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ABSTRACT

Qualitative and quantitative data are presented in this evaluation of the curricular, personnel, and financial status of Miramar College's program in aviation maintenance. The report first provides the results of an interview with the program chairperson, which sought information on program objectives and goals and their determination, the extent to which the goals were being achieved, the importance of the program to the community, major program changes and outcomes of the past three years, predicted changes for the future, the impact of a reduction in program offerings, adverse influences on the program, suggestions for improving outcomes and reducing costs, and types of equipment and services used in the program. The bulk of the report provides data tables summarizing, for the years 1975-76 through 1977-78: (1) program staffing costs and personnel workload: (2) average daily attendance, classes offered, students enrolled, and degrees awarded: (3) job placement percentages: (4) capital equipment outlay: (5) instructional costs: and (6) audio-visual/learning resource expenditures. The report concludes with a list of data sources used during the evaluation. (JP)

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ED195294

MIRAMAR COLLEGE PROGRAM EVALUATION

Aviation Maintenance

Bruce Moriyama

and

Leslie Brumley

The San Diego Community College District

3375 Camino del Rio South

San Diego, CA 92108

February 1, 1980

JC 800 588

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

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February 1, 1980

TO: Thoyd Latham, Miramar College

FROM: Bruce Moriyama BM and Leslie Brumley LB

SUBJECT: MIRAMAR COLLEGE PROGRAM EVALUATION - AVIATION MAINTENANCE

The following is the Miramar College Program Evaluation for the Aviation Maintenance Program which includes the following:

I The Program Chairman Questionnaire Results

II The Program Staffing Summary

III The Program Enrollment Data

IV The Job Placement Data

V The Capital Equipment Outlay Data

VI The Instructional Cost Data

VII The Audio Visual/Learning Resource Cost Data

VIII The Program Summary

IX The Program Evaluation Sources

It is hoped that the attached will be of some assistance in your decision making process.

BRM:LAB:jb

Attachments

This report is based upon information received from numerous District sources. The accuracy/validity of the information provided within this report is solely the responsibility of the site/source from which it is received. Any unauthorized additons or corrections not approved by Research & Planning Department invalidates the findings of this report.

MIRAMAR COLLEGE PROGRAM EVALUATION - AVIATION MAINTENANCE

I THE PROGRAM CHAIRMAN QUESTIONNAIRE RESULTS

The following information was gathered in a face-to-face interview between the Program Chairman and the Administrative Services Analysts. The purpose of the interview is to assess the program's current situation.

QUESTIONNAIRE RESULTS

AVIATION MAINTENANCE TECHNOLOGY
PROGRAM CHAIRMAN: Chuck Et[illegible]

1) WHAT ARE THE OBJECTIVES/GOALS OF YOUR PROGRAM? HOW ARE THEY DETERMINED?

The broad objectives are to train students to be aviation mechanics in the areas of (A) airframe and (B) power plant technology. This training is aimed at preparing these students for entrance into the workforce in general aviation and trunk (transport) air. The program is set up so that all levels of the public may enter. The curriculum includes 2,000 hours of instruction to be completed within a two-year period, and students attend class five hours per day, Monday thru Friday.

The objectives/goals are established by an outside advisory committee and the Federal Aviation Administration. The FAA determines quality standards and the advisory committee helps determine community needs.

2) TO WHAT EXTENT ARE THESE PROGRAMS OBJECTIVES/GOALS BEING ACHIEVED? HOW DO YOU MEASURE THE ACHIEVEMENTS?

According to the FAA, the Aviation Maintenance Program is meeting all the pre-established goals and correctly following FAA guidelines.

The Aviation Program also measures their achievements in the number of students who pass the FAA test. (All potential aviation mechanics must pass this test before they enter the work force). Over 80% of the program graduates pass the test on the first take and over 90% of the graduates pass after re-examination. The FAA follows up on test results by sending computer printout results to the Aviation Department. The FAA also evaluates the program by:

a) Unannounced spot checks.
b) Determining materials/resource standards.
c) Analyzing classroom space requirements.
d) Establishing student/teacher ratio (25:1).
e) Making sure records are maintained on all students during their two years.

3) COMMENT ON THE IMPORTANCE OF THE PROGRAM TO THE COMMUNITY.

a) This program is the only avaiation maintenance program south of Orange Coast Community College.

b) There are many airfields and manufacturing companies in this area and demand for mechanics is quite high. (There are approximately five jobs available per graduate).

4) HAVE ANY MAJOR PROGRAM CHANGES TAKEN PLACE DURING THE PAST THREE YEARS?

a) The unit allocation for students has increased from 46 to 85.

b) The Aviation Program will be divided into two areas as of fall, 1979. The student can major in (1) airframe technology, or (2) power plant technology.

c) Constant increase in enrollment.

