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ABSTRACT

In 1992, a study was conducted at Grossmont College (GC) in El Cajon, California, to determine employment positions and incomes of former students who had left/graduated during the 3 academic years 1985-86, 1986-87, and 1987-1988 and had been enrolled in one of the following 11 vocational education programs: Accounting, Administration and Justice, Business-General, Business Office Technology, Cardiovascular Technology (CT), Child Development (CD), Family Studies (FS), Information Systems, Marketing, Nursing, or Telecommunications (TC). Employment and income data were solicited from the California Employment Development Department, which provided information on 9,738 of the 10,522 students submitted, producing a match rate of 93%. The study focused on data for former students' third year after leaving the college and was limited to those who had earned income for the previous four fiscal quarters, reporting all income in 1992 dollars. Study findings included the following: (1) incomes 3 years after leaving GC ranged from $35,600 for students from CT to $16,900 for former FS students; (2) top earners were from the Health Sciences, while the lowest earners were from FS, CD, and TC; (3) the highest placement rates in the field of training were in the Health Sciences; and (4) 87% of Nursing students found payroll employment in California 3 years after leaving GC, while 56% of former CD students did so. A discussion of study methodology and limitations, data tables for each of the 11 programs, and a printout of the computer program used in the data analysis are included. (PAA)

VOCATIONAL EDUCATION OUTCOMES

FOR

ELEVEN GROSSMONT COLLEGE PROGRAMS

BY

LARRY SMITH AND WINSTON DEAN

GROSSMONT COLLEGE INSTITUTIONAL RESEARCH

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The authors thank the following people for their help and encouragement on the project: Jack Friedlander and Bill Hamre (Santa Barbara City College), Susan Sargent (CC Chancellor's Office), Dave Jones (EDD), Dick Sanchez, Michele Nelson, and Bob Steinbach (Grossmont College).

VOCATIONAL EDUCATION OUTCOMES

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ELEVEN GROSSMONT COLLEGE PROGRAMS

I. Introduction and Summary

This report provides information on labor market outcomes of eleven Grossmont College vocational education programs. Information on placement and income are provided for the following programs: Accounting, Administration of Justice, Business-General, Business Office Technology, Cardiovascular Technology, Child Development, Family Studies, Information Systems, Marketing, Nursing, and Telecommunications. The students in the study are from the 1985-86, 1986-87, and 1987-88 academic years. All incomes are reported in 1992 dollars of constant purchasing power.

The available data are superior to any ever reported for Grossmont College. The results indicate a high degree of success in tracking and reporting on the students included. The tracking mechanism represents a major improvement over older methods.

II. Background of the study

In early 1992, Grossmont College entered into a partnership with Santa Barbara City College to develop a statewide model for electronic tracking of income and employment information for community college vocational education students. The study is sponsored by the Community College Chancellor's office. In May, 1992 a meeting was held in Sacramento to begin the information exchange with the California Employment Development Department. In the summer of 1992, Grossmont College and Santa Barbara City College submitted computerized lists of social security numbers of former students who had been enrolled in our vocational education departments. In November, 1992 both schools received income information and industry of employment information for about 93% of the students submitted. This report provides some of the core information of what we learned about the students.

III. Structure of the study

Electronic follow-up of students is not new. Oregon, Florida, Texas, Oklahoma, Illinois, and other states already possess the capability to match student social security numbers to income records.

Electronic follow-up is new to California. Previously, the primary mechanism available to vocational education deans and other decision-makers was the time-honored but unreliable method of mail

follow-up. Mail follow-up suffers from a number of unfortunate problems. Among these are: Low response rate (20% was good) and powerful sampling biases which made the results as an evaluative tool essentially worthless. For example, mail follow-up is heavily biased towards successful outcomes: More successful students are more likely to return a letter or postcard. This makes the reported outcomes look pleasing to providers of schooling, but is not very useful to the people responsible for creating, maintaining, shaping, and paying for the educational setting. Also, for those former students who respond at all to a mail survey, there is a an a priori downward bias to the incomes reported. After all, former students don't want to report income that was perhaps previously unreported to the Internal Revenue Service. Therefore, some of the actual earnings go unnoticed and successful programs might possibly look unsuccessful or problematic at best.

About 10,500 students, in 19 different occupational categories, known as TOP codes, were submitted to the California Employment Development Department. The students were from five exit cohort years: 1985-86 through 1989-90. The Employment Development Department (EDD) returned to us, from their electronic income data base, quarterly income amounts and the industry of employment for about 9,700 of the students we sent. EDD was most helpful in providing, where available, income for the year prior to leaving/graduation, the year of leaving/graduation, and for up to five years after graduation. Table 1 summarizes the number of matches by year of leaver cohort.

TABLE 1

SAMPLING RETURNS

#STUDENT LEAVERS SENT		#MATCHED TO EDD INCOME RECORDS	
COHORT YEAR			% MATCHED
85-86	1,609	1,507	94%
86-87	2,058	1,925	94%
87-88	2,175	2,025	93%
88-89	2,226	2,061	93%
89-90	2,454	2,220	91%
TOTALS	10,522	9,738	93%

IV. Some basic findings

The sampling returns represent a phenomenal "hit" or "match" rate of 93% (see Table 1). However, not all of the former students had income in every quarter, so decisions had to be made about the students on whom to report (and for what reasons) and how to report the industry of employment.

Since people tend to stabilize in employment after about 3 years from leaving school, we decided to report only on people who had four quarters of income 3 years from leaving Grossmont College. The sample chosen on which to report represents a pooled sample from the 85-86, 86-87, and 87-88 academic year cohorts. We further decided that we would use the last industry of employment and report on that location only, for the third year after leaving.

Table 2 on the following page summarizes some of the results by program. Detailed results are presented graphically in the Appendix to this report. Briefly, some observations on the 11 programs are:

- Income in the graphics is reported in 1992 dollars. Year 0 means year of leaving, year 1 means 1 year after leaving, etc.
- Incomes 3 years after leaving range from a high of $35,600 (Cardiovascular Tech) to a low of $16,900 (Family Studies).
- The top earners were in the Health Sciences and the lowest earners were in Family Studies, Child Development, and Telecom.
- The clearest view of placement in the field of training came from the Health Sciences. Virtually all of these students found work somewhere in their chosen field.
- The fuzziest view of placement came from general areas such as Business, Family Studies, and Telecom. Students from these areas could very well have directly utilized their specialized training, but we were not able to detect it. (See 'Qualifications to the Findings' below.)
- Students who found payroll employment in California 3 years after leaving school, as a percent of their cohort, range from a high of 87% (Nursing) to a low of 56% (Child Development).

V. Qualifications to the findings

These results represent a major improvement over earlier mail

TABLE 2

SELECTED CHARACTERISTICS OF 11 VOC ED PROGRAMS

(PROGRAMS COMPARED TO EACH OTHER)

PROGRAM	INCOME	% WORKING IN FIELD OF TRAINING (SEE TEXT)	% WORKING IN CA FULL OR PART TIME (SEE TEXT)
1. Accounting	Middle	Probably high; ('Services')	75%
2. Admin of Justice	High	Probably high; ('Public Admin')	72%
3. Business-Gen	Middle	Unknown	72%
4. Business Office Tech	Low/Middle	Probably high; ('Services')	75%
5. Cardiovascular Tech	High	96%(!)	74%
6. Child Develop-ment	Low	Perhaps high; ('Services')	56%
7. Family Studies	Low	Unknown	67%
8. Info Systems	Middle	Probably high;	68%
9. Marketing	Middle	Probably high; ('Trade')	76%
10. Nursing	High	95%(!)	87%
11. Telecom	Low	Unknown	78%

follow-up surveys. They are the equivalent of going from crystal radios to television. But they are only equivalent to going to early television of the late 40's. Recall those early images: Flickery, sometimes vague, and rife with electronic interference.

The images of this report are similar to those of early TV: They are incomplete and carry considerable fuzziness from the interference and omissions. Some of the problems with the information presented in this report are:

- → The assignment of occupational codes from the GC data base is imprecise. Not all students are necessarily slotted into the right program where the programs are general, like Business.

- → What educational attainment should students achieve before they are included in the study? E.g., only degree/certificate holders? These people plus people with 12 or more occupational units? People with fewer than 11 occupational units? Our choice was: Only students with a degree or certificate or 12 or more occupational units were included in this report.

- → If a student did not have 4 quarters of income in an early year of consideration, how should we construct an estimate of annual earnings? Our answer was to construct an estimate of earnings by summing income over existing quarters, dividing by number of quarters, and multiplying by 4.

- → Since students may work in many industries, which industry of employment should be reported? Our solution: Report the last industry of employment, on the grounds that employment will have stabilized after 3 years.

- → Only California payroll employment is shown. Therefore, the data result in omissions such as: Self-employment; out-of-state employment; agriculture and mining (not covered by unemployment insurance and hence not included in EDD numbers); income does not represent entire compensation package because nontaaxable items like health benefits do not appear; value of professional homemaking services provided are not shown (important for students in areas like Family Studies and Child Development); military income is not obtained; the "student status" of those reported on is not known; earnings from the underground economy are not measured or reported.

