
		0-5%	6-10%	11-15%	16-20%	21-25%	26-50%	51% or More	
0-24%	Frequency	39	46	25	24	17	33	7	191
	Row Percent	20.4	24.1	13.1	12.6	8.9	17.3	3.7	18.8
	Column Percent	13.1	20.2	18.2	25.3	24.6	27.3	10.3	
25-49%	Frequency	58	54	36	34	21	39	11	253
	Row Percent	22.9	21.3	14.2	13.4	8.3	15.4	4.3	24.9
	Column Percent	19.3	23.7	26.3	35.8	30.4	32.2	16.2	
50-74%	Frequency	112	76	49	23	16	35	36	347
	Row Percent	32.3	21.9	14.1	6.6	4.6	10.1	10.4	34.2
	Column Percent	37.7	33.3	35.8	24.2	23.2	28.9	52.9	
75-100%	Frequency	88	52	27	14	15	14	14	224
	Row Percent	39.3	23.2	12.1	6.3	6.7	6.3	6.3	22.1
	Column Percent	29.6	22.8	19.7	14.7	21.7	11.6	20.6	
Column Total		297	228	137	95	69	121	68	1015
Percent		29.3	22.5	13.5	9.4	6.8	11.9	6.7	100.0

$\chi^2 = 60.58$ with 18 df, $p < .001$

A cross-tabulation of percentage of disadvantaged students graduating by number of programs for disadvantaged existing at an institution show no statistically significant differences exist: proportions of disadvantaged graduating do not vary across institutions containing different numbers of programs. Although, as stated, the differences were not significant, it is interesting to note that 61% of the institutions having no programs for their disadvantaged undergraduates graduated 50% or more of their disadvantaged undergraduates (a percentage which was neither equalled nor exceeded by any other set of institutions grouped by number of programs). Institutions without problems in graduating disadvantaged students do not have special support programs.

Within those institutions having "special programs" for the disadvantaged undergraduates, the proportion of disadvantaged graduating was not related to either full-time equivalent staff or full-time equivalent faculty assigned to program; however, significant relationships did exist for full-time equivalent students served by program, cost per student, and student-faculty ratio. These relationships are shown in Tables 55 through 57. It can be seen from Table 56 and Table 57 that programs at institutions graduating the greatest proportions of their disadvantaged undergraduate population tend to have below average student-faculty ratio (greater proportions of these programs have smaller numbers of students per faculty member), and smaller numbers of students. Table 57 indicates that institutions graduating the greatest number of their undergraduate disadvantaged population are more likely to have programs with greater than average cost per student.

Table 55

Relationship between Percentage of Disadvantaged Graduating from Institution and Numbers of Full-Time Equivalent Students Served by Programs within Institutions

Percent Graduating		Full-Time Equivalent Students Served: Below Common Median	Above Common Median	Row Total/ Percent
0-24%	Frequency	149	143	292
	Row Percent	51.0	49.0	18.5
	Column Percent	19.0	18.0	
25-49%	Frequency	186	235	421
	Row Percent	44.2	55.8	26.7
	Column Percent	23.8	29.5	
50-74%	Frequency	282	309	591
	Row Percent	47.7	52.3	37.4
	Column Percent	36.0	38.8	
75-100%	Frequency	166	109	275
	Row Percent	60.4	39.6	17.4
	Column Percent	21.2	13.7	
Column Total		700	730	1430
Percent		49.0	51.0	100.0

Contingency Coefficient = .11, $p < .001$

Table 56

Relationship between Percentage of Disadvantaged Graduating from Institution and Costs per Full-Time Equivalent Student of Programs within Institutions

Percent Graduating		Full-Time Equivalent Students Cost: Below Common Median	Above Common Median	Row Total/ Percent
0-24%	Frequency	148	118	266
	Row Percent	55.6	44.4	18.3
	Column Percent	21.0	15.8	
25-49%	Frequency	224	179	403
	Row Percent	55.6	44.4	27.7
	Column Percent	31.7	23.9	
50-74%	Frequency	250	296	546
	Row Percent	45.8	54.2	37.6
	Column Percent	35.4	39.6	
75-100%	Frequency	84	155	239
	Row Percent	35.1	64.9	16.4
	Column Percent	11.9	20.7	
Column Total		706	748	1454
Percent		48.6	51.4	100.0

Contingency Coefficient = .15, $p < .001$

Table 57

Relationship between Percentage of Disadvantaged Graduating from Institution and Student to Faculty Ratio in Programs within Institutions

Percent Graduating		Student/Faculty Ratio: Below Common Median	Student/Faculty Ratio: Above Common Median	Row Total/ Percent
0-24%	Frequency	89	89	178
	Row Percent	50.0	50.0	18.5
	Column Percent	18.7	18.3	
25-49%	Frequency	114	148	262
	Row Percent	43.5	56.5	27.2
	Column Percent	24.0	30.4	
50-74%	Frequency	173	184	357
	Row Percent	48.5	51.5	37.1
	Column Percent	36.4	37.8	
75-100%	Frequency	99	66	165
	Row Percent	60.0	40.0	17.2
	Column Percent	20.8	13.6	
Column Total		475	487	962
Percent		49.4	50.6	100.0

Contingency Coefficient = .11, $p < .05$

Proportion of disadvantaged students graduating at an institution is also frequently related to inclusion or noninclusion of the specific program elements listed in Table 33. The relationship is significant for all but four of these program elements, the four being: (1) extra-institutional involvement with other colleges, (2) provision of remedial courses, (3) student loans, and (4) grants. The relationships are, in the main, not simple ones. Two of the relationships, those between proportions of disadvantaged students graduating (1) special recruiting efforts and (2) guidance for graduate study, are positive monotonic relationships (i.e., increasing likelihood of inclusion of the program element with increasing percentages of disadvantaged students graduating). Four of the relationships suggest lowest likelihood of inclusion of program elements in the 25-49% graduating category, with likelihood in the remaining categories approximately equal; these elements are: (1) use of special facilities for diagnosing academic difficulties, (2) extra-institutional involvement with feeder schools or (3) with business or industry, and (4) use of special instructional media. Four additional relationships, those including the elements of provision of special tutorial services, special classroom instructional strategies, work-study, and job placement, indicate greatest likelihood of inclusion of this element in the 50 to 74% graduating category with likelihood for the remaining categories approximately equal. The three remaining relationships (those involving the elements of special academic counseling, extra-institutional involvement of community agencies, and provision of extracurricular support) are basically cubic in nature; that is, likelihood of inclusion of program elements is greatest in the 0-24% and the 50-74% categories and lowest in the remaining categories.

15. Proportions of Disadvantaged Students Graduating at Institutions Awarded SSDS Programs

Table 58 shows the relationship between degree of participation of an institution in the USOE-funded SSDS program and proportion of disadvantaged students graduating. The relationship shown in this table is somewhat contraintuitive, when taken at face value; for these data show that institutions receiving funds for SSDS programs are those where disadvantaged students in the past have been least likely to graduate (it must be remembered that the SSDS programs had not been in existence long enough to yet produce graduates at the time of the survey, even in the two-year institutions). That this relationship is moderated by other institutional indices (particularly selectivity), however, is almost a certainty. Table 58 may reflect, to a large extent, a strategy of SSDS planners to place their programs at institutions where the need to improve persistence to graduation was greatest, or it may simply reflect the fact that selective institutions with low attrition rates either do not apply for funding, or do not have many truly "disadvantaged" in their institutions.

16. Institutional Factors Related to Continuance into Graduate Study by Disadvantaged

Although the proportion of disadvantaged undergraduates transferring from an institution was found to be significantly related to most of the institutional indices considered in this report, and to a few of the program-specific variables which have been considered, presentation of these data has not been undertaken, for the reason that the meaning of

Table 58

Percentage of Disadvantaged Graduating by Degree of Participation in SSDS Programs

Percent Graduating		SSDS Status: Participated	Applied But Not Funded	Never Applied	Row Total/ Percent
0-24%	Frequency	31	44	126	201
	Row Percent	15.4	21.9	62.7	18.7
	Column Percent	25.2	17.3	18.1	
25-49%	Frequency	37	59	167	263
	Row Percent	14.1	22.4	63.5	24.5
	Column Percent	30.1	23.1	24.0	
50-74%	Frequency	36	104	233	373
	Row Percent	9.7	27.9	62.5	34.7
	Column Percent	29.3	40.8	33.4	
75-100%	Frequency	19	48	171	238
	Row Percent	8.0	20.2	71.8	22.1
	Column Percent	15.4	18.8	24.5	
Column Total		123	255	697	1075
Percent		11.4	23.7	64.8	100.0

$\chi^2 = 14.70$ with 6 df, $p < .05$

differences between proportions of students transferring from institutions is at best ambiguous. It is possible, for example, that at a two-year institution a student could graduate as well as transfer to a four-year institution to continue his education. Further, transfer could indicate that the course of study at an institution offered a challenge that was either too great or too small for the transferring student.

The remaining portion of this section is concerned with relationships between proportions of disadvantaged undergraduates continuing for graduate education and the various institutional and programmatic indices considered previously in this report. It should be pointed out, however, that the number of institutions providing these data was relatively small; the number of institutions for which comparisons can be made shrinks even further because information concerning the additional cross-tabulation index was frequently omitted or incomplete. Perhaps the most critical aspect of this shrinkage, in terms of possible implication from the data, is the disparate effect on the marginal distribution of the cross-tabulation index (this effect can be observed by comparing marginal proportions of the cross-tabulation indices of this section with those of previous sections, for which information was more complete).

The data in Table 59 indicate that proportion of disadvantaged undergraduates continuing their education by enrollment in graduate schools is positively related to institutional selectivity (i.e., as institutional selectivity increases the likelihood of larger proportions of disadvantaged students continuing for graduate education also increases). This relationship is best observed in the two extreme categories of proportion continuing for graduate education.

Table 59

Proportion of Disadvantaged Undergraduates Continuing for Graduate Education by Institutional Selectivity

Proportion to Graduate School		Selectivity				Row Total/ Percent
		Low	Moderately Low	Moderately High	High	
0-5%	Frequency	108	53	107	18	286
	Row Percent	37.8	18.5	37.4	6.3	42.6
	Column Percent	60.7	45.3	37.3	20.2	
6-15%	Frequency	33	38	88	20	179
	Row Percent	18.4	21.2	49.2	11.2	26.7
	Column Percent	18.5	45.3	37.3	22.5	
16-30%	Frequency	23	11	50	30	114
	Row Percent	20.2	9.7	43.9	26.3	17.0
	Column Percent	12.9	9.4	17.4	33.7	
31-100%	Frequency	14	15	42	21	92
	Row Percent	15.2	16.3	45.7	22.8	13.7
	Column Percent	7.9	12.8	14.6	23.6	
Column Total		178	117	287	89	671
Percent		26.5	17.4	42.8	13.3	100.0

$\chi^2 = 65.76$ with 9 df, $p < .001$

Proportions of disadvantaged continuing for graduate education is also related to the proportions of such students in the total undergraduate population of the institution, as shown in Table 60. The relationship shown in this table is not immediately obvious; however, a plot of the median institutional response across the seven categories of the cross-tabulation index shows a steadily decreasing proportion from 0-5% undergraduate disadvantaged through the category 21 to 25% with subsequent increase thereafter. This quadratic-type relationship has been observed previously.

Proportion of disadvantaged undergraduates continuing for graduate education is also related to institutional control and highest offering of the institution, as shown in Tables 61 and 62. From Table 61 it can be seen that, given a disadvantaged student has been enrolled, the likelihood that he will attend graduate school is greatest at the private non-church-related institution; it is least at the public institution (again, the inclusion of the two-year public community colleges within the public institution category may be distorting this relationship). From Table 62, we see that the higher the degree offering of an institution, the greater is the likelihood that the institution will send larger proportions of its disadvantaged undergraduates for graduate training.

Residentiality of institution also appears to be related to the proportion of disadvantaged students in the undergraduate population who enter graduate school, as shown in Table 63. Residential institutions are more likely to send greater proportions of their disadvantaged undergraduates to graduate training than are nonresidential institutions.