5) WHAT FUTURE CHANGES WOULD YOU PROJECT (DEPARTMENTAL LEVEL)?

The department plans to restructure the delivery of curriculum (content will not change). The current five hours/day, five days/week, is not a very flexible one for the student.

6) DESCRIBE PROGRAM OUTCOMES OVER THE PAST THREE YEARS, INCLUDING SUCH THINGS AS:

a) NUMBER OF A.S. DEGREES: The number of degrees given over the past few years is not known; however, there were 32 graduates this last semester.

b) NUMBER OF CERTIFICATES OF ACHIEVEMENT. Approximately 28-37 per semester.

c) JOB PLACEMENTS. Approximately 90% enter the workforce in the aviation maintenance field upon completion of this program. However, this program does not provide a job placement service.

d) STUDENT SUCCESS RATE. About 90% complete the program. Approximately 85-90% of graduates enter the workforce; however, San Diego has a depressed wage scale and 50-55% leave the area.

e) TRANSFERS TO 4-YEAR INSTITUTIONS. A maximum of 5% go on to a 4-year institution. San Jose State is the only 4-year school in California offering aviation maintenance technology.

f) CANCELLED CLASSES. They never have a cancelled class.

g) UNDER/OVERLOADS OF CONTRACT OR REGULAR STAFF. FAA determines the student/teacher ratio (25:1). There are six staff members and all maintain the same workload.

7) WHAT WOULD THE IMPACT BE ON STUDENTS AND/OR OTHER PROGRAMS IF PROGRAM OFFERINGS ARE REDUCED? (SPECIFIC RESPONSE NEEDED, NOT GENERALIZATION).

There would be a critical impact on students since there is no other school in the area to service their training needs. Also the job needs of the community are very high right now.

8) WHAT OTHER LOCAL PROGRAM OPTIONS WOULD BE AVAILABLE TO STUDENTS IF PROGRAM OFFERINGS WERE REDUCED OR ELIMINATED?

None.

9) CAN YOU IDENTIFY ANY FACTORS, EITHER INTERNAL OR EXTERNAL, THAT HAVE HAD AN ADVERSE INFLUENCE ON YOUR PROGRAM?

a) The internal budget allocation has been cut in half.
b) Enrollment has been increasing and they are running out of space, materials and resources.
c) Need more staff. Teachers are hired on an hourly basis and teaching salaries are much less than private industry salaries.
d) No money is coming in from external sources.

10) WHAT SPECIFIC SUGGESTIONS DO YOU HAVE FOR IMPROVING PROGRAM OUTCOMES?

a) Secure external funding sources--curriculum writers needed to obtain this funding.
b) Need clerical support staff.
c) Need access to outside surplus materials (planes, etc.)

11) WHAT SPECIFIC SUGGESTIONS DO YOU HAVE FOR REDUCING PROGRAM COSTS?

a) Greater productivity from instructors (instead of spending time performing clerical duties).
b) More efficient program design.

12) COULD THE PROGRAM BE COMBINED WITH SOME OTHER PROGRAM, OR COULD IT BE REORGANIZED IN SOME WAY THAT ITS ESSENTIAL ELEMENTS ARE RETAINED BUT COSTS ARE REDUCED?

The program could be reorganized by having non-instructional help doing basic needs analysis to prevent cutbacks in the wrong areas.

13) ARE PERSONNEL COSTS APPROPRIATE? ARE PROFESSIONALS DOING PROFESSIONAL WORK OR COULD THE WORK, IN SOME AREAS, BE DONE BY PARAPROFESSIONALS?

a) Salary levels for instructors too low to compete with outside work force; entry-level mechanics make more money.

b) Paraprofessionals cannot teach since FAA requirements indicate all teaching staff must have B.A. degree.

c) Teachers are doing clerical work when support staff should be used.

14) COULD ANY WORK BE ROUTINIZED AND ACCOMPLISHED IN SOME ECONOMICAL AND EFFICIENT MANNER?

There is some inefficiency that should be eliminated when the program is restructured.

15) WHAT TYPES OF EQUIPMENT ARE USED IN THE CLASSROOM AND HOW OFTEN ARE THEY USED (AUDIO-VISUAL, EDUCATIONAL TELEVISION, ETC.)?

a) All types of AV equipment is used as teaching aids (film projectors, overheads, slide/tape instruction modules, etc.)

b) The use is constant.

c) All equipment is located at the Learning Resource Center.