  Therefore, the "% Working in CA Full or Part-Time" is strongly biased downward. We believe the percentages reported in Table 2 are floor-level estimates. The true

percentages are, in fact, above those shown.

The difference between the measured "match" rate and 100% is not a measure of people not working at all. The difference between the "match" rate and the full 100% may very well be one or more of the omissions mentioned in the previous paragraph. (E.g., self-employment or employed out-of-state, etc.) Since any additional matches would only add to the measured rate, the rates shown are minimum estimates of people working.

→ The full-time or part-time labor force status of the student is not obtainable from the current data.

→ We know the industry of employment but not the actual occupation. Thus, a student may show up as working in the aerospace industry but we do not know whether the student was a rocket scientist or floor sweeper.

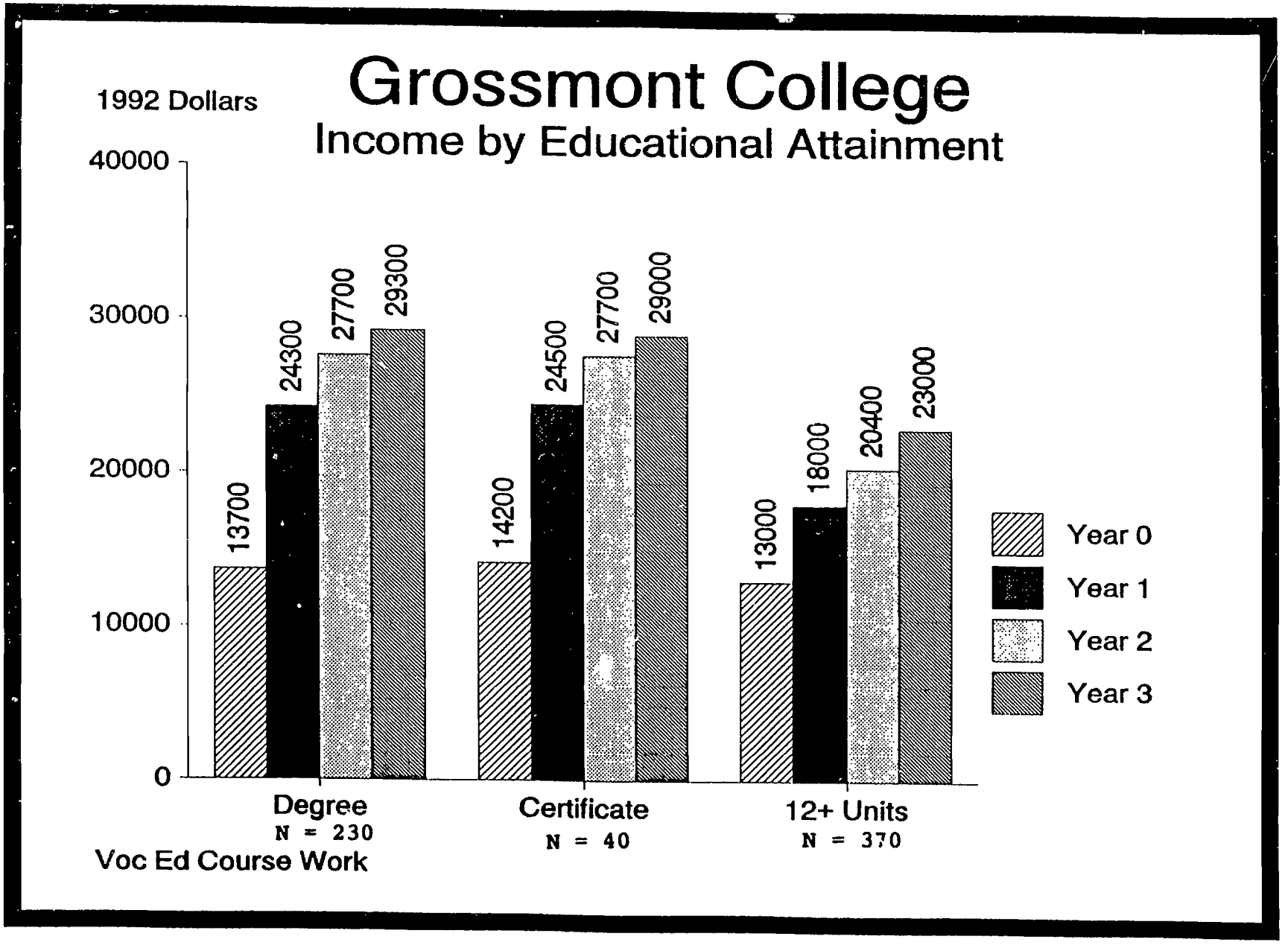
→ The age distribution of the student leavers may bias the reported earnings. For example, if one occupational group is composed entirely of young people and a second group consists mostly of seasoned workers returning for skill updates, the second group will have higher earnings that will be more related to their life experience than to the training they received at Grossmont College. While this is quite plausible, we were able to find little evidence of a strong relationship between age and earnings (except for Business-General). Therefore, we chose to report, for each program, on everyone, regardless of age. Some programs do have older students, though: Health Sciences. Some are more heavily populated by younger students: Business-General. See below for more discussion of the age issue.

→ There is no affective information from the students on their opinion as to the effectiveness of their training.

VI. Side issues: The effects of educational attainment and age

A. Educational attainment

What are the effects on income of completing a degree or certificate--as compared to leaving with 12 or more occupational units? Consider the graphic on the next page. Note that, on average, for all 11 programs combined, completing a degree or certificate will raise annual earnings for the third year from about $23,000 to about $29,000.


Grossmont College
Income by Educational Attainment
1992 Dollars
40000
30000
20000
10000
0
13700
24300
27700
29300
14200
24500
27700
29000
13000
18000
20400
23000
Year 0
Year 1
Year 2
Year 3
Degree
N = 230
Certificate
N = 40
12+ Units
N = 370
Voc Ed Course Work

B. The effects of age

It is not surprising, and--indeed--altogether typical for earnings to increase with age. These positively sloped "age-earnings-profiles" are widely and systematically reported in the labor economics literature.

Do our data support such a positive relationship of age and earnings? Surprisingly, not. There is a positive relationship in one or perhaps two of the programs in this report: General Business and Accounting. However, when considered on a program by program basis, we found no other statistically significant relationships. We performed, on each program, t-tests of means of different age groups (no difference except for programs mentioned above), and ran regressions of earnings on age for each program. Again, except for the programs mentioned, there was no statistically significant effect of age.

If all programs are combined, we do discover a significant relationship of earnings with age. We believe this is the result of the strong relationship embedded in the one or two individual programs mentioned above. However, we believe that it is inappropriate to pool earnings across programs. We believe it makes no sense to combine students from, say, Cardiovascular Tech, with Business Office Technology to see if there is a link between age and earnings.

Therefore, we decided, in the absence of better evidence, to include everyone, independent of age, in our sample.

VII. Are there systematic effects of gender and ethnicity?

We could find none that were statistically significant.

VIII. Where does the study/model/program go from here?

In March, 1993, the principals in the pilot project (Santa Barbara, Grossmont, the Chancellor's Office, and EDD) met in Los Angeles. We discussed details for further refinement of the project and plans for its implementation as a statewide model.

Besides the technical details of sample construction, it was agreed that the following would occur, subject to confirmation by the Chancellor's Office and EDD:

- The Chancellor's Office and EDD will co-ordinate the implementation of a statewide reporting mechanism.
- Each community college will be given the opportunity to participate, if they have the technical capacity to do so

and wish to participate.

- "Participation" means that a college sends a diskette containing the data elements (see Appendix) of students in programs they wish reports on. Colleges may, for their local analysis, attach demographic and other information about the students.

- MIS from the Chancellor's Office and EDD will provide reports on vocational programs to participating colleges. A participating college may request that a diskette of its own income information be returned to its own campus for further local analysis.

IX. Conclusion

The methods of this report are a breakthrough in tracking and reporting on student success--or lack of success--in occupational and other programs. Even though much further work needs to be done to improve the quality of the numbers, enough work has already been done to improve dramatically the quality of program outcome information.

Even a casual look at the Grossmont College information suggests that the students in the programs reported on above achieved considerable success in finding work, considerable success in finding work in their field of training, and considerable success in producing a viable stream of income with that training. Further analysis by others will no doubt fill in the details, but the present work provides a real contribution to counseling students and to program review.