Table 60

Proportion of Disadvantaged Undergraduates Continuing for Graduate Education by Percentage of Disadvantaged Students in Undergraduate Population

Proportion to Graduate School		Percent of Financially Disadvantaged in Undergraduate Population. 0-5%	6-10%	11-15%	16-20%	21-25%	26-50%	51% or More	Row Total/ Percent
0-5%	Frequency	64	55	45	31	24	36	18	273
	Row Percent	23.4	20.1	16.5	11.4	8.8	13.2	6.6	42.5
	Column Percent	33.3	37.7	48.4	51.7	70.6	51.4	37.5	
6-15%	Frequency	53	41	25	12	6	22	13	172
	Row Percent	30.8	23.8	14.5	7.0	3.5	12.8	7.6	26.7
	Column Percent	27.6	28.1	26.9	20.0	17.6	31.4	27.1	
16-30%	Frequency	35	28	14	11	2	9	10	109
	Row Percent	32.1	25.7	12.8	10.1	1.8	8.3	9.2	17.0
	Column Percent	18.2	19.2	15.1	18.3	5.9	12.9	20.8	
31-100%	Frequency	40	22	9	6	2	3	7	89
	Row Percent	44.9	24.7	10.1	6.7	2.2	3.4	7.9	13.8
	Column Percent	20.8	15.1	9.7	10.0	5.9	4.3	14.6	
Column Total		192	146	93	60	34	70	48	643
Percent		29.9	22.7	14.5	9.3	5.3	10.9	7.5	100.0

$\chi^2 = 36.65$ with 18df, $p < .01$

Table 61

Proportion of Disadvantaged Undergraduates Continuing for Graduate Education by Institutional Control

Proportion to Graduate School		Control: Public	Private	Church-Related	Row Total/ Percent
0-5%	Frequency	180	35	60	275
	Row Percent	65.5	12.7	21.8	41.5
	Column Percent	57.0	22.9	31.1	
6-15%	Frequency	73	41	66	180
	Row Percent	40.6	22.8	36.7	27.2
	Column Percent	23.1	26.8	34.2	
16-30%	Frequency	42	36	38	116
	Row Percent	36.2	31.0	32.8	17.5
	Column Percent	26.8	23.5	19.7	
31-100%	Frequency	21	41	29	91
	Row Percent	23.1	45.1	31.9	13.7
	Column Percent	6.6	26.8	15.0	
Column Total		316	153	193	662
Percent		47.7	23.1	29.2	100.0

$\chi^2 = 79.11$ with 6 df, $p < .001$

Table 62

Proportion of Disadvantaged Undergraduates Continuing for Graduate Education by Highest Offering of Institution

Proportion to Graduate School		Highest Offering: Two-Year	Highest Offering: 4-5 Year Undergraduate	Highest Offering: Masters or Above	Row Total/ Percent
0-5%	Frequency	99	80	93	272
	Row Percent	36.4	29.4	34.2	41.3
	Column Percent	66.0	33.3	34.7	
6-15%	Frequency	24	86	69	179
	Row Percent	13.4	48.0	38.5	27.2
	Column Percent	16.0	35.8	25.7	
16-30%	Frequency	15	42	59	116
	Row Percent	12.9	36.2	50.9	17.6
	Column Percent	10.0	17.5	22.0	
31-100%	Frequency	12	32	47	91
	Row Percent	13.2	35.2	51.6	13.8
	Column Percent	8.0	13.3	17.5	
Column Total		150	240	268	658
Percent		22.8	36.5	40.7	100.0

$\chi^2 = 56.62$ with 6 df, $p < .001$

Table 63

Proportion of Disadvantaged Undergraduates Continuing for Graduate Education by Residentiality of Institution

Proportion to Graduate School		Residentiality: Residential	Residentiality: Nonresidential	Row Total/ Percent
0-5%	Frequency	110	177	287
	Row Percent	38.3	61.7	42.7
	Column Percent	32.0	54.0	
6-15%	Frequency	103	73	176
	Row Percent	58.5	41.5	26.2
	Column Percent	29.9	22.3	
16-30%	Frequency	62	54	116
	Row Percent	53.4	46.6	17.3
	Column Percent	18.0	16.5	
31-100%	Frequency	69	24	93
	Row Percent	74.2	25.8	13.8
	Column Percent	20.1	7.3	
Column Total		344	328	672
Percent		51.2	48.8	100.0

$\chi^2 = 42.72$ with 3 df, $p < .001$

Notable by the absence of significant relationship to proportion of disadvantaged undergraduates continuing for graduate education are the institutional indices: institutional size, accreditation of institution, predominant ethnicity of student body, degree of participation in USOE-funded SSDS programs, and number of programs existing at an institution.

17. Programmatic Factors Related to Continuance into Graduate Study by Disadvantaged Students

Within those institutions having "special programs" for their disadvantaged undergraduates, proportions of disadvantaged undergraduates continuing for graduate education is significantly related to only two of the program-specific variables considered above; these are number of full-time equivalent staff assigned to program, and program cost per full-time equivalent student. These relationships are depicted in Tables 64 and 65. While these relationships are almost certainly distorted by the disproportionate shrinkages of institutions falling within the categories of the cross-tabulation indices considered above, they are considered of sufficient interest for inclusion. From Tables 64 and 65 it can be seen that both relationships are, in fact, positive (i.e., institutions sending greater proportions of their disadvantaged undergraduates to graduate school generally tend to have relatively greater numbers of programs with above average--median value--number of staff assigned and relatively greater numbers of programs with above average cost). However, the relationships are not strictly monotonic (see tabular data).

Table 64

Relationship between Proportion of Disadvantaged Undergraduates Continuing for Graduate Education at an Institution and Full-Time Equivalent Staff Assigned to Programs within Institution

Proportion to Graduate School		Full-Time Equivalent Staff Assigned: Below Common Median	Above Common Median	Row Total/ Percent
0-5%	Frequency	177	96	273
	Row Percent	64.8	35.2	37.5
	Column Percent	43.5	29.9	
6-15%	Frequency	121	88	209
	Row Percent	57.9	42.1	28.7
	Column Percent	29.7	27.4	
16-30%	Frequency	63	92	155
	Row Percent	40.6	59.4	21.3
	Column Percent	15.5	28.7	
31-100%	Frequency	46	45	91
	Row Percent	50.5	49.5	12.5
	Column Percent	11.3	14.0	
Column Total		407	321	728
Percent		55.9	44.1	100.0

Contingency Coefficient = .18, $p < .001$

Table 65

Relationship between Proportion of Disadvantaged Undergraduates Continuing for Graduate Education at an Institution and Costs per Student of Programs within Institution

Proportion to Graduate School		Cost per Student: Below Common Median	Cost per Student: Above Common Median	Row Total/ Percent
0-5%	Frequency	203	182	385
	Row Percent	52.7	47.3	40.4
	Column Percent	45.1	36.3	
6-15%	Frequency	128	163	291
	Row Percent	44.0	56.0	30.6
	Column Percent	28.4	32.5	
16-30%	Frequency	84	96	180
	Row Percent	46.7	53.3	18.9
	Column Percent	18.7	19.1	
31-100%	Frequency	35	61	96
	Row Percent	36.5	63.5	10.1
	Column Percent	7.8	12.2	
Column Total		450	502	952
Percent		47.3	52.7	100.0

Contingency Coefficient = .10, $p < .05$

Proportion of disadvantaged undergraduates continuing for graduate education at an institution is also related to inclusion or noninclusion of some of the elements of Table 33 within their programs for these disadvantaged undergraduates. As may have been predicted, a strong positive monotonic relationship exists with the inclusion or noninclusion of the elements of guidance for graduate study (i.e., increasing proportions of programs containing this element as percentage of disadvantaged students continuing to graduate school increased). A less marked, but significant, positive relationship exists with the element of extra-institutional involvement of business or industry. Generally negative relationships (decreasing proportions of programs containing the element with increasing percentage of disadvantaged undergraduates continuing for graduate education) were observed for the elements of remedial course offerings and special instructional media and strategies. Although the intent of such programmatic activities may be pure, they are simply more likely to occur where they are needed to keep students in school. Significant relationships also exist with inclusion or noninclusion of the elements: special tutorial services, extra-institutional involvement with other colleges, and the financial aid element of loans, grants, and work-study. These relationships, while not simple, have one feature in common; that is, institutions sending 31% or more of their undergraduates to graduate training have a markedly greater proportion of programs containing each of these elements.

18. Suggestions of Institutional Need in Establishing and/or Supplementing Programmatic Attention to Disadvantaged Undergraduates

Items 9 and 10 of the Census Form (see Appendix A) seek from institutional authorities recommendations for possible changes to or additions of programs for optimal institution-specific arrangements for special programmatic attention to disadvantaged students, and of suggestions as to appropriate sources for additional funds. Changes proposed by institutional authorities in order to attain what they consider to be optimal attention to disadvantaged undergraduates are given in Table 66. For this table, proposed budget changes were determined by comparison of the figure given in response to item 9 of the census form, asking budget for an optimal program, and that given in response to item 8, asking current total expenditures for special programmatic attention to disadvantaged students. About four out of five administrative officials felt that their institutions should serve greater numbers of disadvantaged students, with increased funds. The preponderance of the remaining group of institutional officials saw "optimality" attained by maintaining current numbers of students with equal or increased budget, a finding that comes, of course, as no surprise, considering the context of the study. Almost 90% of the administrators saw "optimality" obtainable only through increased budget. Only 19 institutions of the 1087 reporting (less than 2%) felt more students could be served at the existing or a smaller budget. This may provide more information about the individual responding than about what is actually possible--some of these may be negative toward the idea of investing additional funds in disadvantaged students, some may feel some

Table 66

Proposed Changes to Attain "Optimal" Institution-Specific

Attention to Disadvantaged Undergraduates

Changes in Program Budgets		Changes in Number of Students: Fewer Students	Same Number of Students	More Students	Row Total/ Percent
Smaller	Frequency	4	7	13	24
	Total Percent	.4	.6	1.2	2.2
Same	Frequency	3	98	6	107
	Total Percent	.3	9.0	.6	9.8
Increased	Frequency	1	96	859	956
	Total Percent	.1	10.0	79.0	87.9
Column Total		8	201	878	1087
Percent		.7	18.5	80.8	100.0

of the program elements are "frills," and some, indeed, may see more cost-efficient ways of accommodating disadvantaged students. For the more general purposes of the survey: an almost overwhelming number of institutional respondents--80% of those responding--imply that the optimal situation involves more disadvantaged students, not less--and, of course, more money to cover the costs. Additional revenue and more disadvantaged students are, of course, confounded in the notion of optimality; but, there is no evidence that given the financial incentive or possibility, institutions would not be willing to take on increased numbers of disadvantaged.

Table 67 shows the administrators' judgments of what would be appropriate or most likely sources of additional funds. Within Table 67, there are two indications of the relative importance of potential sources of funds listed. These are (1) the percentage of administrators indicating that the source of funds is an important one (percentage computed as a portion of those institutions returning "usable" census forms), and (2) the median rank awarded to the potential source of funds checked as important (respondents were asked to rank sources in order of importance). Clearly, most respondents look to federal sources as the most important potential source of funds, coming from either increased appropriations under existing federal authorization or as a result of new federal legislation. State funds are also seen as an important potential source for increasing programmatic attention to disadvantaged undergraduates. While foundations are seen as an important source of funds by over one-third of the institutional officials, the average rank of importance given to

Table 67

Responses to Prospective Sources of Additional Funds

for Programmatic Attention for Disadvantaged

Source of Funds	Number Checking as Important	Percent of Responding Irstitutions	Median Rank Awarded
Institutional funds - general	454	30.3%	3.3
Institutional funds - tuition and fees	240	16.0%	4.4
Institutional funds - gifts	480	32.1%	3.6
Institutional funds - endowment income	172	11.5%	5.0
Institutional funds - other	67	4.4%	3.4
Foundations	527	35.2%	3.4
Existing federal authorizations, with increased appropriation	967	64.5%	1.3
New federal legislation	875	58.4%	1.9
State general funds	642	42.9%	2.7
New state legislation	663	44.2%	3.0
Other	64	4.3%	3.0

this source is between three and four. (One wonders, of course, what the response would have been had a major foundation conducted the survey.) With the exception of gifts and general funds, institutional funds are in general seen as a relatively unimportant source. It is interesting to note, that, while one of nine officials see institutional endowment income as an important source of funds, the rank given to this source is very low.