16) WHAT OTHER CAMPUS SERVICES ARE UTILIZED AND HOW MUCH (LEARNING CENTER, REPROGRAPHICS, SPECIAL LIBRARY SERVICES, ETC.)?

a) The Learning Center is used a lot.

b) Many of the resource books and periodicals need updating.

c) The copy machine is used extensively.

II THE PROGRAM STAFFING SUMMARY

The following information is presented to give a better idea of the Certificated/Classified and Hourly/Contract/Regular personnel, use of Paraprofessionals, Certificated staff workload and an overview of program costs.

MIRAMAR COLLEGE PROGRAM REVIEW WORKSHEET

PROGRAM AVIATION MAINTENANCE

1. Listed below are the number of all hourly and contract/regular certificated staff and monies spent on salaries for the following school years:

	1975-76	1976-77	1977-78
# hourly personnel (Certificated)	.18 FTE	1.0 FTE	.68 FTE
# contract personnel (Certificated)	5	4	4
$ spent on hourly salaries	$ 7,640	$14,438	$11,976
$ spent on contract salaries	$73,991	$70,881	$66,990
TOTAL $ spent on salaries	$81,631	$85,319	$78,966

(No fringe benefits included.)

It should be noted that the full-time equivalent in the numbers and the salaries of hourly certificated personnel has been constantly changing, while the number of contract personnel and their salaries have remained fairly constant.

2. In the following table, the only noticeable change has been the increase in the amount of classified/regular monies spent on salaries from 1975-78:

	1975-76	1976-77	1977-78
# hourly personnel (Classified)	0	0	0
# regular personnel (Classified)	1	1	1
$ spent on hourly salaries	0	0	0
$ spent on regular salaries	$5,807	$6,674	$9,924
TOTAL $ spent on salaries	$5,807	$6,674	$9,924

This change can be attributed to the annual increases of regular classified staff.

MIRAMAR COLLEGE PROGRAM REVIEW WORKSHEET

PROGRAM AVIATION MAINTENANCE

3. Due to credential/licensing requirements, all Aviation Maintenance instructors must have their educational and Federal Aviation Administration credentials. Therefore, no paraprofessionals can be used:

AREA	NUMBER OF STAFF THAT COULD BE REPLACED
None - Must have credential license.	
Presently there is no clerical staff. If a clerical person was provided, it could save the certificated staff members 2 hours a day each for a total of 8 hours a day.	

There is a need for more clerical assistance.

4. The 1975-78 workload of certificated staff is shown below. It shows an overall increase (basically in WSCH/office hours):

	1975-76	1976-77	1977-78
Increased - - - - -	✓	✓	✓
Constant - - - - -			
Decreased - - - - -			

5. The faculty load table has been designed to indicate the increases/decreases in faculty workload as expressed in weekly student contact hours:

PROGRAM	FACULTY LOAD			% INCREASE	% DECREASE	CONSTANT
	1975-76	1976-77	1977-78	1975-78	1975-78	
AVIATION MAINTENANCE	9,047.25	10,159.25	8,521.0		526.25 or Approx 6%	8,521.0

This has been done to give a visual three-year comparison of the teaching workload.

MIRAMAR COLLEGE PROGRAM EVALUATION

FACULTY LOAD

AVIATION (Program) - 1975-76 (Year)

INSTRUCTOR'S NAME	WSCH	INSTRUCTOR'S NAME	WSCH
HOOVER	225.0	ETTEL	360.0
	337.5		300.0
	250.0		442.0
	375.0		360.0
TOTAL	1,187.5		715.0
		TOTAL	2,177.0
ELAME	382.5		
	255.0	MCAULIFFE	67.5
	250.0	TOTAL	67.5
	428.75		
TOTAL	1,316.25	MALPASS	375.0
			250.0
STAFF	330.0	TOTAL	625.0
	220.0		
	180.0	WEBER	375.0
	170.0		250.0
TOTAL	900.0		428.75
			500.0
		TOTAL	1,553.75
		Continued on Next Page - - -	

MIRAMAR COLLEGE PROGRAM EVALUATION

FACULTY LOAD

AVIATION (Program) - 1975-76 (Year)

INSTRUCTOR'S NAME	WSCH	INSTRUCTOR'S NAME	WSCH
IRWIN	144.0		
TOTAL	144.0		
TIFFIT	-----		
TOTAL	-0-		
GANDERTON	255.0		
	463.75		
TOTAL	718.75		
LAFRANCE	130.0		
	227.5		
TOTAL	357.5		
GRAND TOTAL	9,047.25		

MIRAMAR COLLEGE PROGRAM EVALUATION

FACULTY LOAD

AVIATION (Program) - 1976-77 (Year)