APPENDIX

Contents

GROSSMONT COLLEGE
Vocational Ed Outcomes

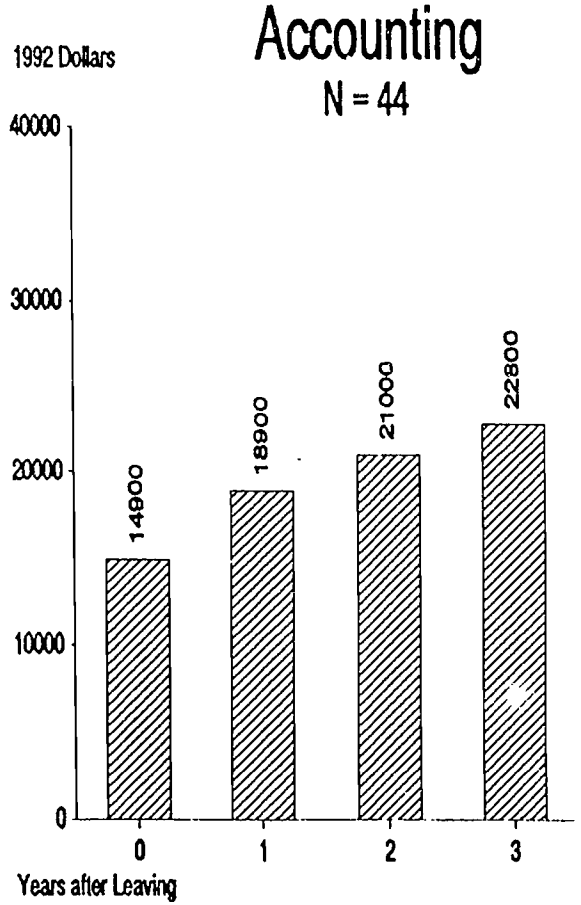
Where did they work?

ACCOUNTING (TOP=50200)

Construction	2 %
Manufacturing	26 %
Transport, Utilities	2 %
Wholesale & Retail	22 %
Finance, Real Estate	11 %
Services	36 %
Public Admin	1 %

% Employed in CA Full-Time after 3 years	56 %
% Employed in CA Full or Part-Time	75 %
% Employed in Accounting	?? %

How much did they make?



WHERE DID THEY WORK? ACCOUNTING

	Frequency	Percent		
CONSTRUCTION	1	2.3	2.3	2.3
DAIRY	1	2.3	2.3	4.5
PAPERBOARD	1	2.3	2.3	6.8
NEWSPAPERS	2	4.5	4.5	11.4
PERIODICALS	1	2.3	2.3	13.6
MISC. PUBLISHING	1	2.3	2.3	15.9
COMPUTERS	1	2.3	2.3	18.2
MISSILES	1	2.3	2.3	20.5
LAB EQUIPMENT	2	4.5	4.5	25.0
MEDICAL INSTRUMENTS	1	2.3	2.3	27.3
TELEPHONE	1	2.3	2.3	29.5
GROCERIES-WHLSALE	1	2.3	2.3	31.8
DEPARTMENT STORES	1	2.3	2.3	34.1
GROCERY STORES	1	2.3	2.3	36.4
WOMENS CLOTHES	1	2.3	2.3	38.6
FURNITURE-SALES	1	2.3	2.3	40.9
EAT & DRINK PLACES	2	4.5	4.5	45.5
DRUG STORES	1	2.3	2.3	47.7
MISC. STORES	1	2.3	2.3	50.0
BANKS	2	4.5	4.5	54.5
SAVINGS & LOANS	2	4.5	4.5	59.1
REAL ESTATE BROKERS	1	2.3	2.3	61.4
HOTELS	1	2.3	2.3	63.6
PERSONNEL AGENCY	2	4.5	4.5	68.2
COMPUTER PROGRAMMING	1	2.3	2.3	70.5
MISC. SERVICES	2	4.5	4.5	75.0
MISC. AMUSEMENTS	1	2.3	2.3	77.3
DOCTOR OFFICE	1	2.3	2.3	79.5
ELEMENTARY SCHOOL	1	2.3	2.3	81.8
COLLEGE, UNIVS	1	2.3	2.3	84.1
ZOOS	1	2.3	2.3	86.4
ACCOUNTING	4	9.1	9.1	95.5
RESEARCH	1	2.3	2.3	97.7
TRANSPORTION/REG	1	2.3	2.3	100.0
TOTAL	44	100.0	100.0	100.0

GROSSMONT COLLEGE
Vocational Ed Outcomes

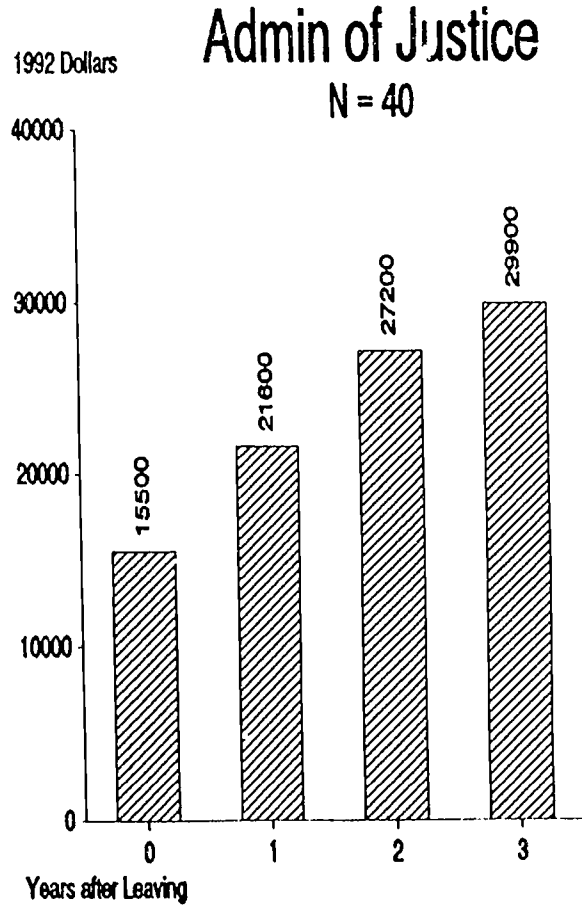
Where did they work?

ADMINISTRATION OF JUSTICE (TOP=210500)

Construction	5 %
Manufacturing	0 %
Transport, Utilities	5 %
Wholesale & Retail	20 %
Finance, Real Estate	5 %
Services	15 %
Public Admin	50 %

% Employed in CA Full-Time after 3 years	46 %
% Employed in CA Full or Part-Time	72 %
% Employed in AOJ	?? %

How much did they make?



WHERE DID THEY WORK? ADMINISTRATION OF JUSTICE

	Frequency	Percent	Percent	Percent
CONSTRUCTION	1	2.5	2.5	2.5
CARPENTRY	1	2.5	2.5	5.0
TRUCKING	2	5.0	5.0	10.0
MISC.-SALES	1	2.5	2.5	12.5
DEPARTMENT STORES	3	7.5	7.5	20.0
GROCERY STORES	2	5.0	5.0	25.0
AUTO STORES	1	2.5	2.5	27.5
EAT & DRINK PLACES	1	2.5	2.5	30.0
REAL ESTATE	2	5.0	5.0	35.0
MISC. SERVICES	2	5.0	5.0	40.0
MISC.-REPAIR	1	2.5	2.5	42.5
LEGAL	1	2.5	2.5	45.0
ELEMENTARY SCHOOL	2	5.0	5.0	50.0
POLICE DEPARTMENT	19	47.5	47.5	97.5
TRANSPORTION/REG	1	2.5	2.5	100.0
TOTAL	40	100.0	100.0	100.0

GROSSMONT COLLEGE
Vocational Ed Outcomes

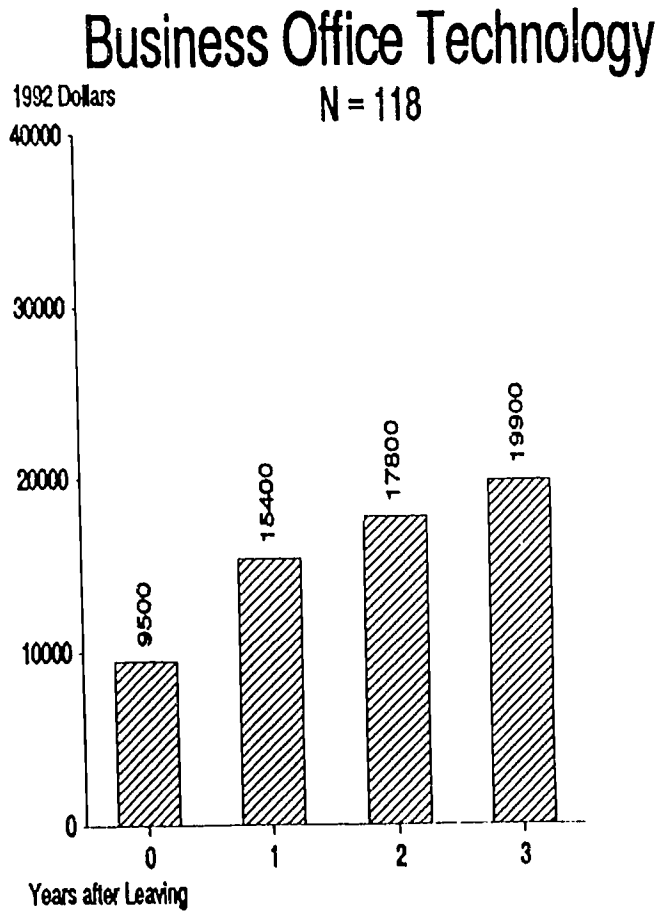
Where did they work?