C. Limitations

While certain limitations have been noted in the discussion of the findings, it is considered most prudent, at this point, to review the totality of limitations affecting the findings of this study.

Limitations regarding the bias introduced by the self-selective nature of responding institutions have been discussed in some detail in a separate section of this paper. However, the fact of response or non-response from an institution, which is affected notably by the institutional capability to respond to surveys in general, or the importance the president places on the disadvantaged and on responding, is only one aspect of this self-selectivity problem. As noted throughout this report, the number of institutions contributing to any given statistic shrinks, in varying degrees, from the number of 1766 institutions that returned the census form. For example, 64 of these institutions (3.6% of those institutions returning forms) were not included in any analyses because they provided no information whatsoever on their returned census form, or indicated that information pertaining to their institution would be

included in the form returned by parent institution. Additionally, 204 institutions (11.6% of those returning census forms) contributed only to the overall statistic regarding numbers of programs on campus (these institutions were those which returned a blank census form with a notation that they had no such programs existing on their campuses). Further, many institutions left one or another question unanswered: in fact, from data presented earlier (see Table 1) better than 13% of the institutions returning the census form were classified as having responded to less than half of the items on that form. Thus, in terms of any specific analysis, additional biases may be introduced in regard to the representativeness of the sample of institutions on which that analysis is based (these additional biases may have: no effect; an augmenting effect; or a corrective effect, on those biases discussed in relation to all institutions returning the census form).

In addition to sampling biases, the reliability and validity of information provided is questionable. It has been seen previously (see Table 1) that 5.6% of the institutions returning census forms provided conflicting information on this form (these were obvious discrepancies such as greater yearly expenditures for programmatic attention to disadvantaged students than total institutional budget or greater numbers of full-time equivalent students served in a program for disadvantaged undergraduates than the entire undergraduate student body, etc.). Time and budget limitations did not permit challenge and resolution of suspicious data in most instances.

Another bit of evidence that would indicate the very tenuous nature of much of the information provided came from instances where a president

or his assistant made xerox copies of the census form and distributed these to several different staff members. This has been noted in other federal surveys;[5] in the current survey, over 50 institutions returned "duplicate" census forms. In virtually every case, there was disagreement in terms of the information provided on these "duplicate" forms. These differences ranged from those concerning judgmental or estimation items (e.g., optimal arrangement for special programmatic attention to disadvantaged students, importance of sources of possible funds for increased support, estimates of percentage of disadvantaged undergraduates at the institution, and proportions of disadvantaged estimated as graduating, transferring, or continuing for graduate study) to those concerning factual information of record at the institutions (e.g., total current funds expenditures, full-time equivalent undergraduate enrollment, number of programs on campus, etc.). In at least two cases, there were disagreements in forms prepared by the same individual at an institution. When such a situation existed, only one form was used to provide data for this report; the general rule for use of one or another of such "duplicate" forms was that the one containing the greatest amount of information (not necessarily the most factual information) was used. When, in fact, both "duplicate" forms were complete to the same extent the inclusion or non-inclusion of one of these forms in the census data was determined by random means. While it may be argued that such disparities in provided information

[5] C.f. Hodgkinson, H.L. and Edelstein, S. Questionnaires: In fact there is error. Educational Researcher, I (8), August 1972.

is more likely to come from institutions where "duplicate" forms would be returned, it is felt that such instances reflect not only institution-specific unreliability but also cast serious doubt on the reliability of the information provided by any institution. If nothing else, the items of the census form requesting estimations or judgmental responses are certainly less than perfectly reliable.

Error is also introduced into the data from several additional sources. Errors in encoding the data and in keypunching are inevitable. Some, but certainly not all, of this error was removed by a lengthy process of pre-analysis data examination, cross-checking, and corrections. Further, during the encoding process, certain assumptions were made. For example, if an institution listed no programs for disadvantaged undergraduates it was assumed that no such programs existed at that institution (not a particularly unreasonable assumption, since this was the stated purpose of the census form); however, some of these may have simply omitted the item. One dean to whom the completion of the form had been assigned called the research team for help, through DSA files, in locating on his complex campus any federally supported programs.

In order to offset, to some extent, the effect of the kinds of errors noted, we have attempted to employ statistics that are less adversely affected by extreme data errors (e.g., we have relied upon the median as opposed to the mean as a measure of central tendency; we have used categorical as opposed to continuous data correlational techniques). The use of such statistics, however, <u>does not eliminate</u> the error; it simply reduces the effect of this error on the statistic. It should be

noted, in this regard, that in quantizing continuous data (regardless of the amount of error in such data) different results may be obtained by different approaches to the categorization process. The degree of distortion introduced as a result of such quantization is basically a function of the original distribution of the continuous variable. No "magic formulas" were used for the quantization of the data reported in this paper. Instead, the basic procedure used throughout was that of maintaining reasonably large or gross cell frequencies.

Finally one should be reminded that the statistical approach used throughout this paper involves multiple application of certain statistical tests. The level of significance for each of these tests has been maintained at the .05 probability level. The meaning is perfectly straightforward when only one such test is applied. With multiple applications of the statistical test to the same set of data, however, the interpretation of significance level becomes, at best, clouded. Using a .05 level of significance, which defines a significant result as one which will occur one time in twenty--or less--by chance, suggests that on the average one could expect one of twenty independent applications of the statistical test to yield a significant result even when no real difference existed. If, in fact, the tests are independent, then appropriate corrections to an overall significance level can be applied. Unfortunately, when one considers the response of the group of institutions to a given census item and then classifies the institution on more than one cross-tabulation index, it is not reasonable to assume--in fact as indicated from the data it is not the case--that such cross-tabulation indices are independent. This makes interpretation of the set of analyses even more

difficult, since precise conditional probabilities cannot be accurately determined. In some instances, we have qualified our interpretations on the basis of controlling for the relationships between the various cross-tabulation indices; however, simultaneous control for the joint relations of all possible indices is not feasible within the framework of analysis adopted for this report.

Another matter needs to be reiterated. While the sampling units for the study were in fact the institutions, some results have been presented with specific implications to individual programs within institutions. Regarding these implications, it should be realized that institutional differences may magnify any program differences found; and that to the extent biases exist in terms of institutions in the sample, such biases are reflected and probably magnified in terms of programs.

Finally, the very nature of a cross-sectional survey approach, such as this, limits the applicability of the findings. No data are available from which change in institutional or programmatic variables as a function of some other variable can be judged. The time-bound nature of the study is reflected to a greater or smaller degree in most aspects of the findings. For example, while any influence of a program on graduation rates will be reflected in future graduates, we have been forced to use data that reflect only past graduation rates. In short: the census provides a less than perfectly accurate picture of the programmatic treatment of disadvantaged students in the 1971-72 year.

D. Summary

The Higher Education Amendments of 1968 established a legal basis and funding authorization for the provision, in colleges and universities, of programs of special support services--counseling, tutoring, career guidance, etc.--for "students with academic potential...who, by reason of deprived educational, cultural, economic background, or physical handicap, are in need of such services to assist them to initiate, continue, or resume their post-secondary education."

Under contract with USOE, Educational Testing Service began, in the fall of 1971, an intensive examination of support programs and students therein in a sample of 120 institutions. Prior to this "intensive examination," however, a census of all institutions of higher education in the United States was taken, to determine principally the nature and extent of special programs of supporting services for "disadvantaged" students. Of central interest was: What kinds of institutions offer such programs? What do they cost, and what are the sources of support? What students are served, in what ways, and at what investment of faculty and staff time? Finally, what is the attitude of the responding institutional officials toward continuing these programs, and from what sources do they see programmatic support?

In October 1971, 2991 institutions were identified and their chief administrative officers were mailed a four-page questionnaire that requested information on: total current funds expenditures for fiscal year ending in 1971; full-time equivalent fall undergraduate enrollment; admissions procedures; brief descriptions of special supporting services

programs; total expenditures for such special programmatic services for disadvantaged students; and judgments or estimates of optimal size, new sources of support, proportions of undergraduates within the federal poverty classification, proportions of disadvantaged graduating, and proportions entering graduate school. With extensive follow-up, 1766 (or 59%) of the 2991 institutions had responded to the survey by the end of the first quarter of 1972 (five months after the original mailing).

When less than 100% response to a survey of a population is obtained, the possibility of biases in the responding portion must be considered. Two procedures were employed: First, responding institutions were compared with nonresponding institutions on certain critical matters of public record; geographic area, participation in programs of federal support for disadvantaged students under the Higher Education Amendments of 1968, institutional control, predominant or traditional race of student body, highest offering, and accreditation. Second, a random sample of nonrespondents was drawn, and an attempt was made to obtain the survey information by telephone.

Responding vs. nonresponding institutions were found not to differ as a function of geographic region, institutional control (public, private, church-related), predominant race of student body, estimates of proportions of disadvantaged students on campus, proportions who continue into graduate study. On the other hand, institutions more likely to respond were found to be those with federal support for disadvantaged student service programs, and those without problems of accrediting.

Institutions less likely to respond were found to be junior or community colleges and, among institutions with federally supported programs, those with the highest proportions of disadvantaged graduating.

Obviously, institutions with relevant federal support were more inclined to respond to the survey in the context; nonaccredited institutions or two-year colleges may have more difficulty in responding to any questionnaire survey. The extension of the findings to be reported to all institutions of higher education would overestimate the amount of programmatic activity for disadvantaged, and underrepresent those institutions providing only two years of academic or vocational training or those with accrediting problems (wherein, of course, disadvantaged students may appear in relatively large proportions, though this was not found to be a critical difference in responding vs. nonresponding institutions).

At this point in time, with the federally supported programs of interest at most only in their second year, it would seem far too early to attempt to judge their success or failure by any of the data available. More reasonable questions to ask are: How many disadvantaged students get into college? Where are the greatest concentrations of disadvantaged students found? What kind of institutions are interested in and indeed provide such special services (or, what kinds of institutions are likely to be favored by federal support)? What services are provided? In short: the purpose of the census is, most exactly, descriptive, and for providing a baseline against which later analyses of trends may be drawn.

How many "disadvantaged" students enter college, and where do they go? For the institutions responding, roughly one-third estimated from 0

to 5% of the undergraduate student body to be disadvantaged, another one-third from 6 to 15%, and another one-third more than 16%. Only about one in five institutions estimated more than one-quarter of their undergraduate population to be disadvantaged. An estimate drawn from the reported frequencies yields a figure of 14% of the total undergraduate population to come from families within the poverty classification.

A number of factors were found to be associated with the numbers of disadvantaged in college. The degree to which the institution employs selective criteria at admissions is, of course, strongly related: over half of the institutions screening on the basis of requiring graduation in the top fourth of the high school class and scores on scholastic aptitude test have fewer than 5% disadvantaged. More disadvantaged students were found in public-supported institutions than in private institutions (although private church-related institutions contain more disadvantaged undergraduates than private nonchurch-related institutions); this may, of course, result as an aspect both of cost and of the fact that private institutions more frequently tend to be selective. Two-year institutions, and the larger universities offering graduate degrees, had larger proportions of disadvantaged than did four-year colleges. The predominant ethnicity of the student body was highly related: almost 60% of the nonwhite institutions had more than half of their undergraduate population within the poverty criteria, while only 3% of the white institutions had this many poor among their student bodies. Nonaccredited institutions, representing 16% of the responding institutions, tended to have higher

proportions of disadvantaged, as did institutions with more than half of their student body living off campus.