INSTRUCTOR'S NAME	WSCH	INSTRUCTOR'S NAME	WSCH
HOOVER	250.0	ETTEL	205.0
	375.0		292.5
	235.0		277.5
	352.5		352.5
TOTAL	1,212.5		411.25
			185.0
MALPASS	352.5	TOTAL	1,723.75
	235.0		
	240.0	MCAULIFFE	-----
	360.0	TOTAL	-0-
TOTAL	1,187.5		
		ELAME	220.0
WEBER	277.5		330.0
	185.0		230.0
	195.0		345.0
	130.0		382.5
	411.25		318.75
	352.5	TOTAL	1,826.25
TOTAL	1,551.25		
		Continued on Next Page - - -	- - - - - - - -

MIRAMAR COLLEGE PROGRAM EVALUATION

FACULTY LOAD

AVIATION (Program) - 1976-77 (Year)

INSTRUCTOR'S NAME	WSCH	INSTRUCTOR'S NAME	WSCH
NEEL	185.0	GANDERTON	300.0
	277.5		360.0
	270.0	TOTAL	660.0
	405.0		
	330.0	GRAND TOTAL	10,159.25
	385.0		
TOTAL	1,852.5		
LEANO	28.5		
TOTAL	28.5		
WEIR	28.5		
TOTAL	28.5		
WELCH	85.5		
TOTAL	85.5		
STAFF	2.0		
	1.0		
TOTAL	3.0		

MIRAMAR COLLEGE PROGRAM EVALUATION

FACULTY LOAD

AVIATION (Program) - 1977-78 (Year)

INSTRUCTOR'S NAME	WSCH	INSTRUCTOR'S NAME	WSCH
HOOVER	210.0	ETTEL	185.0
	315.0		277.5
	225.0		6.0
	337.5		170.0
TOTAL	1,087.5		255.0
			250.0
ELAME	210.0		375.0
	322.5	TOTAL	1,518.5
	135.0		
	202.5	STAFF	2.0
	190.0		300.0
	285.0		200.0
TOTAL	1,345.0		8.0
		TOTAL	510.0
WEBER	205.0		
	307.5	MCAULIFFE	30.0
	150.0	TOTAL	30.0
	225.0		
	275.0	Continued on Next Page - - - - - - - - - -	
	165.0		
TOTAL	1,327.5		

MIRAMAR COLLEGE PROGRAM EVALUATION

FACULTY LOAD

AVIATION (Program) - 1977-78 (Year)

INSTRUCTOR'S NAME	WSCH	INSTRUCTOR'S NAME	WSCH
LAFRANCE	240.0	LEANO	-----
	155.0	TOTAL	-0-
	24.0		
	230.0	LEY	-----
	345.0	TOTAL	-0-
TOTAL	994.0		
		CASEY	-----
WEIR	-----	TOTAL	-0-
TOTAL	-0-		
		GRAND TOTAL	8,521.0
WELCH	-----		
TOTAL	-0-		
NEEL	225.0		
	377.5		
	250.0		
	375.0		
	1.0		
	240.0		
	240.0		
TOTAL	1,708.5		

III THE PROGRAM ENROLLMENT DATA

Within this section entitled "Program Enrollment Data", the areas of program enrollment trends; statistical summary regarding classes, students, degrees and transfers; ADA data; and faculty load, have been presented. From this information, you can get a good overview of this program's enrollment situation from the number of classes offered each semester to the amount of ADA generated.

MIRAMAR COLLEGE PROGRAM EVALUATION

OVERVIEW OF COSTS TO RUN AVIATION PROGRAM

1975-76 School Year Costs		1976-77 School Year Costs		1977-78 School Year Costs	
Staffing	- $ 87,438.00	Staffing	- $ 91,993.00	Staffing	- $88,890.00
Capital Expenditures	- 11,485.06	Capital Expenditures	- 5,572.15	Capital Expenditures	- 7,662.39
Instructional	- 8,559.64	Instructional	- 6,778.90	Instructional	- 7,866.96
Audio Visual	- 971.68	Audio Visual	- 945.41	Audio Visual	- 833.14
TOTAL	$108,454.38	TOTAL	$105,289.46	TOTAL	$105,252.49
Number of Students	720	Number of Students	858	Number of Students	880
Cost per Student	$150.63	Cost per Student	$122.72	Cost per Student	$119.61
Approximate Amount of ADA* Collected	$387,108.24	Approximate Amount of ADA* Collected	$409,688.00	Approximate Amount of ADA* Collected	$386,136.13

*Approximation

MIRAMAR COLLEGE PROGRAM REVIEW WORKSHEET

PROGRAM AVIATION MAINTENANCE

Program enrollment data:

Trend in program enrollment:

.The number of class offerings has been increasing progressively each year while the number of cancelled classes remained the same for the first two years, but tripled in the third year.