BUSINESS OFFICE TECHNOLOGY (TOP=51400)

Construction	2 %
Manufacturing	7 %
Transport, Utilities	0 %
Wholesale & Retail	19 %
Finance, Real Estate	8 %
Services	53 %
Public Admin	11 %

% Employed in CA Full-Time after 3 years	55 %
% Employed in CA Full or Part-Time	75 %
% Employed in Bus Off Technology	?? %

How much did they make?



WHERE DID THEY WORK? BUSINESS OFFICE TECHNOLOGY (PAGE ONE)

	Frequency	Percent	Percent	
CONSTRUCTION	1	.8	.8	.8
PLUMBING	1	.8	.8	1.7
MISC. APPAREL	1	.8	.8	2.5
COMM. PRINTING	2	1.7	1.7	4.2
DRUGS	1	.8	.8	5.1
CUTLERY	1	.8	.8	5.9
ELECTRICAL EQUIP.	1	.8	.8	6.8
AIRCRAFT	1	.8	.8	7.6
MEDICAL INSTRUMENTS	1	.8	.8	8.5
EQUIPMENT-SALES	1	.8	.8	9.3
MISC.-SALES	2	1.7	1.7	11.0
DEPARTMENT STORES	6	5.1	5.1	16.1
GROCERY STORES	3	2.5	2.5	18.6
CAR SALES	1	.8	.8	19.5
RV DEALERS	1	.8	.8	20.3
FURNITURE-SALES	2	1.7	1.7	22.0
TV STORES	2	1.7	1.7	23.7
EAT & DRINK PLACES	1	.8	.8	24.6
DRUG STORES	1	.8	.8	25.4
USED GOODS STORES	1	.8	.8	26.3
MISC. STORES	1	.8	.8	27.1
SAVINGS & LOANS	1	.8	.8	28.0
INSURANCE-OFFICE	2	1.7	1.7	29.7
INSURANCE-SALES	3	2.5	2.5	32.2
REAL ESTATE	1	.8	.8	33.1
REAL ESTATE BROKERS	1	.8	.8	33.9
INVESTMENTS	1	.8	.8	34.7
LAUNDRY	1	.8	.8	35.6
PERSONNEL AGENCY	6	5.1	5.1	40.7
COMPUTER PROGRAMMING	2	1.7	1.7	42.4
MISC. SERVICES	2	1.7	1.7	44.1
CAR WASH	2	1.7	1.7	45.8
THEATERS	1	.8	.8	46.6
DOCTOR OFFICE	9	7.6	7.6	54.2
DENTAL OFFICE	2	1.7	1.7	55.9
HEALTH OFFICE	1	.8	.8	56.8
NURSING HOME	2	1.7	1.7	58.5
HOSPITAL	6	5.1	5.1	63.6
MEDICAL LAB	1	.8	.8	64.4
HOME HEALTH CARE	1	.8	.8	65.3
MISC. HEALTH CARE	2	1.7	1.7	66.9
LEGAL	5	4.2	4.2	71.2
ELEMENTARY SCHOOL	4	3.4	3.4	74.6
COLLEGE, UNIVS	5	4.2	4.2	78.8
SOCIAL SERVICES	1	.8	.8	79.7
VOCATIONAL REHAB	1	.8	.8	80.5
PROF. ASSOCIATIONS	1	.8	.8	91.4

BUSINESS OFFICE TECHNOLOGY (PAGE TWO)

LABOR UNIONS	1	.8	.8	82.2
CIVIC ORGANIZATIONS	1	.8	.8	83.1
ACCOUNTING	2	1.7	1.7	84.7
RESEARCH	3	2.5	2.5	87.3
POLICE DEPARTMENT	14	11.9	11.9	99.2
TOTAL	118	100.0	100.0	100.0

GROSSMONT COLLEGE
Vocational Ed Outcomes

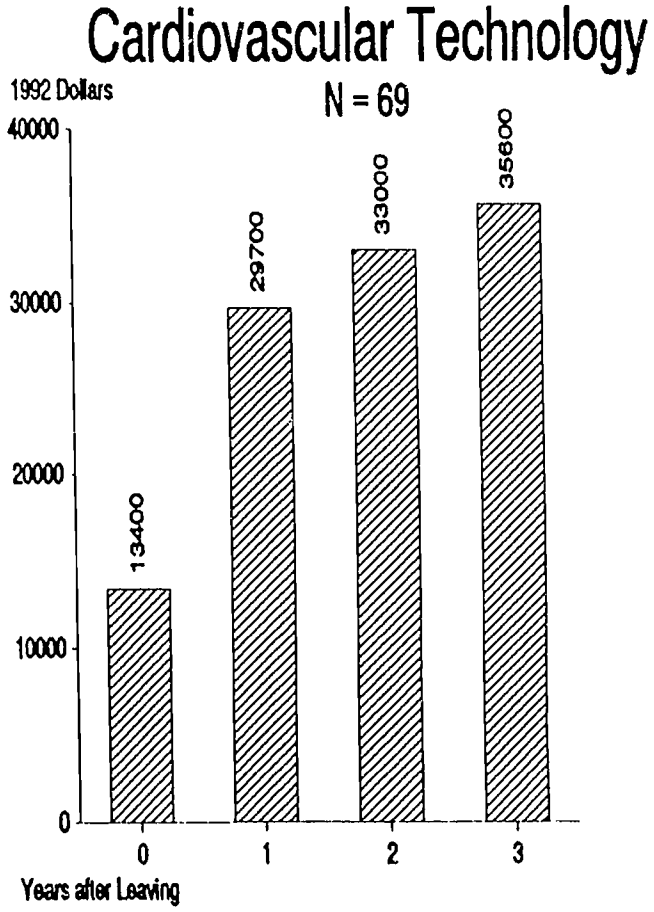
Where did they work?

CARDIOVASCULAR TECHNOLOGY (TOP=120740)

Construction	0 %
Manufacturing	1 %
Transport, Utilities	0 %
Wholesale & Retail	1 %
Finance, Real Estate	1 %
Services	95 %
Public Admin	2 %

% Employed in CA Full-Time after 3 years	63 %
% Employed in CA Full or Part-Time	74 %
% Employed in CVTE	96 %

How much did they make?



WHERE DID THEY WORK? CARDIOVASCULAR TECHNOLOGY

	Frequency	Percent	Percent	Percent
CHEMICALS	1	1.4	1.4	1.4
DAIRY STORES	1	1.4	1.4	2.9
INSURANCE-SALES	1	1.4	1.4	4.3
DOCTOR OFFICE	13	18.8	18.8	23.2
HOSPITAL	34	49.3	49.3	72.5
MEDICAL LAB	7	10.1	10.1	82.6
MISC. HEALTH CARE	4	5.8	5.8	88.4
LEGAL	1	1.4	1.4	89.9
COLLEGE, UNIVS	7	10.1	10.1	100.0
TOTAL	69	100.0	100.0	100.0

GROSSMONT COLLEGE
Vocational Ed Outcomes

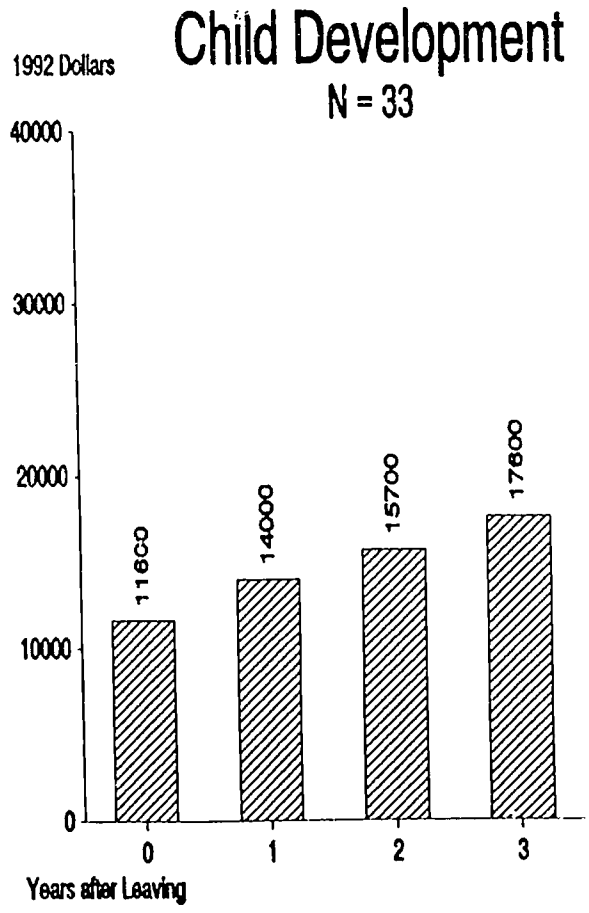
Where did they work?

CHILD DEVELOPMENT (TOP=130510)

Construction	3 %
Manufacturing	3 %
Transport, Utilities	0 %
Wholesale & Retail	27 %
Finance, Real Estate	3 %
Services	61 %
Public Admin	3 %

% Employed in CA Full-Time after 3 years	37 %
% Employed in CA Full or Part-Time	56 %
% Employed in Child Development	?? %

How much did they make?