There also appeared to be sharp differences by geographic region. Dividing the country according to USOE regions, institutions in region 4 (the Southeastern states) and region 6--Louisiana, Arkansas, Oklahoma, Texas, and New Mexico--tended to have larger proportions of disadvantaged, while region 1--the New England states--had relatively few institutions with large numbers of disadvantaged. This would seem to be a function of area per-capita income and of the traditional kinds of institutions indigenous to the area (i.e., the traditionally black institution in the Southeast). The implications of this finding for federal funding are, of course, both complex and significant.

Institutions with federally-supported service programs for the disadvantaged were found to have, on the average, larger proportions of disadvantaged on campus than did those without federally supported programs; this relationship holds where institutions are grouped according to selectivity at admissions and then compared within each category. This may reflect the fact that federal money tends to be going now where the institution has shown a commitment or a tradition of service to this type of student; or, the infusion of federal funds may indeed have served to increase the proportion of disadvantaged on some campuses. Undoubtedly, both of these possibilities are true to some extent, though longitudinal studies are needed to better judge the impact factor. A marked trend was noted for highest proportions of disadvantaged students at institutions that had applied successfully for Special Services Programs, the next

highest proportions at those applying unsuccessfully, and the lowest proportions at those institutions never applying. In the latter group of institutions, representing two-thirds of all responding institutions, 60% had 10% or fewer disadvantaged. Even so, of these institutions granted programs, almost one-third had 10% or fewer disadvantaged.

What is the extent and nature of the special support services programs offered? Of the responding institutions, 801, or almost half, reported no such programs. Given the biases noted in the responding sample, it is reasonable to state that somewhat less than half, but at least 25%, of the nation's colleges and universities offer support programs expressly for or appropriate for disadvantaged students. Of those institutions with programs, about half offered only one program, and the other half from 2 to 8 programs (although one institution listed 19 different activities). The 901 institutions(53% of the respondents) reporting one or more programs yielded a total of 2381 separate programs. These tended, on the whole, to be relatively new: the median number of years of program operation was 2.6, and less than 3% of the programs had been in operation for 10 years or more. Almost 40% of the programs were "bridge" programs such as Upward Bound, thus directed more toward preparing the student for college than for facilitating his on-the-academic program adjustment.

Although, in general, it was found that the higher the proportion of disadvantaged on campus, the higher the number of special programs, the relationship is far from perfect. Institutions in USOE regions 8, 9, and 10 (the Far Western states) tended to take a multi-program approach in comparison with institutions in other parts of the country. Institutions in the Southeastern states, previously noted as having larger

disadvantaged college populations, tended to have fewer programs. Larger institutions tended, of course, to have more programs, as did open-door institutions when compared with more selective institutions, public institutions (when compared with private institutions), two-year institutions, traditionally nonwhite institutions, or nonresidential institutions. Nonaccredited institutions, though generally serving higher proportions of disadvantaged students than accredited institutions, tended to have fewer programs; over half of the nonaccredited institutions listed no programs at all. Institutions receiving aid through the Division of Student Assistance, USOE, tended to have more programs. Number of programs is an extremely gross measure, of course, of extent of attention to disadvantaged students; there is nothing particularly surprising in the findings. A reasonably accurate summation of these findings would be that special support programs abound where the tradition of service to disadvantaged students exists--with some exception of nonaccredited or Southeastern area institutions.

What are the characteristics of these programs? Almost one in three of the reported programs were funded exclusively through USOE, and thus would be strongly influenced by USOE guidelines as to content. About 15% of the programs were funded exclusively by state or local government, and almost 15% by institutional funds exclusively, while a little more than one-fifth of the programs drew funds from two or more agencies. Programs that were funded exclusively by other agencies of the U. S. Government or by private foundations accounted for only a little better than 10% of the total. About one in five programs reported multiple funding sources.

Clearly, federal support was the prime resource being used for program support, while state and local, or regular institutional support tended to appear only half as frequently.

With regard to the content of the programs: the most frequently listed element was that of special academic counseling, guidance or advisory assistance, with almost three out of every four programs containing this component. Almost two of three institutions reported special recruiting effort or strategy. Tutoring components were reported in 63% of the programs; a little more than half provided for diagnosis of learning difficulties or provided remedial courses. About 44% of the programs reported components of special instructional media or of special instructional strategies. However, taking these frequently provided academically-oriented elements--counseling, recruiting, diagnostic work, tutoring, remedial courses, and special instructional media or strategies--only 341, or about 14%, of the programs consisted exclusively of one or more of these elements. In other words, a vigorous majority of the programs included nonacademic elements.

For financial aid, grants were the most frequently reported (60%), through work-study (55%) and loans (52%) were almost as popular.

The most frequent extra-institutional resource employed in the programs was community agencies or organizations, with almost half of the program containing such a component. About one-third reported activities with schools sending students, while work with other colleges or with business and industry was found in only one of every five programs.

Toward assisting disadvantaged students with post-college plans and activities, job placement (in 45% of the programs) was found about twice as frequently as guidance for graduate study (in 22% of the programs).

The programs reported a considerable variety of patterns of staffing, number of students served, and costs per student. The typical program, as revealed by median values, involved two staff members and two faculty members, and served 50 full-time equivalent students at a cost per FTE student of $673 per year.

Programs funded under the Higher Education Amendments of 1968 tended to have a higher number of full-time equivalent faculty and staff (though foundation-supported programs had the highest median number of staff), and served larger numbers of students; in addition, however, the Special Services Programs served larger numbers of students per full-time equivalent faculty or staff and at a cost per student slightly below the median reported for all programs.

Institutions with higher proportions of disadvantaged involved substantially more students in their programs, as well as slightly larger numbers of faculty and staff. Cost per student tended to decrease as porportions of disadvantaged on campus increased, although this relationship is not statistically significant.

The more selective institutions in their programs tended to have higher numbers of faculty and staff involved in their programs, but not a higher number of FTE students in their programs. Per-student costs, however, appeared to be higher in the moderately selective institutions than in open-door or highly selective institutions. Larger institutions

tended to have larger programs in the sense of faculty, staff, and students involved, but institutional size did not appear to be related to per-student cost of the programs. Public institutions, on the other hand, tended to have programs with lower per-student costs, no doubt a function of higher numbers of students per faculty or staff member assigned to the program, particularly in the public two-year institutions. Public and private institutions with graduate programs served larger numbers of students but at greater per-student costs. Undoubtedly, overall institutional per-student costs affected program cost per student served by the program. Program costs per student did not differ for traditionally white vs. nonwhite institutions, however, a function most probably of larger numbers of involved faculty and staff per student in the program.

Institutions with one or more programs funded under the higher education amendments tended to serve more FTE students in their programs, with more staff (if not faculty), at a slightly higher cost per student (as previously reported data would suggest).

With regard to the components within the programs: with more components (i.e., counseling, tutoring, remedial work, etc.), higher costs per student and faculty and staff involvement were sustained. Addition of programs components tended to create staff involvement to a greater extent than faculty involvement. Larger numbers of students tended to be served in programs including special classroom instructional strategies, loans and work-study, extracurricular support, and guidance for graduate study, while those institutions with smaller numbers of FTE

students in their programs were more likely to report a recruiting component.

Larger institutions tended to provide more frequently the components of academic counseling, tutoring, extracurricular support, job placement, and guidance for graduate study, but reported less frequently the use of special instructional media or provision of remedial courses. Special instructional strategies appeared more frequently in the very small and the very large institutions. More selective institutions tended to stress counseling, tutoring, involvement with feeder schools, and guidance for graduate study; but involved less frequently any infusion of support activities directly into the classroom (i.e., special media, strategies, etc.). An essentially similar pattern occurred when highest degree offering was considered. Programs in private institutions more frequently provided guidance for graduate study, but less frequently job placement, community agency involvement, or medical courses. There were few differences in the programs provided in traditionally white as opposed to traditionally nonwhite institutions, though the nonwhite institutions recruited less frequently and contained special intervention in the classroom more frequently. Finally, there was evidence that with the exception of remedial courses, loans, and work-study, the institutions with programs funded under the Higher Education Amendments were more likely to have each of the support components than were institutions otherwise funded.

From the reports of the responding institutions, a wide range of success was reported in terms of the proportion of disadvantaged who graduate. For all disadvantaged in all institutions, about half were believed to

graduate, and about 10% were believed to continue into graduate study. The more selective institutions, the smaller institutions, and the residential did indeed report higher proportions graduating.

Institutions with programs funded under the Higher Education Amendments of 1968 reported lower proportions of disadvantaged graduating than institutions never applying for Special Services programs; also, the number of programs provided by an institution was not related to proportions of disadvantaged graduating. Other factors associated with high proportions of disadvantaged graduating appeared to be smaller numbers of students per faculty member in the program, and higher per-student program costs. These findings reflected more exactly the institutional facts of life; most programs reported, and all Special Services Programs, had not been in existence long enough to produce a graduating class.

The reports of proportions who enter graduate study followed highly similar patterns to those found for proportions graduating. Also, institutions with remedial study components sent fewer disadvantaged to graduate school; those that provided tutorial services, guidance for graduate study, and financial aid sent more.

A final set of questions in the survey was concerned with the responding individuals' opinion as to what would be an optimal arrangement for special programmatic attention to disadvantaged students for the 1972-73 academic year. Given that in most cases completion of the survey was assigned to someone concerned with disadvantaged students, it is not surprising that four out of five respondents felt that given additional funds their institutions could serve larger numbers. The

other one in five felt additional money was needed to serve present numbers, while only nine of the 1087 institutional representatives responding to this question felt larger numbers of students could be served at the existing budget or a smaller one. Nevertheless, there was in these otherwise nonremarkable patterns no evidence that, given the financial incentive or wherewithal, larger numbers of disadvantaged could be accommodated. The sources of this increased financial support were most frequently felt to be attainable through federal sources, though a number of institutional respondents indicated the potential of state funding should be stressed. Foundations were less frequently seen as a likely resource for additional money, and the dimmest prospects seemed to reside in rearrangements of regular institutional income; for example, endowment income was given a low rank of importance as a source for increased programmatic support.

It would seem prudent to state in final summary that the relationships observed at this point of time are more understandable in terms of the institutional characteristics and the stereotypes associated with different types or circumstances of institutions than they are in terms of their special program efforts. For example, emphasis on continuing into graduate study may be pressed by a variety of programmatic emphases, but the impact can be felt in institutions where values and emphases push toward graduate study, not in those that traditionally see their students in technical roles in the community after two years of training in a highly pragmatic work role. Or, institutions with the lowest attrition rates will inevitably show larger proportions of disadvantaged graduating, whether

support programs are provided or not. It would be extremely hazardous to infer that some of the effects observed are caused by the impact of the programs. Given the limited time of program operation in most cases, it is more reasonable to assume that federal support amplifies existing institutional patterns. More time and longitudinal studies are needed to determine how programs may "transform" the institution. And, given the early lead taken by federal sources in supporting such programs and the obvious fact of their unusual costs without built-in financial compensation as from tuition and fees, the current outlook for their future is toward Washington.

It would therefore seem of critical urgency to look beyond this descriptive census to the need for careful research to determine now the impact of the programs and their components on the progress and the lives of the disadvantaged students involved. Given a positive answer (and obtaining any definitive answer will require time for the embryo programs to mature), the task then will be to seek ways in which the early responsibility undertaken by federal support could either be increased or expanded to include other interests--state, foundation, business and industry, or tuition adjustment--if larger numbers of disadvantaged are to be served. The most critical early sign of potential success from these data resides in the proportion of disadvantaged who, in 1971, were estimated to be enrolled as undergraduates. Although this figure of 14% may be inflated, we have assuredly the highest proportion of students from poverty backgrounds now in college than has existed in history. The trick will be to keep them there, in good standing and in dignity, while continuing to expand a truly equal educational opportunity.

APPENDIX A

Sample Copy of Survey Questionnaire

and Accompanying Instructions

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
OFFICE OF EDUCATION
WASHINGTON, D.C. 20202

October 19, 1971

President
Somewhere College
0 Some Street
Somewhere, Somestate 00000

Dear President:

The U.S. Office of Education has contracted with Educational Testing Service for a series of surveys to determine the extent and level of success of special programs for disadvantaged students in institutions of higher education. The initial survey requires a census of all U.S. institutions of higher education to determine the kinds and costs of programs in operation, and the numbers of students served.