WHERE DID THEY WORK? CHILD DEVELOPMENT

	Frequency	Percent	Percent	Percent
ELECTRICIAN	1	3.0	3.0	3.0
COMPUTERS	1	3.0	3.0	6.1
HARDWARE-SALES	1	3.0	3.0	9.1
MISC.-SALES	1	3.0	3.0	12.1
LUMBER-SALES	1	3.0	3.0	15.2
MISC.-SALES	1	3.0	3.0	18.2
GROCERY STORES	1	3.0	3.0	21.2
EAT & DRINK PLACES	3	9.1	9.1	30.3
DRUG STORES	1	3.0	3.0	33.3
SAVINGS & LOANS	1	3.0	3.0	36.4
BEAUTY SHOPS	1	3.0	3.0	39.4
DOCTOR OFFICE	1	3.0	3.0	42.4
ELEMENTARY SCHOOL	9	27.3	27.3	69.7
COLLEGE, UNIVS	2	6.1	6.1	75.8
DAY CARE	4	12.1	12.1	87.9
RELIGIOUS ORGS	1	3.0	3.0	90.9
ACCOUNTING	1	3.0	3.0	93.9
MGT. SERVICES	1	3.0	3.0	97.0
POLICE DEPARTMENT	1	3.0	3.0	100.0
TOTAL	33	100.0	100.0	100.0

GROSSMONT COLLEGE
Vocational Ed Outcomes

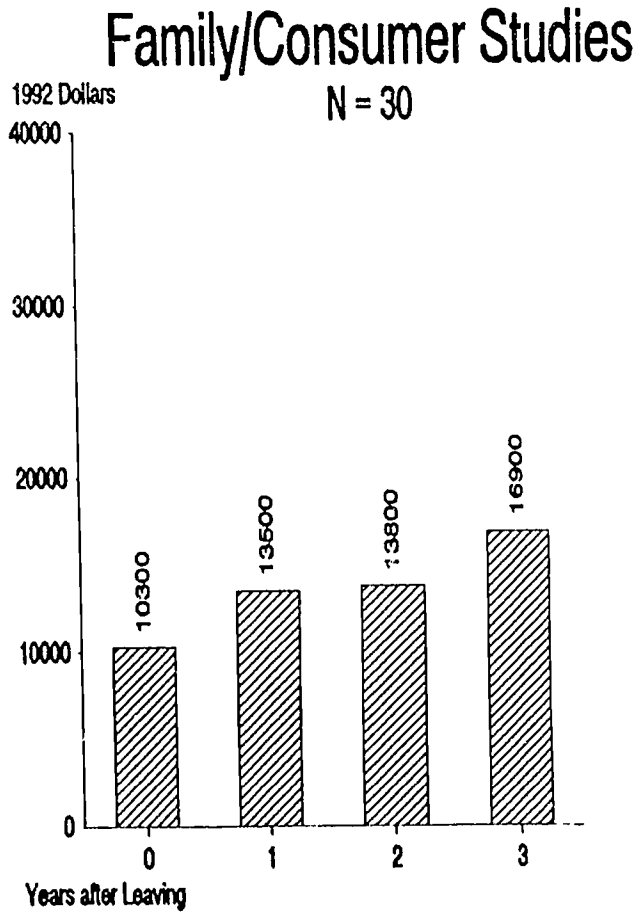
Where did they work?

FAMILY/CONSUMER STUDIES (TOP=130400)

Construction	10 %
Manufacturing	3 %
Transport, Utilities	0 %
Wholesale & Retail	30 %
Finance, Real Estate	17 %
Services	37 %
Public Admin	3 %

% Employed in CA Full-Time after 3 years	47 %
% Employed in CA Full or Part-Time	67 %
% Employed in FACS	?? %

How much did they make?



WHERE DID THEY WORK? FAMILY STUDIES

	Frequency	Percent	Percent	Percent
CONSTRUCTION	1	3.3	3.3	3.3
PLUMBING	1	3.3	3.3	6.7
MISC. CONTRACTING	1	3.3	3.3	10.0
MISC. PUBLISHING	1	3.3	3.3	13.3
MISC.-SALES	1	3.3	3.3	16.7
DEPARTMENT STORES	1	3.3	3.3	20.0
VARIETY STORES	1	3.3	3.3	23.3
MISC.-SALES	1	3.3	3.3	26.7
FURNITURE-SALES	2	6.7	6.7	33.3
EAT & DRINK PLACES	3	10.0	10.0	43.3
BANKS	1	3.3	3.3	46.7
SAVINGS & LOANS	1	3.3	3.3	50.0
INSURANCE-SALES	2	6.7	6.7	56.7
REAL ESTATE BROKERS	1	3.3	3.3	60.0
FUNERAL HOMES	1	3.3	3.3	63.3
PERSONNEL AGENCY	1	3.3	3.3	66.7
ATUO REPAIR	1	3.3	3.3	70.0
MISC. AMUSEMENTS	1	3.3	3.3	73.3
DENTAL OFFICE	1	3.3	3.3	76.7
ELEMENTARY SCHOOL	1	3.3	3.3	80.0
COLLEGE, UNIVS	2	6.7	6.7	86.7
CIVIC ORGANIZATIONS	1	3.3	3.3	90.0
ACCOUNTING	1	3.3	3.3	93.3
PRIV. HOUSEHOLDS	1	3.3	3.3	96.7
POLICE DEPARTMENT	1	3.3	3.3	100.0
TOTAL	30	100.0	100.0	100.0

GROSSMONT COLLEGE
Vocational Ed Outcomes

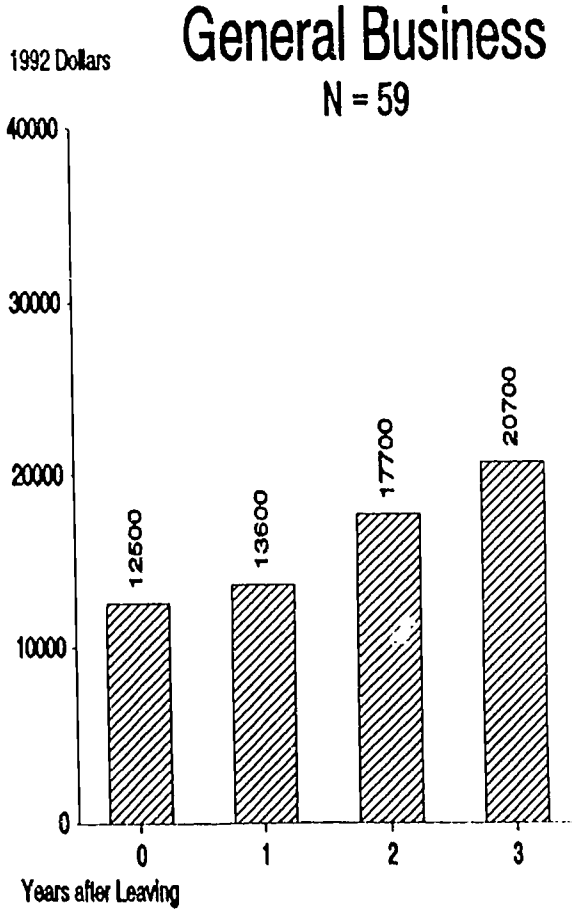
Where did they work?

GENERAL BUSINESS (TOP=50100)

Construction	2 %
Manufacturing	3 %
Transport, Utilities	3 %
Wholesale & Retail	48 %
Finance, Real Estate	20 %
Services	24 %
Public Admin	0 %

% Employed in CA Full-Time after 3 years	51 %
% Employed in CA Full or Part-Time	72 %
% Employed in General Business	?? %

How much did they make?



WHERE DID THEY WORK? GENERAL BUSINESS

	Frequency	Percent		
VETERINARY	1	1.7	1.7	1.7
CONSTRUCTION	1	1.7	1.7	3.4
COMM. EQUIP	1	1.7	1.7	5.1
CLOCKS	1	1.7	1.7	6.8
PUBLIC UTILITIES	1	1.7	1.7	8.5
EQUIPMENT-SALES	1	1.7	1.7	10.2
METALS-SALES	1	1.7	1.7	11.9
ELECTRICAL-SALES	2	3.4	3.4	15.3
MACHINERY-SALES	1	1.7	1.7	16.9
GROCERIES-WHLSALE	1	1.7	1.7	18.6
MISC.-SALES	1	1.7	1.7	20.3
DEPARTMENT STORES	2	3.4	3.4	23.7
GROCERY STORES	4	6.8	6.8	30.5
WOMENS CLOTHES	1	1.7	1.7	32.2
CLOTHING-GENERAL	2	3.4	3.4	35.6
EAT & DRINK PLACES	10	16.9	16.9	52.5
MISC. STORES	2	3.4	3.4	55.9
BANKS	3	5.1	5.1	61.0
SAVINGS & LOANS	3	5.1	5.1	66.1
CREDIT UNIONS	1	1.7	1.7	67.8
LOAN COMPANIES	1	1.7	1.7	69.5
INSURANCE-OFFICE	2	3.4	3.4	72.9
REAL ESTATE	2	3.4	3.4	76.3
HOTELS	2	3.4	3.4	79.7
PHOTO SHOP	1	1.7	1.7	81.4
PERSONNEL AGENCY	2	3.4	3.4	84.7
MISC. SERVICES	2	3.4	3.4	88.1
ELECTRICAL-REPAIR	1	1.7	1.7	89.8
MISC. AMUSEMENTS	1	1.7	1.7	91.5
HOSPITAL	1	1.7	1.7	93.2
LEGAL	1	1.7	1.7	94.9
ELEMENTARY SCHOOL	1	1.7	1.7	96.6
ACCOUNTING	2	3.4	3.4	100.0
	59	100.0	100.0	100.0