To expedite the survey, we are enclosing a brief form which we hope you will assign for completion to the administrative officer responsible for all special programs for disadvantaged students. The form asks for some identifying information about the institution, for information about special programs for disadvantaged students, and for estimates of need for such programs at your institution.

All information provided in this survey will be treated as confidential. Because only aggregates, by type of institution, will be reported to the U.S. Office of Education by Educational Testing Service, the information you provide can not affect federal support of current or requested programs at your institution. Indirectly, the results of the total survey will make an important contribution to estimates of national need, and could have a major impact on the direction and nature of these programs in the future.

Your assistance in this critical matter is appreciated. Time deadlines are very tight, and we would be most gratified for return of the form by November 30, 1971.

Sincerely,

Acting Associate Commissioner
for Higher Education

DEFINITIONS

SPECIAL PROGRAM. To qualify as a "special program" under this definition, there should be a statement of institutional record as to the goals and objectives of the special program, with specification of target population, intervention or treatment strategies, and there should be an institutional staff member charged with responsibility for the administration and maintenance of the program. A separately budgeted (e.g., separate line item, noted in other line item, etc.) formal or structured body of activity by the institution for high school graduates (e.g., Upward Bound, Project Opportunity, etc.) or enrolled students, which is not routinely available to or appropriate for the typical entering student but directed toward the more disadvantaged student (see next definition) is usually considered to be a "special program."

DISADVANTAGED STUDENT. By "disadvantaged student" is meant a student who, by virtue of origin from an ethnic minority, a low income group as defined by the national poverty criteria (see below), or by virtue of physical handicaps restricting movement or sensory acuity, has special deficiencies of a social, cultural, or academic nature that set him apart from the regular or modal students at your institution. These are generally students who would require special resources and innovative curriculum to assure their success in the academic environment.

NATIONAL POVERTY CRITERIA*

To fall within the national poverty criteria group, a student must come from a family with annual income not exceeding the amount shown below:

Family Size	Nonfarm	Farm
1	$1,840**	$1,569
2	2,383	2,012
3	2,924	2,480
4	3,743	3,195
5	4,415	3,769
6	4,958	4,244
7	6,101	5,182

If a low-income student comes from a family with more than seven members, add $600 for each additional family member in a nonfarm family, add $500 if the family is a farm family.

The poverty criteria is generally met if the student:

1. lives in federally supported low-income public housing.
2. is part of a family where there is serious mismanagement of income so that little, if any, of such income accrues to the benefit of the student.
3. is from a family on state or federally funded welfare program.

---

* *Adapted from Series P60, Number 71, Table 6, Bureau of the Census, U.S. Department of Commerce, July 1970.*

** *All dollar amounts refer to income before taxes.*

SPECIAL INSTRUCTIONS

The attached form (OE Form 160) for survey of special programs for disadvantaged students should be completed by all institutional units responding and reporting as such in the annual Higher Education General Information Survey (HEGIS) of the U. S. Office of Education. In the event that a branch campus completes the form individually or that the parent institution completes the form inclusive of branch campuses, please indicate such under item 1 of the form. The administrative officer responsible for all special programs for disadvantaged students, as defined above, should complete the items relating to such programs.

Items 1 through 5:

These items involve general institutional data of record. Data requested on opening fall undergraduate enrollment in 1971 (item 3), and on current funds expenditures for the fiscal year ending in 1971 (item 2), should agree with that provided in the 1971-72 HEGIS Survey of the U. S. Office of Education.

Item 6:

If this item is applicable to the institution, list separately each program that operates as a functional unit (i.e., that focuses on a particular target group of students, consists of one or more discrete activities, and that has a responsible "program director" assigned.) Use additional sheets of blank paper if space provided is insufficient.

If the program listed is a "bridge program" for students not yet formally enrolled in the institution, please indicate in the appropriate space.

Numbers of students served by the program, and numbers of involved faculty and staff, are requested in Full-Time ("FT"), Part-Time ("PT"), and Full-Time Equivalent ("FTE") categories.

A Full-Time student is defined as one enrolled for at least 75% of the load normally required of undergraduates.

A Part-Time student is one enrolled for less than 75% of the normal load.

"Faculty" are defined as persons with academic rank who serve the program in teaching or administrative capacities, staff members are defined as other personnel serving the program who do not hold academic rank (e.g., counselor, etc.).

A Full Time faculty or staff member is defined as a member of administrative or academic staff devoting three fourths or more of available work time to the program.

A Part Time faculty or staff member is one devoting less than three-fourths time to the program.

"Full Time Equivalent student" may be determined by the same procedure used in HEGIS. If you have not previously calculated full time equivalent enrollment, the following method is suggested:

> ADJUSTED HEADCOUNT METHOD - Full-Time Equivalent enrollment equals the headcount of full time students plus one third the headcount of part time students.

You may use the above method or any other method of calculating full time equivalent enrollment most appropriate and/or convenient to your institution.

"Full Time Equivalent faculty or staff" is determined by the average total man hours per work week, devoted to the program while program is in operation, divided by 40.

Item 6 (continued):

Support in most cases will fall into one or more of the following categories: Federal, state, foundation, institutional general funds, or other (business and industry, community action groups, church, etc.).

In identifying SOURCE OF SUPPORT, please observe the following considerations:

- If support comes from federal sources, please indicate agency (e.g., OE, OEO, USDL, etc.) and if possible indicate law and title providing funds or the name of the act (e.g., Higher Education Amendments of 1968, Title I-A).
- If support comes from state appropriations, please specify whether their source is state general funds or special appropriations.
- If support comes from a foundation grant, please name the foundation.
- If support is drawn from institutional general funds, please indicate if identifiable portions come from unrestricted gifts, income on endowment, student tuition, special fees, sale of goods or services, or other sources.
- If support comes from other than federal, state, foundation, or general institutional funds, please name or otherwise identify the nature of the source.

Should program support as budgeted come from more than one source, list the several sources and show in brackets the approximate percentage of total costs from each source [e.g., "Title I-A, (50%); Ford Foundation, (50%)]

Item 7:

If item 6 is completed, this item provides space for identifying the content or nature of the special programs previously listed. Specifically, those activities or aspects of the programs that are, as a matter of record, formal emphases, and for which budget line items may exist, should be checked, and, if more than one program is listed in item 6, show by number which program(s) has(have) the feature indicated.

Item 8:

This item calls for total expenditures for special programatic attention to disadvantaged students. As such, it allows for expenditures for programs not meeting the definition of "special programs" given above, but which you consider significant.

Items 9 through 12:

These items call for "best estimates" and opinions concerning disadvantaged students and the source of support for programs for disadvantaged students at your institution.

Should you have any questions concerning the completion of this form, please call the individual listed below at the nearest office of Educational Testing Service.

Location of ETS Office	Phone	Name of Individual to Contact
Princeton, N. J.	609 921 9000	Mr. Chuck Stone
Evanston, Ill.	312 869 7700	Mrs. Theresa Strand
Los Angeles, Cal.	213 254 5236	Mrs. Celia DeLavallade
Redington Beach, Fla.	813 391 9806	Mr. John Dobbin
San Juan, P.R.	809 765 3365	Mr. Ennio Belén Trujillo
Durham, N. C.	919 682 5683	Miss Adele Richardson
Berkeley Cal.	415 849 0950	Mrs. Santelia Knight Johnson
Austin, Tex.	512 454 8935	Mr. Don Hood
Washington, D. C.	202 296 5930	Mr. David Nolan

OMB No. 51-S71033
Approval expires 6/30/72

SURVEY OF SPECIAL PROGRAMS IN HIGHER EDUCATION FOR DISADVANTAGED STUDENTS

Educational Testing Service
Princeton, N.J.

Please Read Instructions Before Completing This Form

Please return by NOVEMBER 30, 1971
USE ENCLOSED ENVELOPE

1. Name and mailing address of this institution:

2. Total current funds expenditures for fiscal year ending 1971 *(from HEGIS Survey, OE Form 2300-4, 4/71, P. 3, line 18)*

3. Full time equivalent opening fall undergraduate enrollment, 1971 *(from line 3, column 6, and/or line 14, column 6, HEGIS, OE Form 2300 2,3 1, 3/71)*

Degree credit students [ ] Non-bachelor's degree credit students [ ]

4. For what percent of undergraduate students at this institution are on-campus residential quarters available?

[ ] %

5. Admission Requirements and Standards:

A. Usual minimum requirements for undergraduate admission *(Check one)*

(1) Only ability to profit from attendance	
(2) High school graduation or equivalent	
(3) High school graduation plus some additional indication of aptitude *(grades, tests, etc.)*	
(4) Other *(Specify)*	

If (3) is checked above, select best single answer for sections B and C below.

B. Usual minimum high school standing for admission:

(1) top 1/10		(2) top 1/5		(3) top 1/4		(4) top 1/3		(5) top 1/2		(6) Below top 1/2	

C. Use of Scholastic Tests in admission

(1) Generally not required		(3) Required as supporting evidence for admission of some (not all) applicants	
(2) Required principally as a matter of record		(4) Required, and used in determining admissibility for all applicants	

This institution has one or more "Special Programs for Disadvantaged Students", as defined, complete items 6-7; otherwise skip to item 8

6 Identification of Special Programs for Disadvantaged Students.

Title or Brief Description of Program	Year Program Started	Bridge Program?		Summer School or Regular Term?		Numbers of Students Served			Numbers of Faculty			Numbers of Staff			Budgeted Costs for FY 1971-72	Source of Support *(see instructions)*
		Yes	No	SS	RT	FT	PT	FTE	FT	PT	FTE	FT	PT	FTE		
(1)																
(2)																
(3)																
(4)																
(5)																
(6)																
(7)																

Content or nature of special programs *(Check all that apply to this institution, and indicate by number which program listed under item 6 herein has that feature.)*

Special academic counseling, guidance, or advisory assistance		Financial aid *(Check all that apply)*	
Special recruiting efforts or strategy		Loan	
Special facilities or activities for diagnosing academic difficulties		Grant	
Special tutorial service by faculty or students		Work-study	
Involvement of extra-institutional resources *(Check all that apply)*		Job placement	
Schools sending students		Guidance for graduate study	
Other colleges		Other *(Specify)*	
Community agencies, organization			
Business or industry			
Extra-curricular support *(facilitation of social life, etc.)*			
Remedial courses *(credit or non-credit)*			
Special instructional Media			
Special classroom instructional strategies			

9. Total expenditures this year for special programatic attention to disadvantaged students $_____

if this amount differs from sum of "budgeted costs" in item 6, please explain

8. Considering the nature of the institution, what would be, in the opinion of the respondent, the optimal arrangement for special programatic attention to disadvantaged students at this institution in the 1972-73 academic year? *(Check one)*

Numbers of students should remain the same, with total budget of	
Numbers of students should be increased, with total budget of	
Numbers of students should be decreased, with total budget of	

10. In the opinion of the chief administrative officer of this institution, any increased support for special programs for disadvantaged students should be sought and/or come from which of the following sources?

(Check all that apply and then rank those checked in order of importance with 1 = most important, 2 = next most important, etc.)

SOURCE	(✓)	RANK	SOURCE	(✓)	RANK
Institutional funds as follows:			Existing federal authorizations, with increased appropriations		
General			New federal legislation		
Tuition and fees			State general funds		
Gifts			New state legislation		
Endowment income			Other *(Specify)*		
Foundations *(local or national)*					

11 Best estimate of proportion of current undergraduate population at this institution who come from families with annual income less than the national poverty criterion *(see instructions)*

0-5%		6-10%		11-15%		16-20%		21-25%		26-50%		51% or more	

12. Of those disadvantaged students entering this institution, what percent is estimated to

(1) Graduate from this institution	%	(2) Transfer to another institution	%	(3) Continue for graduate studies at any institution	%

13 Comment *(e g , any experience with disadvantaged students, recommendations as to federal policy and program, special institutional philosophy and policy re disadvantaged, relevant activities not fitting under definitions or categories provided, etc.)*

14. Name of person completing this questionnaire

Name _____ Title _____ Date _____

Please return to:

EDUCATIONAL TESTING SERVICE
501 Willard Street,
Durham, North Carolina 27701

APPENDIX B

Sample Text of Follow-up Letter of 10 December

and Mailgram of 21 January

EDUCATIONAL TESTING SERVICE SOUTHEASTERN OFFICE

Mutual Plaza
Durham, North Carolina 27701

Area Code 919 682-7888

December 10, 1971

President
Somewhere College
0 Some Street
Anywhere, Any State 00000

Dear President:

On October 28, a survey form concerned with special programs for disadvantaged students was mailed by this office to you, together with a letter explaining the survey, dated October 19, 1971, from Dr. Preston Valien, Acting Associate Commissioner for Higher Education, USOE. To date, no response has been received from your institution.

We realize the many inconveniences that today's crop of institutional studies imposes on colleges and universities; we also realize that time deadlines in this instance are not liberal.

Nevertheless, the information from this survey will be a major component of estimates of national need, and could affect the direction and nature of federal spending in the future. It is our sincere hope that your representative could complete and return the survey form at the earliest opportunity. If the form has been misplaced, we should be happy to provide you with another.

Sincerely,

J. A. Davis
Project Co-Director

JAD:zm

ZCZC 121 PRINCETON NJ
ZIP 00000
PRESIDENT SOMEWHERE COLLEGE
SOME STREET
SOMEWHERE SOMESTATE 00000
BT
EDUCATIONAL TESTING SERVICE IS CONDUCTING FOR US OFFICE OF EDUCATION A NATIONAL SURVEY OF PROGRAMS FOR DISADVANTAGED STUDENTS. BRIEF QUESTIONNAIRE SENT YOUR OFFICE IN NOVEMBER. RESPONSE FROM YOUR INSTITUTION EXTREMELY CRITICAL TO SURVEY'S SUCCESS AND FINAL REPORT. MAY WE REQUEST YOUR OFFICE CALL COLLECT BY WEDNESDAY JANUARY 26 FOR QUICK REPORT ON YOUR INSTITUTION'S PROGRAMS
TELEPHONE 609 921 9000
MRS ROBERTA RAMIREZ ELDRED
ASSISTANT TO THE DIRECTOR OF MINORITY AFFAIRS
EDUCATIONAL TESTING SERVICE
NNNN

APPENDIX C

Telephone Follow-up for All-Institution Census

TELEPHONE FOLLOW-UP FOR
ALL-INSTITUTION CENSUS

Date _____ Interviewer _____

1. Name of institution _____

2. Name and title of person or persons responding:

   a. _____

   b. _____

3. Was questionnaire received? Yes ___ No ___

4. To whom or what office was it routed for completion _____

5. Number of full-time undergraduate students _____

6. Percent of undergraduate students living on campus _____

7. Admissions requirements and standards for all students (which one applies -- check one)

   a. High school graduation or equivalent _____

   b. High school graduation plus grades or standardized tests (SAT or ACT)

   _____

   c. High school standing:

   top 1/10 _____ top 1/4 _____ top 1/2 _____ below top 1/2 _____

   d. Scholastic tests in admission

   not required _____ required as supporting evidence _____

   a principal requirement _____

8. What kinds of students are considered disadvantaged at this institution?

   all low income students _____ Blacks _____ Chicanos _____

   American Indian _____ Puerto Rican _____ Physically Handicapped _____

9. What kinds of programs for disadvantaged students

   a. Upward Bound _____ e. Special Tutoring _____

   b. Talent Search _____ f. Remedial Courses _____

   c. Special Services _____ g. Summer Programs _____

   d. Special Counseling _____ h. Special Recruitment _____

   Financial Aid _____

10. Best <u>estimate</u> of proportion of current undergraduates who come from families with annual income less than $4,000 or national poverty criterion.

0-5% _____ 6-10% _____ 11-15% _____ 16-20% _____ 21-25% _____ 26-50% _____

51% or more _____

11. What percent of disadvantaged students who enter this institution

graduate _____ transfer _____ go on to grad school _____

12. Any additional comments _____

APPENDIX D

Coding Schemas and Card Layouts for Census Data

NOTE: A copy of data gathered in the all-institution census has been placed on tape in accordance with the coding schemas and layouts following. This copy is on file with the USOE project officer, in the Office of Planning, Budgeting, and Evaluation, U. S. Office of Education.

CARD 1 General Information

Column #	Info	Code
1-45	Name of State in which Institution is located.	-
46	USOE Region	(See added code sheet)
47	SSDS Participation Code	1=2nd year 2=1st year 3=Dropped 4=Not accepted 5=Other
48	SSDS (or prime program) target group (major)	1=Black 2=Chicano 3=Puerto-Rican 4=Native American 5=White(low income) 6=Physically handicapped 7=Other group 8=Combined or multiple 9=No program
49	Control	1=Federal or Territorial 2=State or Local 3=Independent (non-profit) 4=Church Affiliation 5=Independent (Profit)
50	Selectivity Scale value	0 1 2 3 4 (See additional coding-info. sheet) 5 6 7 8 9
51-52	Residentiality Proportion	-
53	Residentiality Code	1=Primarily Residential 2=Primarily non-residential (Primarily Residential is 50% or more residentiality percentage)

Card 1 (Continued)

Column #	Info	Code
54	Predominant racial make-up of student body	1=Pred. White 2=Pred. Black 3=Pred. other minority
55	Sex of student body	1=Coed 2=Male only (mainly) 3=Female only (mainly)
56	Highest offering	1=Less than 1 year 2=1, but less than 2 3=2, but less than 4 4=4-5 years 5=1st professional degree 6=Masters 7=Masters +, but not P.H.D. 8=Doctoral
57	Size	0=Less than 500 1=500-999 2=1000-1499 3=1500-1999 4=2000-2999 5=3000-4999 6=5000-7999 7=8000-11,999 8=12,000-19,999 9=20,000-or more
58-60	Degree credit student proportion	-
61	Accreditation code	1=Accredited by someone 2=Not accredited
62-67	Current funds expenditures (in $1000.00 units)	-
68	Undergrad prop. of Poverty level	0=0-5% 1=6-10% 2=11-15% 3=16-20% 4=21-25% 5=26-50% 6=51% or more

Card 1 (Continued)

Column #	Information	Code
69-72	4 digit ETS-SEO Code	-
73	1	-
78	Selectivity Code	1=Relatively non-selective (Selectivity scale value of 5 or less) 2=Relatively selective (Selectivity scale value of 6 or more)
79	Other dimensions of selectivity	Blank=none 1=racial 2=religious 3=other ideological 4=comittment to some vocation or calling 5=parental constraints 6=age
80	Questionnaire return Code	Blank=No Response 0=Information included under parent institution 1=Institution closed or closing 2=Did not complete form - no programs 3=Conflicting or highly suspect data 4=Some missing data 5=Complete return

Coding of Selectivity Scale Value (Column 50, Card 1)

Assumptions in coding item 5 of Survey:

(1) If more than one response in answering item 5-A, the higher numbered alternative which is checked is assumed.

(2) If alternative (1)-(5) in item 5-B or if alternative (3) or (4) is checked in item 5-C, alternative (3) in 5-A is assumed.

(3) If alternative (4) in 5-A is checked, special procedures are followed, see below:

Obtaining the selectivity scale score:

If alternative (1) or (2) is the response to item 5-A, the scale value is as follows:

Alternative	Scale Value
1	0
2	1

If alternative (3) is the response to item 5-A, the scale score is the sum of the values of the responses in item 5-B and 5-C as follows:

5-B Alternative	Value	5-C Alternative	Value
1	7	1	0
2	6	2	0
3	5	3	1
4	4	4	2
5	3		
6	2		

Thus if (4) were checked in 5-B and (3) were checked in 5-C, the selectivity scale value would be 4 + 1 = 5.

The special case of alternative (4) in Item 5-A:

In the event that this alternative is checked (either singly or in combination with some other alternative in 5-A, 5-B, or 5-C) special consideration must be given to obtaining the selectivity score. Obviously, some of the other factors considered in selection are not within the same dimension of selectivity reflected by the selectivity scale considered here. Examples are selection due to: race, religious belief, other ideological belief, individual or parental membership in some identifiable organization, commitment to some vocational plan or calling, etc. In these cases, the selectivity code is determined (or estimated) from the other responses to item 5 and from any information given in the explanation of the "other" requirement for admission.

On the other hand, some of the other factors for selection are within the dimension of the selectivity scale considered here (for example, an upper division college, which accepts only students who have successfully completed one or more years in another post-secondary institution.) In such event, selectivity must be ascertained as best as possible from the available data. In any event, the selectivity scale value, when alternative 5-A (4) is checked, will likely require some value judgement and will reflect subjective evaluation by a professional staff member.

CODING OF HEW REGIONS
(Column 46, Card 1)

I. Numerical Code

1 = Region 1

2 = Region 2

3 = Region 3

0 = Region 10

II. Regional Areas

Region 1:	Connecticut
	Maine
	Massachusetts
	New Hampshire
	Rhode Island
	Vermount
Region 2:	New Jersey
	New York
	Puerto Rico
	Virgin Islands
Region 3:	Delaware
	District of Columbia
	Maryland
	Pennsylvania
	Virginia
	West Virginia
Region 4:	Alabama
	Florida
	Georgia
	Kentucky
	Mississippi
	North Carolina
	South Carolina
	Tennessee
Region 5:	Illinois
	Indiana
	Michigan
	Minnesota
	Ohio
	Wisconsin

Region 6:	Arkansas
	Louisiana
	New Mexico
	Oklahoma
	Texas
Region 7:	Iowa
	Kansas
	Missouri
	Nebraska
Region 8:	Colorado
	Montana
	North Dakota
	South Dakota
	Utah
	Wyoming
Region 9:	Arizona
	California
	Hawaii
	Nevada
	American Samoa
	Guam
Region 10:	Alaska
	Idaho
	Oregon
	Washington

CARD 1A

GENERAL INFORMATION (CONTINUED)

(Present if code in card 1 col. 80 is greater than 2)

Column #	Information	Code
1-6	Full time equivalent undergraduate enrollment	____
7-11	Per student cost in $100 units ((62-67 (card 1))*10)/(1-6) - rounded	____
69-72	4 digit ETS-SEO Code	____
73	1	____
74	A	____

CARD 2

GENERAL INFORMATION ON PROGRAMS FOR DISADVANTAGED STUDENTS

(Present if code in card 1 col. 80 is greater than 2)

Column #	Information	Code
1-2	Total number of "Special Programs".	-
3-7	Total FTE Students served	-
8-11	Total FTE faculty	-
12-15	Total FTE staff	-
16-20	Total Budget for "Special Programs" in $100 units	-
21-24	Cost of programs per FTE student in $100 units (16-20)/(3-7) - rounded	-
25-29	Total Expenses (item 8) of any programmatic attention to disadvantaged students in $100 units	-
30-33	Proportion of programs cost of total budget (25-29)/[(62-67 (card 1)) *10] - rounded	-
34	Proposed change in programs (expenses)	1=Smaller Budget 2=Same Budget 3=Increased Budget
35	Proposed change in programs (students)	1=Fewer Students 2=Same # of Students 3=More Students
36-37	Rank given "institutional general funds" (item 10)	-
38-39	Rank given "tuition and fees"	-
40-41	Rank given "gifts"	-
42-43	Rank given "endowment income"	-
44-45	Rank given "other institutional funds"	-
46-47	Rank given "foundations"	-
48-49	Rank given "existing...appropriations"	-
50-51	Rank given "new federal legislation"	-

Card 2 (continued)

Column #	Information	Code
52-53	Rank given "state general funds"	-
54-55	Rank given "new state legislation"	-
56-57	Rank given "other" (average if more than 1)	-
58-59	Proportion of disadvantaged students graduating from institution	-
60-61	Proportion of disadvantaged students transferring to another institution	-
62-63	Proportion of disadvantaged students continuing for graduate studies	-
64	Comment Code	Blank= no comment, or non-instructive comment(s) 1= Relevant comment(s)
69-72	4 digit ETS-SEO code	-
73	2	-

Cards 3, 4, etc.