GROSSMONT COLLEGE
Vocational Ed Outcomes

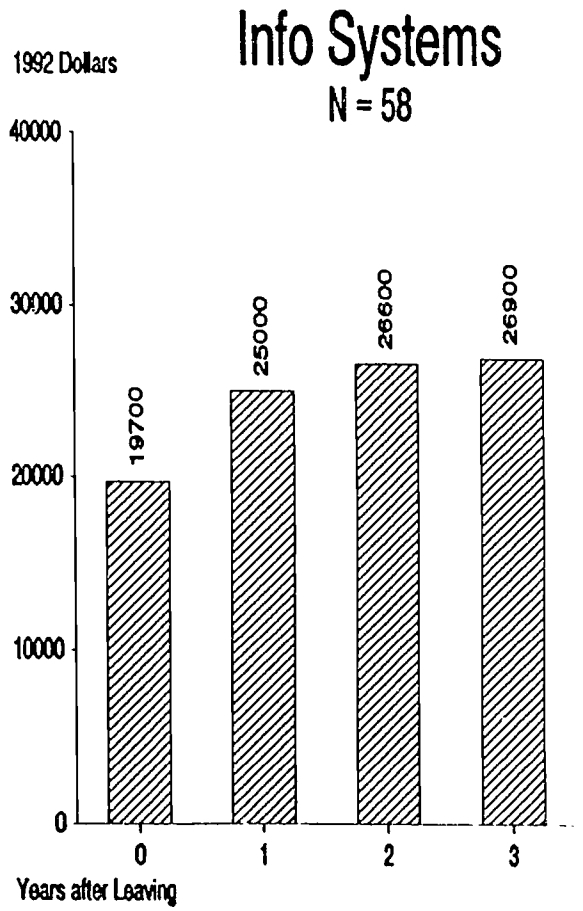
Where did they work?

INFO SYSTEMS (TOP=70300)

Construction	2 %
Manufacturing	10 %
Transport, Utilities	2 %
Wholesale & Retail	25 %
Finance, Real Estate	14 %
Services	47 %
Public Admin	0 %

% Employed in CA Full-Time after 3 years	51 %
% Employed in CA Full or Part-Time	68 %
% Employed in Info Systems	?? %

How much did they make?



WHERE DID THEY WORK? INFORMATION SYSTEMS

	Frequency	Percent	Percent	Percent
ROOFING	1	1.7	1.7	1.7
PERIODICALS	1	1.7	1.7	3.4
CONCRETE	1	1.7	1.7	5.2
COMPUTERS	1	1.7	1.7	6.9
COMM. EQUIP	1	1.7	1.7	8.6
ELECTRONCS	1	1.7	1.7	10.3
LAB EQUIPMENT	1	1.7	1.7	12.1
TELEPHONE	1	1.7	1.7	13.8
EQUIPMENT-SALES	4	6.9	6.9	20.7
HARDWARE-SALES	1	1.7	1.7	22.4
PAINT-SALES	1	1.7	1.7	24.1
DEPARTMENT STORES	2	3.4	3.4	27.6
GROCERY STORES	1	1.7	1.7	29.3
BAKERIES	2	3.4	3.4	32.8
TV STORES	3	5.2	5.2	37.9
EAT & DRINK PLACES	1	1.7	1.7	39.7
BANKS	1	1.7	1.7	41.4
SAVINGS & LOANS	4	6.9	6.9	48.3
LOAN COMPANIES	1	1.7	1.7	50.0
INSURANCE-OFFICE	1	1.7	1.7	51.7
INVESTMENTS	1	1.7	1.7	53.4
HOTELS	2	3.4	3.4	56.9
COMPUTER PROGRAMMING	8	13.8	13.8	70.7
MISC. SERVICES	2	3.4	3.4	74.1
HOSPITAL	1	1.7	1.7	75.9
LEGAL	1	1.7	1.7	77.6
ELEMENTARY SCHOOL	3	5.2	5.2	82.8
COLLEGE, UNIVS	1	1.7	1.7	84.5
MUSEUMS	1	1.7	1.7	86.2
ENGINEERING	1	1.7	1.7	87.9
ACCOUNTING	3	5.2	5.2	93.1
RESEARCH	2	3.4	3.4	96.6
MGT. SERVICES	2	3.4	3.4	100.0
TOTAL	58	100.0	100.0	100.0

GROSSMONT COLLEGE
Vocational Ed Outcomes

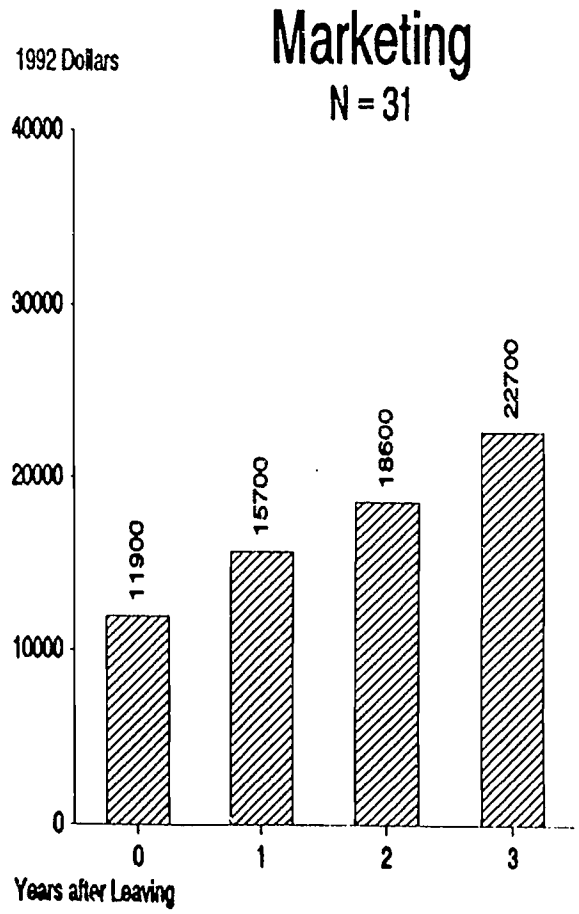
Where did they work?

MARKETING (TOP=50900)

Construction	6 %
Manufacturing	6 %
Transport, Utilities	3 %
Wholesale & Retail	42 %
Finance, Real Estate	20 %
Services	23 %
Public Admin	0 %

% Employed in CA Full-Time after 3 years	56 %
% Employed in CA Full or Part-Time	76 %
% Employed in Marketing	?? %

How much did they make?



WHERE DID THEY WORK? MARKETING

	Frequency	Percent		
PLUMBING	1	3.2	3.2	3.2
MISC. CONTRACTING	1	3.2	3.2	6.5
COMM. PRINTING	1	3.2	3.2	9.7
ENGINES	1	3.2	3.2	12.9
ELECTRIC POWER	1	3.2	3.2	16.1
FURNITURE-SALES	1	3.2	3.2	19.4
PAPER-SALES	1	3.2	3.2	22.6
MISC.-SALES	1	3.2	3.2	25.8
LUMBER-SALES	1	3.2	3.2	29.0
DEPARTMENT STORES	4	12.9	12.9	41.9
WOMENS CLOTHES	1	3.2	3.2	45.2
CLOTHING-GENERAL	1	3.2	3.2	48.4
FURNITURE-SALES	1	3.2	3.2	51.6
APPLIANCES-SALES	1	3.2	3.2	54.8
TV STORES	1	3.2	3.2	58.1
BANKS	1	3.2	3.2	61.3
SAVINGS & LOANS	2	6.5	6.5	67.7
CREDIT UNIONS	1	3.2	3.2	71.0
REAL ESTATE BROKERS	2	6.5	6.5	77.4
MISC.-REPAIR	1	3.2	3.2	80.6
DOCTOR OFFICE	1	3.2	3.2	83.9
NURSING HOME	1	3.2	3.2	87.1
LEGAL	1	3.2	3.2	90.3
ELEMENTARY SCHOOL	1	3.2	3.2	93.5
DAY CARE	1	3.2	3.2	96.8
RESIDENTIAL CARE	1	3.2	3.2	100.0
TOTAL	31	100.0	100.0	100.0

GROSSMONT COLLEGE
Vocational Ed Outcomes

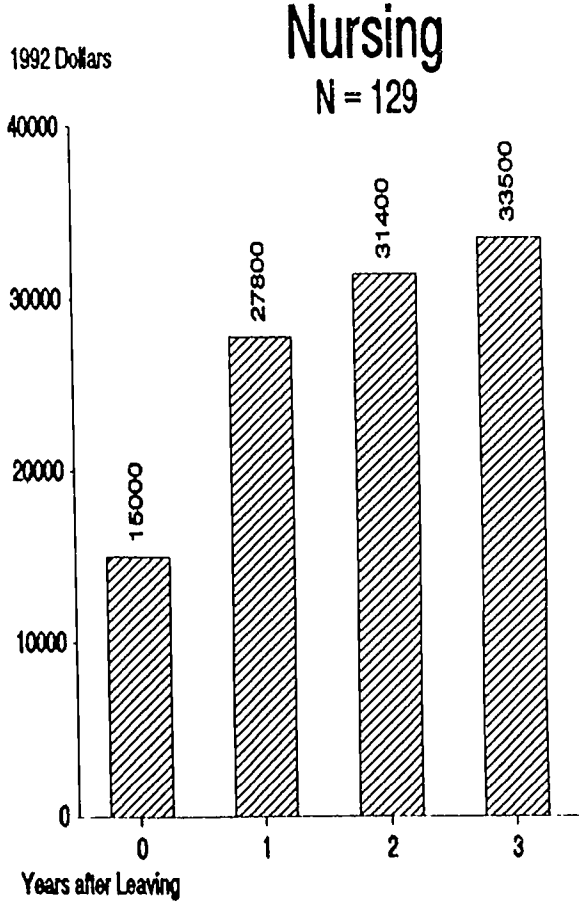
Where did they work?