SPECIFIC INFORMATION ON "SPECIAL PROGRAMS FOR DISADVANTAGED STUDENTS"

(To be completed if code in col. 1-2, card 2 is 1 or greater--one card for each program specified in item 6)

Column	Information	Code
1	Academic orientation code	1=Strict academic orientation 2=Some non-academic orientation
2-3	Number of years program has operated	-
4	Bridge program code	1=Yes 2=No
5	Time-of-offering code	1=Summer school only 2=Regular term only 3=Both
6-10	Full time students served	-
11-15	Part time students served	-
16-20	Full time equivalent students served	-
21-22	Full time faculty	-
23-24	Part time faculty	-
25-26	Full time equivalent faculty	-
27-28	Full time staff	-
29-30	Part time staff	-
31-32	Full time equivalent staff	-
33-36	Program costs (in $100 units)	-
37-39	Support source code	1= (See attached 2= coding 3= sheets)

999

Column	Information	Code
40	Blank	
41-57	Content or nature codes of program, for the 17 options (excluding other) of item 7 (e.g. "special academic counseling, guidance, or advisory assistance" corresponds to Col. 41; "special recruiting efforts or strategy" corresponds to Col. 42;...; "involvement of extra institutional resources-- schools sending students" corresponds to col. 45; ...; "guidance for graduate study" corresponds to col. 57	Blank=Not listed for this program 1=Listed for this program
58	Other content or nature code (item 7 category "other")	Blank=No other content or nature for this program 1= One other content specified for this program 2= Two other contents specified for this program 9= Nine other contents specified for this program
59-61	Program cost per FTE student in $100 units (33-36)/(16-20) - rounded	
62-66	FTE students per FTE faculty member (16-20)/(25-26) -rounded	
69-72	4 digit ETS-SEO Code	
73-74	Card number (serial number of program in item 6, plus 2)	

FUNDING PATTERN CODING

A 3 digit code will be generated for each of the lines completed on page 2, item 6, of the questionnaires

The first digit of this code represents basic funding information as follows:

First Code Digit	For
1	USOE funding exclusively relates to the three specific programs "Special Services to Disadvantaged Students", "Upward Bound", and "Talent Search".
2	USOE funding exclusively of any other program.
3	OEO funding exclusively
4	USDL or other Federal funding exclusively
5	State or Local funding exclusively
6	Institutional funding exclusively
7	Foundation funding exclusively
8	Funding by exactly 2 agencies
9	Funding by 3 or more agencies

The last two digits of the funding code are self produced codes with the following exceptions:

Programs of Special Services to disadvantaged students are coded '101'.

Programs of Upward Bound are coded as '102'.

Programs of Talent Search are coded as '103'.

Non specific USOE funding is coded as '200'.

Non specific OEO funding is coded as '300'.

Non specific USDL or other Federal funding is coded as '400'.

Non specific state or local funding is coded as '500'.

Non specific institutional funding is coded as '600'.

Non specific foundation funding is coded as '700'.

200 - Non-specific USOE funding
201 - Higher Education Act of 1965, Title III
202 - Higher Education Act of 1965, Title IV-C
203 - OE - BHE - DSFA - WSB
204 - OE - BHE - DSFA - LB
205 - OE - BHE - DSFA - EOG
206 - DHEW - ABE
207 - DHEW - Welfare
208 - OE funds through Supplementary Training Associates
209 - HEW, Vocational Amendments
210 - Higher Education Act of 1965, Work Study
211 - Higher Education Act of 1965, National Defense Loan
212 - EOG
213 - HEW - Peer-Tutor Teacher Aid Program
214 - Unspecified HEW
215 - HEW - Public Health Service
216 - HEW - Teacher Corps
217 - Higher Education Amendments of 1968
218 - HEW-EPDA
219 - Headstart Supplementary Training Funds
220 - NDEA
221 - USOE via State
222 - HEW - Health Manpower
223 - HEW (with Southbend Community School Corp.)
224 - Vocational Education for Disadvantaged Students and Physically Handicapped
225 - HEW - Adult Education Act of 1966
226 - Social and Rehabilitation Service
227 - HEW via County School System
228 - Vocational Education Act
229 - Education Professions Development Act
230 - Manpower Development and Training Act
231 - Nurse Training Act of 1964
232 - Higher Education Act of 1965, CEIHS
233 - Elementary and Secondary Education Act, Title III
234 - National Institute of Health
235 - National Fund for Medical Education
236 - "Title I" (PL 89-329)
237 - OE - specified for tuition grants
238 - Title I - ESEA
239 - HEW funds for "Program for the recruitment and retention of Special Students
240 - Unspecified OE
241 - Developing Institutions Grant
242 - "HEAP" (1965 H.E. Act Title III as amended)
243 - PL 89-329, Title IV-A section 408
244 - Elementary and Secondary Education Act (Title VII)
245 - ESEA Title I
246 - 102 - B funds
247 - HEA Title VI
248 - HEW via Greater Omaha Community Action
249 - HEW - Maternal and child health service
250 - HEW - Health Service and Mental Health Administration
251 - Traineeships
252 - C.O.P.
253 - HEW Research and Demonstration
254 - Higher Education Act, Title II-B
255 - Federal Vocational F-2
256 - Federal Vocational 4-B
257 - National Youth Sports Program
258 - Title VI - C&F
259 - VEA part A
260 - College Education Achievement Project.
261 - PL 91-230 Title 6D Dept. of Public Institutions, Division for Handicapped Children
262 - OEG-5-71-0009 (OE Region V)
263 - Social and Rehabilitation Service
264 - HEW - Division of Special Projects
265 - Division of Student Assistance
266 - Public Welfare Foundation
267 - Federal Funds via HEOP
268 - Higher Education Act, Title I
269 - PL 89-329 Title VB
300 - Non-specified OEO funding
301 - Economic Opportunity Act
302 - Headstart Supplementary Training
303 - Model Cities
304 - OEO Migrant Division
305 - High School Equivalency Program
306 - OEO through Chicago Committee on Urban Opportunity
307 - EOG through OEO
308 - OEO via Greater Jacksonville Economic Opportunity
309 - Job Corps contract
310 - LEAA
311 - Great Lakes Region
312 - Migrant Opportunity Program
313 - (same as 305)
314 - EPI;STA -- Headstart

315 - OEO (and President Physical Fitness Program)
316 - OEO (through "Community Actions"
400 - Non-specified USDL or other Federal funding
401 - Federal VEA - Vocational Education
402 - Social Security Act of 1967
403 - Department of Justice - Law Enforcement
404 - Public Health Act
405 - Federal funds distributed through State Department of Education
406 - Veterans Administration
407 - Department of Justice - Ominus Crime Control Act
408 - Federal funds for Disadvantaged
409 - Employment Opportunity Act
410 - WIN
411 - NYC (Neighborhood Youth Corps)
412 - Student Special Service Planning Grant
413 - USDL via National Alliance of Businessmen
414 - Department of Interior - Bureau of Indian Affairs
415 - Emergency Employment Act of 1971
416 - Civil Rights Act
417 - Public Service Careers
418 - "New Careers"
419 - EPA
420 - Appalachian Regional Commission
421 - Unspecified Federal funds via state
422 - Department of Interior - Youth Conservation Corps
423 - College Education Achievement Project
424 - Federal Highway Safety Act
425 - HUD (EOPS)
426 - LEAP
427 - USDL - subcontract City of Chicago
428 - HUD through North Texas Planning Commission
500 - Non-specified State or local funding
501 - State General Education Fund, Title III - Alabama
502 - State Appropriation, Extended Program, California
503 - Alabama - PL 91 -230 Education of the Handicapped
504 - State Board for Community Colleges and Occupational Education
505 - CDE
506 - Special State Appropriation
507 - State Board for Vocational Education
508 - Disadvantaged and Resource fund
509 - State Adult Education
510 - Chicago Committee on Urban Opportunity
511 - State Vocation Rehabilitation funds
512 - Local taxes
513 - State Department of Welfare
514 - State Vocational Technical Board
515 - Community Gift Support
516 - State NYC
517 - Illinois revised statute - 122-30-15
518 - State General and Department of Rehabilitation
519 - State Appropriation - general
520 - State Vocational Education Funds
521 - State Employment Security Commission
522 - State Department of Education
523 - S.R.S.
524 - Program of Continuing Studies
525 - Local (CDA)
526 - Department of Social and Rehabilitation Institutions (Oklahoma)
527 - Education Opportunity Program - N.J.
528 - Urban Education Corps - N.J.
529 - Department of Community Affairs - N.J.
530 - City (or county) Board of Education
531 - State Department of labor/industry
532 - State law enforcement assistance Council grant
533 - Board of Regents
534 - Combined Special and general state appropriation
535 - Ohio Rehabilitation Resources Board
536 - State Bureau of Employment Services
537 - HEOP N.Y.
538 - N.C. Rural Manpower Development Corp.
539 - County funds (for NYC)
540 - Metropolitan Action Commission
541 - Texas Education Agency (and Local)
542 - Higher Education Equal Opportunities Act - State funds N.Y.
543 - State Department of Higher Education
544 - City of N.Y. Executive Budget
545 - "5 Towns Community Center"
546 - EOP N.Y.
547 - N.Y. Full Opportunity Program
548 - N.Y. Department of Correctional Services
549 - CCC (Illinois)
550 - Illinois State Scholarship Commission

551 - State Bureau of Employment Services
600 - Non-specific institutional funding
601 - Special "Student Aid" funds
602 - General funds plus fees
603 - Strictly fees/tuition
604 - Gifts
605 - Board of Trustees
606 - Summer School General Budget
607 - General funds, tuition, endowment
608 - General funds plus Student Government
609 - Funds for developmental courses
610 - Faculty contributions plus Student Government
611 - Admissions office plus Student Government
612 - Salaries (from general funds)
613 - Regular financial aids and institutional funds
614 - Financial aid and grants-in-aid
615 - Institutional "matching grants"
616 - General funds from state appropriations and fees
617 - General funds (income on endowment)
618 - General funds (J.C.) - state and local funds
619 - Division of Community Services
620 - Funds plus tuition
621 - Office of Student Services
622 - General funds plus unrestricted gifts
623 - "Claremont Colleges"
624 - Title Grant
625 - Institutional Human Relations Council
626 - University Grants to Minority Students
627 - Regular College Budget supported by Sponsor, Student, State
628 - SUNY - EOP funds
629 - Voluntary tutoring
630 - SUNY plus Institutional salary funds
631 - Institutional funds: tuition, local taxes, state apportionment

700 - Non-specified institutional funding
701 - MDTA
702 -
703 - United Methodist Church
704 - Alfred P. Sloan Foundation
705 - Rockefeller Foundation
706 - CLEO (Council on Legal Educational Opportunity)
707 - Evangelical Covenant Church of America
708 - American Association of Medical Colleges institution
709 - Union
710 - "Action"
711 - CLEO
712 - Tinker Foundation
713 - Ford Foundation
714 - Reformed Church of America
715 - Kellogg
716 - American Baptist
717 - Bob Davis Scholarship fund
718 - Rockefeller Foundation plus Hill Foundation
719 - Booth Ferris Foundation
720 - Private (unspecified)
721 - Diocese of Providence
722 - Louis Calder Foundation
723 - NCAA
724 - United Progress, Inc.
725 - Butler Mfg. Co.
726 - Josiah Macy, Jr. Foundation
727 - Massongill Foundation
728 - Manpower Development Corp.
729 - National Endowment for the Humanties
730 - Rockefeller Foundation
731 - Unspecified Business and Industry
732 - Seven Colleges Consortium (Ford and Dansforth Foundations)
733 - Band (unspecified)
734 - AMA
735 - Lutheran Churches and private sources
736 - Zale Foundation
737 - Moody Foundation
738 - General Electric, Inc.
739 - Foerderer Foundation
740 - Calder Foundation

741 - United Tribes Development Corp.
742 - Haas Foundation
743 - Association of Foundations
744 - College of DuPage Foundation, Inc.
750 - City University N.Y.; Institutional funds
751 - County; Private
752 - Department of Mental Hygiene; VEA
753 - Institutional funds; State EOP
754 - OE; Bureau of Indian Affairs
755 - A.P. Sloan Foundation; Student tuition
756 - VEA part B; Institutional
757 - General Funds; College Work Study
758 - Donations; MCCCD
759 - WIN; D.O.L.
760 - Campaign for Human Development; Special Fees
761 - Mary Foundation; Institutional
762 - Texas Education Agency; Local Funds
763 - Institutional; Contribution from Christian Brothers
764 - CEP/MDTA
765 - Institutional; Ford Foundation
766 - Center for Educational Action; Institutional
767 - State General Fund; Student Aid
768 - Corporate Gifts; Sloan Foundation
769 - HUD Fellowships; ASPA
770 - Private Gifts; Federal Scholarships
775 - N.Y. Times Foundation; Eastman Foundation; GT&E Foundation; Institutional Funds
776 - NY EHOP; Institutional funds, federal funds
777 - Fleischman Foundation; Ford Foundation; NY State; Institutional; funds from other institutions
778 Same as 776 plus other State funds
779 - Same as 776 plus student fees
780 - N.Y. State Department of Education; NYC Committee for Blind; Lions Club
781 - HEOP N.Y.; institutional funds; unspecified other
782 - Academic Opportunity Consortium - NY HEOP; EOG, NDSL, CWS, NY Scholar Incentive; Institutional funds
783 - HEOP; Institutional Grant; Division of Rehabilitation
784 - Federal funds; Institutional Grant; Division of Rehabilitation
785 - HEOP: Institutional; Student Association funds; Foundation funds
786 - HEOP; Institutional; Shiffman Foundation
787 - EOG; CWS; NDSL; HEOP; EOP; Other; Institutional
788 - N.Y. EOP; OE; CACHE
789 - N.Y. HEOP; N.Y. Scholar Incentive, Mater Dei
790 - Brunner Foundation; Commonwealth Foundation; Central Brooklyn Model Cities Human Relations Administration N.Y.C.
791 - OE, Division of Special Services; Tuition and other university sources
792 - PL 91-230; MDTA; WIN; DVR; RCC
793 - State; local; institutional; Special Gifts
794 - EOP-N.Y.; EOG; NDSL; OE (unspecified); Institutional
795 - EOG; CWS; Institutional
796 - OE; Institutiona; Buhl Foundation
797 - Private Gifts; Federal; General Funds
798 - National Defense Loan; Texas Opportunity Plan; United Student Aid Fund; Federally Guaranteed loans, others
799 - Federal; State; Institutional

CODES FOR MULTIPLE FUNDING--TWO SOURCES

800 - Federal; Local
801 - State; Local (or county)
802 - VEA (part A); Local
803 - Federal; State
804 - OE-WSP (OE-PL 88-452): Institutional
805 - OE (unspecified); Institutional
806 - Unspecified state; Institutional
807 - State; NDEA
808 - State; Title III
809 - Institutional; Title III
810 - OEO; Rockefeller Foundation
811 - State; Vocational Amendments of 1968
812 - Institutional; Local
813 - OEO, Title III; Fees
814 - Institutional; Model Cities
815 - Unspecified Federal; Institutional
816 - Model Cities; State budget
817 - EPDA-EOA; State
818 - Tuition; contributed services of religious personnel
819 - HEW Title IV-A PL 89-10 Migrant Amendment; State
820 - Higher Education Act; Local
821 - State general; 'Title I, part C' of EOA
822 - HEW; Department of Labor
823 - Institutional; State Board for Community Colleges
824 - Institutional; Unspecified other
825 - Institutional; "special" state
826 - San Francisco Consortium; Ford Foundation
827 - EOG; "special" state
828 - Vocational Education; State Department of Rehabilitation
829 - Federal; State vocational
830 - OEO; State
831 - Division of Vocational and Technical Education; Board of Vocational Rehabilitation
832 - OEO; Model Cities
833 - Adult Education Act; State
834 - STP; Training Rehabilitation Act
835 - Local funds; Model Cities
836 - OEO; Institutional
837 - OEO; Local
838 - Eugene Agnes Meyer Foundation; Ford Foundation
839 - California Youth Authority; Institutional
840 - National Urban Coalition; PL 89-329
841 - Tuition; General Aid
842 - Special State Funds; OE (Special Services)
843 - State Department of Vocational and Technical Education; Institutional
844 - OE; Local
845 - USDL; MDTA
846 - State General Funds; Vocational Education Act
847 - Institutional; M/O Fund
848 - Auxiliary Enterprises; Special Funds
849 - Institutional; Title IV A
850 - Institutional; Title I (PL189-329)
851 - Student Senate; Church
852 - Institutional; Education Development Program
853 - Institutional; Educational Professional Development Act
854 - Institutional; Industry
855 - Rockefeller Foundation; Hill Foundation
856 - "Special Needs:; "Vocational Education"
857 - State funding; tuition
858 - Hill Foundation; Institutional
859 - Land Education Fund; Institutional
860 - Action for Boston Community Development, Mass. Board; Regional Community Colleges
861 - "Special State Appropriation"; General State Funds
862 - Institutional; Unspecified "government funds
863 - OEO; OE
864 - General Institutional fees; outside scholarship aid
865 - OE (PL 90-575 sec. 105); General State Funds
866 - Institutional; unrestricted gifts
867 - Institutional; National Institute for Management Development
868 - EPDA; Private funds
869 - National Teacher Corps; Urban Education Corps
870 - "Supportive Services Funds"; "Direct Aid to Students"
871 -
872 - Title III, OE; Massongill Foundation
873 - Varied Indian Program support; Institutional
874 - OE; Institutional "matching funds"
875 - National Institute of Mental Health; CSF

876 - Higher Education Act, Title VI; Institutional
877 - Emergency Employment Act of 1971; Institutional funds
878 - Institutional; Rockefeller Foundation
879 - National Institute of Health; Institutional
880 - Institutional; VEA
881 - Institutional; Bureau of Indian Affairs
882 - Division of Student Assistance (HEW); Institutional
883 - Student fees; county taxes
884 - Institutional; Board of Regents
885 - SRS; USOE
886 - Unspecified HEW; Vocational Amendments of 1968
887 - HEW; N.C. Department of Community Colleges
888 - Institutional; USDL
889 - Governors Crime Commission; OEO
890 - MDTA; State (or district)
891 - Institutional; Vocational Rehabilitation
892 - Institutional; Aron Foundation
893 - Institutional; Mellon Grant
894 - Title III; Student tuition
895 - Moody Foundation; Texas Education Agency
896 - State EOP; Federal
897 - OE; Model Cities COP
898 - Institutional; HEOP N.Y.
899 - HEW, PL 89-36; National Technical Institute for the Deaf

CODES FOR MULTIPLE FUNDING - THREE OR MORE SOURCES

900 - OEO, VEA, State OEP, District, JFC Foundation
901 - VEA, State OP, Local
902 - CWS, EOG, NDSL, Local
903 - Department of HEW, Public Health Service, National Institution of Health, Bureau of Health Manpower
904 - Banks and Lending Agencies
905 - San Francisco Foundation, Oakes Foundation, National Foundation for the Arts, Institutional Funds, S.F.
906 - School District VIE, Federal Employment, Model Cities
907 - HEW-USDL-IVE
908 - State and PL 91-230, Title III and Fees
909 - State and Local and Fees
910 - Federal and State and Local
911 - Work Study (Federal) and State EOG Grants and State Budget
912 - Work Study (Federal) and CEEB
913 - USDL and State Special Appropriations and Associated Students, Inc.
914 - HEW E.P.D.A. and S.F. Foundation and Van Luben Sels and Levi Strauss
915 - Fees and Associated Students, Inc. and Faculty-Staff Contributions and Regents and carry-over funds and Educational Opportunity Grant
916 - General funds and Special Institutional (Mellon Grant) and EOG and NDEA
917 - Institutional and EOG, NDEA, Work Study, Nursing Scholarship, Nursing Loan, Scholarship
918 - WIN and Local and State
919 - University of Miami and Dade County Community Action Agency and EOPI
920 - USOE - Vocational Educational Act and USOE-Vocational Rehabilitation and USOE - Higher Education Act of 1965
921 - Institutional and State and HUD Model Cities
922 - VA and CWS and COP and Institutional and DVR and State
923 - NYC; Special State; Institutional
924 - EM; EMP; Act
925 - CWS; EOPS; General Institutional
926 - EOG and Special State and VEA
927 - EOG and Special State and District
928 - Federal (CWS; EOG; NDSL) and State Appropriations and Private Scholarships

929 - Same as 917 and State
930 - OEO, USOE, and Institutional
931 - USOE, Chicago Community Trust, WC and JV Stone Foundation, Field Foundation of Illinois, and National Board of Episcopal Churches
932 - Department of Corrections; Junior College Board; Division of Vocational Rehabilitation
933 - OE Division of Student Assistance; Institution; Agencies
934 - MDTA and State and Local
935 - (OE) CWSP; Title I part C, NDSL; Title II; EOG; Title IV part A and Institutional
936 - Fees; Special needs funds; special projects; State Aid
937 - Institutional; Title IVA; Title IVC; Title II; State Grant appropriations; Ford Foundation
938 - State; Local; District
939 - State General Funds; State SPD Funds; NTF Title III
940 - AAMC; Health Manpower; Institutional
941 - OEO; NIH; HU
942 - Institutional General; EOG; Work Study; National Defense Loan
943 - Rockefeller Foundation; Claremont Colleges; Student, Family Contributions; Grants and Scholarships
944 - VEA; BIA; EOP
945 - HEW; State (and Special State); Institutional
946 - Tuition; General Aid; Vocational Aid
947 - Vocational Aid; Federal Aid; Local tax
948 - USOE PL 91-380; Department of Education PL 90-575; HEW PL 91-204; State funds
949 - Ford Foundation; J. Aaron Foundation; Institutional
950 - State; County; Fees
951 - Michigan Department of Education; Department of Vocational Rehabitation; Institutional; Kalamazzoo Foundation
952 - College Budget for Student Aid; EOG; State Aid
953 - Institutional General; Private Industry; Alumni Fund
954 - EOG Title IV; NDL Title II; St. Paul Foundation; Tozer Foundation; Otto Bremer; Aid Association for Lutherans; Churchers; Institutional
955 - Institutional (General); Emergency Employment Act; Bureau of Indian Affairs; EOG; Work Study
956 - Higher Education Act, Title III; General Institutional Funds; American Lutheran Church; Hill Foundation; Student Association
957 - HEW, EOG, NDEAL, State, General, Special; Student Senate; Private Donations
958 - OE, Ford Foundation; General State Funds
959 - Institutional; Title II, Model Cities
960 - Title I; Model Cities; State Funds
961 - 942 - except that institutional funds come from tuition and income
962 - State Department of Higher Education; Restricted funds; Unrestricted funds; EOG; College Job Program
963 - State Board of Regents; Religious Affiliation, Johnson Foundation, Private Donors
964 - State General Appropriations; Gifts; EOG; Victoria Foundation; Turrell Foundation
965 - EOG; EOF; TAG; NDSL; W[illegible]: Ford Foundation
966 - EOG; EOF; Sloan Foundation; Victoria Foundation
967 - EOF; State General Fund; Institutional
968 - EOF; CWS (Work Study); Institutional
969 - EOF; Tuition Aid Grants (State); College contribution from unrestricted funds; EOG; College Job Program
970 - Tuition; State; County
971 - V.A.; Institutional; P.N. Gate
972 - Institutional; Private Foundation; OEO
973 - Presbyterian Church; Missouri Synod; Institutional
974 - State Adult Education; OEO; Local funds
975 - SSDS money; State Disadvantaged; General State; Vocational Education
976 - "SSDS", funds, Regents; Student Development