NURSING (TOP=120310)

Construction	0 %
Manufacturing	1 %
Transport, Utilities	0 %
Wholesale & Retail	2 %
Finance, Real Estate	0 %
Services (Health)	95 %
Public Admin	2 %

% Employed in CA Full-Time after 3 years	78 %
% Employed in CA Full or Part-Time	87 %
% Employed in Nursing	83 %

How much did they make?



WHERE DID THEY WORK? NURSING

	Frequency	Percent	Percent	Percent
MISSILES	1	.8	.8	.8
GROCERY STORES	1	.8	.8	1.6
DRUG STORES	1	.8	.8	2.3
PERSONNEL AGENCY	4	3.1	3.1	5.4
DOCTOR OFFICE	2	1.6	1.6	7.0
NURSING HOME	2	1.6	1.6	8.5
HOSPITAL	100	77.5	77.5	86.0
HOME HEALTH CARE	1	.8	.8	86.8
MISC. HEALTH CARE	1	.8	.8	87.6
COLLEGE, UNIVS	9	7.0	7.0	94.6
POLITICAL ORGS	1	.8	.8	95.3
ACCOUNTING	1	.8	.8	96.1
MGT. SERVICES	1	.8	.8	96.9
POLICE DEPARTMENT	4	3.1	3.1	100.0
TOTAL	129	100.0	100.0	100.0

GROSSMONT COLLEGE
Vocational Ed Outcomes

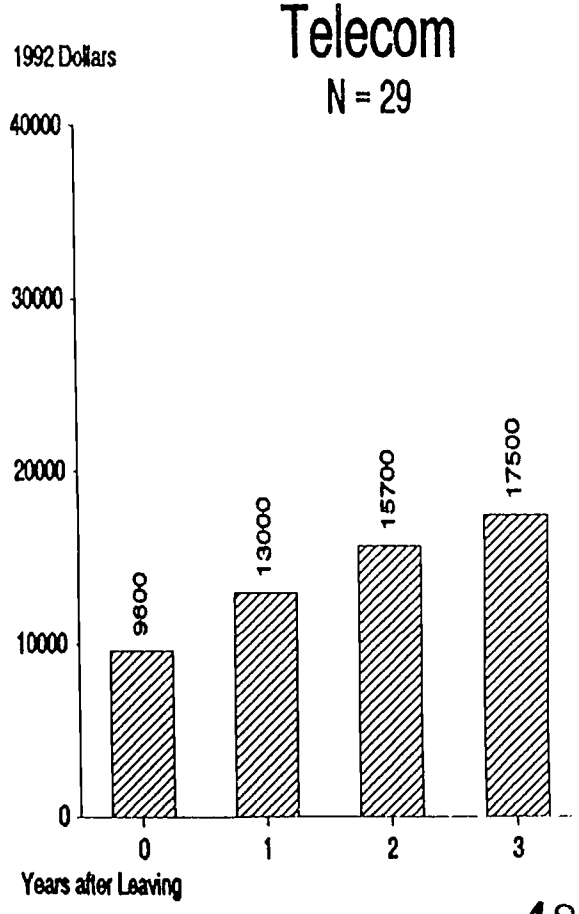
Where did they work?

TELECOM *(TOP=60300)*

Construction	7 %
Manufacturing	3 %
Transport, Utilities	10 %
Wholesale & Retail	35 %
Finance, Real Estate	3 %
Services	42 %
Public Admin	0 %

% Employed in CA Full-Time after 3 years	64 %
% Employed in CA Full or Part-Time	78 %
% Employed in Telecom	?? %

How much did they make?



WHERE DID THEY WORK? TELECOM

	Frequency	Percent	Percent	Percent
LANDSCAPE	1	3.4	3.4	3.4
MASONRY	1	3.4	3.4	6.9
NEWSPAPERS	1	3.4	3.4	10.3
TV/RADIO	3	10.3	10.3	20.7
DEPARTMENT STORES	3	10.3	10.3	31.0
GROCERY STORES	3	10.3	10.3	41.4
FURNITURE-SALES	1	3.4	3.4	44.8
EAT & DRINK PLACES	3	10.3	10.3	55.2
BANKS	1	3.4	3.4	58.6
HOTELS	3	10.3	10.3	69.0
ADVERTISING	1	3.4	3.4	72.4
PERSONNEL AGENCY	1	3.4	3.4	75.9
MISC. SERVICES	1	3.4	3.4	79.3
MOVIES-PRODUCTION	3	10.3	10.3	89.7
PROF. SPORTS	1	3.4	3.4	93.1
MISC. AMUSEMENTS	1	3.4	3.4	96.6
PRIV. HOUSEHOLDS	1	3.4	3.4	100.0
TOTAL	29	100.0	100.0	100.0

Agenda for meeting of EDD project principals in Los Angeles. Meeting was held on March 11, 1993. Present were Jack Friedlander (SBCC), Larry Smith (GC), Jim Johnson and Dave Jones(EDD), Jan Paulson (CC/MIS), Tom Oliver (LAVC), and Susan Sargent (CC Voc Ed Specialist).

AGENDA

1. Review and, if needed, revise the agenda

2. Review of findings from SBCC, Grossmont College and EDD Studies

   A. Major findings

   B. Methodological concerns

   C. Logistics of obtaining data from EDD

   D. Recommendations on how data can best be provided to Chancellor's Office and colleges

3. EDD-Related Issues

   A. Cost of providing match on job placement to meet VATEA accountability requirements

   B. Recommended length of time after students leave college when match should be made to meet VATEA reporting requirements

   C. Costs of providing colleges with UI wage record data that can be used in conducting longitudinal studies similar to what has been done this year at SBCC and Grossmont College

   D. Methodological and procedural concerns in providing colleges with UI wage record data

4. Chancellor's Office Issues

   A. Procedures for having the Chancellor's Office MIS Unit obtain UI wage record data from EDD

   B. Other

5. Next Steps

   A. Recommendations for addressing the limitations of using UI wage records data

   B. Other

Communication from EDD: December, 1992

December 15, 1992

DOCUMENTATION

GROSSMONT COLLEGE

GR.EXE (Compressed)		GRW1.EXE(Compressed) GRW2.EXE(Compressed)	
	Enrollment		**Wages**
Files	Semesters	Files	Quarters *
GR86.TXT	855-857-863	GRW86.TXT	843-912
GR87.TXT	865-867-873	GRW87.TXT	853-921
GR88.TXT	875-877-883	GRW88.TXT	863-921
GR89.TXT	885-887-893	GRW89.TXT	873-921
GR90.TXT	895-897-903	GRW90.TXT	883-921
GR91.TXT	905-907-913	GRW91.TXT	893-921

This is our "Loose Summer '90."*Quarterly wage data stops with the first quarter of 1992.

THE DATA FILES ON BOTH DISKS ARE COMPRESSED. TO DECOMPRESS DATA FILES, COPY TO HARD DISK USING THE FULL FILE NAME (i. e. GR.EXE). WHEN IN THE HARD DISK, TYPE FULL FILE NAME (i. e. GR.EXE) TO COMPLETE THE DECOMPRESS AND TO PLACE FILES ON THE HARD DISK.

If you have any problems, please call me at (916) 262-2263.

Dave Jones.

File descriptions for materials sent to EDD and received from EDD.

DOCUMENTATION

GROSSMONT COLLEGE

Enrollment Files

File Structure:

VARIABLE		COLUMN
College		1 - 3
Student I. D.		4 - 8
YYT		9 - 11
TOP		12- 17
Ed Attain		18
Ed Goal		19
Spec Pop		20 - 23
Ac Disady.	20	
Ec Disady.	21	
Lep	22	
Disab	23	
Sex		24
Birth Year		25 - 26
Ethnic		27
Major		28 - 33
School Year		34 - 36

Quarterly Wage Files

File Structure:

VARIABLE	COLUMN
ID	1- 4 (college ID)
Student ID	5 - 9
SIC3	10 - 12 (Industry)
Quarter	13 - 15
Wages	16 - 23 (Quarter wages, Dollars only)

VOC ED PROJECT
SSN-EDD

```
TITLE 'EDD.CR1---SAM COURSES: 853-902'
FILE HANDLE QEDD3/NAME='QEDD3.FIL'
FILE HANDLE TMP/NAME='TMP.TMP'
FILE HANDLE QEDD1/NAME='QEDD1.FIL'
FILE HANDLE EDD/NAME='EDD.SY1'
DATA LIST FILE=QEDD3
  /YYS 1-3 SECT 4-7(A) COURSE 8-15(A) UNITS 16-18(1) TOPS 19-24(2) SAM 25(A)
SELECT IF (SAM='A' OR SAM='B' OR SAM='C' OR SAM='D')
SELECT IF (YYS GE 853 AND YYS LE 902)
SAVE OUTFILE=TMP
  /KEEP=YYS SECT COURSE UNITS TOPS SAM
DATA LIST FILE=QEDD1
  /SSN 1-9 YYS 10-12 SECT 13-16(A) GR 17(A)
MATCH FILES TABLE=TMP/IN=INSAM/FILE=*/BY=YYS SECT
SELECT IF (INSAM)
SELECT IF (GR='A' OR GR='B' OR GR='C' OR GR='D' OR GR='R')
SORT CASES BY SSN YYS SAM TOPS
SAVE OUTFILE=EDD
  /KEEP=SSN YYS COURSE UNITS SAM TOPS
GET FILE=EDD
FREQUENCIES VARIABLES=YYS

TITLE 'EDD.CR2---TOPS CODE/SAM UNITS: 853-902'
FILE HANDLE EDD1/NAME='EDD.SY1'
FILE HANDLE EDD2/NAME='EDD.SY2'
GET FILE=EDD1
SORT CASES BY SSN SAM TOPS YYS COURSE UNITS
AGGREGATE OUTFILE=*
  /BREAK=SSN SAM TOPS
  /NTOPS=N(TOPS)
  /COURSE=FIRST(COURSE)
  /YYS=MAX(YYS)
  /UNITS=SUM(UNITS)
SORT CASES BY SSN(A) SAM(A) NTOPS(D)
AGGREGATE OUTFILE=*
  /BREAK=SSN
  /SAM TOPS COURSE=FIRST(SAM TOPS COURSE)
  /YYS=MAX(YYS)
  /UNITS=SUM(UNITS)
SELECT IF (UNITS GE 3.0)
SAVE OUTFILE=EDD2
  /KEEP=SSN YYS TOPS
      SAM COURSE UNITS
GET FILE=EDD2
FREQUENCIES VARIABLES=YYS TOPS

TITLE 'EDD.CR3---DEGREES/EDATTAIN: 853+'
FILE HANDLE QEDD2/NAME='QEDD2.FIL'
FILE HANDLE EDD2/NAME='EDD.SY2'
FILE HANDLE EDD3/NAME='EDD.SY3'
DATA LIST FILE=QEDD2
  /SSN 1-9 YYSD 10-12 EOC 13-17 EOC2 18-22 EOCTYPE 23(A) EOCTYPE2 24(A)
IF (EOCTYPE='C' AND (EOCTYPE2='A' OR EOCTYPE2='B'))   EOC=EOC2
IF (EOCTYPE='C' AND (EOCTYPE2='A' OR EOCTYPE2='B'))   EOCTYPE=EOCTYPE2
SORT CASES BY SSN EOCTYPE YYSD
COMMENT---------- CHOOSE LAST DEGREE/CERTIFICATE ----------
MATCH FILES FILE=*/BY=SSN/LAST=TAIL
SELECT IF (TAIL)
COMMENT---------- MATCH DEGREES TO PEOPLE IN SAM COURSES ----------
MATCH FILES FILE=EDD2/IN=INSAM/FILE=*/BY=SSN
SELECT IF (INSAM)
COMMENT---------- SET NON-DEGREE PEOPLE YYSD/EOC=0 ----------
IF (SYSMIS(EOC))   EOC=0
IF (EOCTYPE=' ')   EOCTYPE='N'
IF (SYSMIS(YYSD))  YYSD=0
COMMENT---------- ASSIGN EDATTAIN VALUES (UNITS ARE SAM UNITS) ------
NUMERIC EDATTAIN (F1)
IF (UNITS GE 3 AND UNITS<6)                EDATTAIN=5
```

```
IF (UNITS GE 6 AND UNITS < 12)              EDATTAIN = 4
IF (UNITS GE 12)                          EDATTAIN = 3
IF (UNITS GE 12 AND EOCTYPE = 'C')              EDATTAIN = 2
IF (UNITS GE 12 AND (EOCTYPE = 'A' OR EOCTYPE = 'B'))  EDATTAIN = 1
COMMENT---------- EXCLUDE DEGREE PEOPLE WITH FEW UNITS ----------
NUMERIC EDDPOOL (F1)
IF (EDATTAIN > 0)                         EDDPOOL = 1
IF (YYSD > 0 AND (EDATTAIN = 4 OR EDATTAIN = 5))  EDDPOOL = 0
SELECT IF (EDDPOOL = 1)
SAVE OUTFILE = EDD3
  /KEEP = SSN YYS TOPS SAM COURSE UNITS
      EDATTAIN EOC EOCTYPE YYSD
GET FILE = EDD3
FREQUENCIES VARIABLES = YYSD
CROSSTABS EOC BY TOPS

TITLE 'EDD.CR4---LEAVERS: 853-902'
FILE HANDLE GPA/NAME = 'GPA.SYS'
FILE HANDLE EDD3/NAME = 'EDD.SY3'
FILE HANDLE EDD4/NAME = 'EDD.SY4'
GET FILE = GPA
  /KEEP = SSN YYSG
SELECT IF (YYSG > 852)
COMMENT---------- IDENTIFY LAST GROSSMONT SEMESTER (YYSG) ----------
MATCH FILES FILE = */BY = SSN/LAST = TAIL
SELECT IF (TAIL)
COMMENT---------- SELECT IF LAST SAM YYS = LAST GROSSMONT YYS ----------
MATCH FILES FILE = EDD3/FILE = */BY = SSN
SELECT IF (YYS = YYSG)
SAVE OUTFILE = EDD4
  /KEEP = SSN YYS TOPS SAM COURSE UNITS
      EDATTAIN EOC EOCTYPE YYSD
GET FILE = EDD4
FREQUENCIES VARIABLES = YYS

TITLE 'EDD.CR5---DEMOGRAPHICS: 853-902'
FILE HANDLE QEDD4/NAME = 'QEDD4.FIL'
FILE HANDLE EDD4/NAME = 'EDD.SY4'
FILE HANDLE EDD5/NAME = 'EDD.SY5'
FILE HANDLE EDD6/NAME = 'EDD.FIL'
DATA LIST FILE = QEDD4
  /SSN 1-9 BIRTH 10-15 GENDER 16(A) ETH 17(A) EDGOAL 18(A) CLGCOM 19-21
MATCH FILE FILE = EDD4/IN = INEDD4/FILE = */IN = INMASTER/BY = SSN
SELECT IF (INEDD4 AND INMASTER)
COMMENT---------- CREATE CLGCODE YYSMIS SPECPOP TOP MAJOR FOR EXPORT ---
STRING CLGCODE (A3)/ SPECPOP (A4)
COMPUTE CLGCODE = '022'
COMPUTE SPECPOP = '0000'
NUMERIC TOP MAJOR (F6)/ YYSMIS (F3)
COMPUTE TOP = 100*TOPS
COMPUTE MAJOR = TRUNC(EOC/10)
COMMENT---------- CONVERT YYS TO YYSMIS ----------
IF (MOD(YYS,10) = 3)    YYSMIS = YYS + 4
IF (MOD(YYS,10) = 2)    YYSMIS = YYS + 3
IF (MOD(YYS,10) = 1)    YYSMIS = YYS + 2
SAVE OUTFILE = EDD5
  /KEEP = TOPS SAM COURSE UNITS EOC EOCTYPE YYSD CLGCOM
      CLGCODE SSN YYSMIS TOP EDATTAIN EDGOAL SPECPOP GENDER BIRTH ETH MAJOR
GET FILE = EDD5
FREQUENCIES VARIABLES = CLGCODE YYSMIS TOP EDATTAIN EDGOAL SPECPOP
            GENDER ETH MAJOR
WRITE OUTFILE = EDD6
  /CLGCODE SSN YYSMIS TOP EDATTAIN EDGOAL SPECPOP GENDER BIRTH ETH MAJOR
EXECUTE
COMMENT-- /CLGCODE 1-3 SSN 4-12 YYSMIS 13-15 TOP 16-21 EDATTAIN 22 EDGOAL 23(A)
COMMENT--  SPECPOP 24-27(A) GENDER 28(A) BIRTH 29-34 ETH 35(A) MAJOR 36-41
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Winston Dean
6/10/92
Thanks - Larry Smith
Dedicated to - Jack Friedlander & Bill Hamre