.The amount of weekly student contact hours has been increasing annually while the ADA has remained steady at the 500 - 600 level.

	1975-76	1976-77	1977-78
No. of Classes Offered:	36	43	62
No. of Classes Cancelled:	4	4	18
Percent of Offered Classes Cancelled	11.11%	9.30%	29.03%

MIRAMAR COLLEGE PROGRAM REVIEW

AVIATION

	WSCH	
	Sub Total	Grand Total For Year
FALL - 1975	2,417.5	
SPRING - 1976	2,871.0	
SUMMER - 1976	3,758.75	
		9,047.25
FALL - 1976	3,242.0	
SPRING - 1977	3,312.5	
SUMMER - 1977	3,604.75	
		10,159.25
FALL - 1977	3,046.0	
SPRING - 1978	2,537.0	
SUMMER - 1978	2,938.0	
		8,521.0
GRAND TOTAL FOR ALL THREE YEARS		27,727.5

MIRAMAR COLLEGE PROGRAM REVIEW

AVIATION

		ADA	
		Sub Total	Grand Total For Year
FALL - 1975		146.83	
SPRING - 1976		181.07	
SUMMER - 1976		228.29	
			556.19
FALL - 1976		196.89	
SPRING - 1977		201.18	
SUMMER - 1977		218.93	
			617.00
FALL - 1977		182.57	
SPRING - 1978		167.21	
SUMMER - 1978		178.45	
			528.23
GRAND TOTAL FOR ALL THREE YEARS			1,701.42

MIRAMAR PROGRAM EVALUATION

TYPE OF PROGRAM: AVIATION MAINTENANCE

	1975-76	1976-77	1977-78
No. of Classes Offered	36	43	62
No. of Classes Cancelled	4	4	18
Average No. of Students in Classes	22.5	22.0	20.0
No. of A. S. Degrees	60*	60*	60*
No. of Certificates of Achievement	70*	70*	70*
No. of Students Entering Program	Over 70 Students*	Over 70 Students*	Over 70 Students*
No. of Students Completing Program	69	68	65*
No. of Transfer Students to 4 Year Institutions	5%*	5%*	5%*
Total ADA	556.19	617.00	528.23
Total WSCH	9,147.25	10,159.25	8,521.00

*Note: Approximate Figures

The enrollment Weekly Student Contact Hours (WSCH) and Average Daily Attendance (ADA) figures are based on the District Master Schedule print-out by Census Week.

ADA CALCULATION FORMULAS

.The ADA calculation formula for conventional full semester courses:

$$\frac{\text{Census Week - 1 Enrollment} + \text{Census Week - 2 Enrollment}}{\text{Two}} \times \text{Contact Hours} = \text{Weekly Student Contact Hours}$$

Weekly Student Contact Hours x .911 ÷ 15 = ADA Figure

.The ADA calculation formula for independent study and work experience courses:

$$\text{No. of Units Per Course} \times \text{No. of Students Enrolled} = \text{Weekly Student Contact Hours}$$

Weekly Student Contact Hours x .911 ÷ 15 = ADA Figure

MIRAMAR COLLEGE PROGRAM REVIEW

SEMESTER: FALL - DAY YEAR: 1975

TYPE OF PROGRAM (please circle): (AVIATION) POLICE FIRE

MASTER COURSE NO.	COURSE NO.	WSCH	AVERAGE ENROLLMENT FIGURE	A.D.A.
80441 } Hoover	001	225.0	22.5	13.67
80442 } Hoover	002	337.5	22.5	20.50
80443 } Elame	003	255.0	22.5	15.49
80444 } Elame	004	382.5	25.5	23.23
80445 } Staff	009	220.0	22.0	13.36
80446 } Staff	010	330.0	22.0	20.04
80447 } Ettel	011	240.0	24.0	14.58
80448 } Ettel	012	360.0	24.0	21.86
80450 - McAuliffe	021	67.5	22.5	4.10
	Total	2,417.5		146.83

MIRAMAR COLLEGE PROGRAM REVIEW

SEMESTER: FALL - EVENING YEAR: 1975

TYPE OF PROGRAM (please circle): AVIATION (circled) POLICE FIRE

MASTER COURSE NO.	COURSE NO.	WSCH	AVERAGE ENROLLMENT FIGURE	A.D.A.
NONE				

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MIRAMAR COLLEGE PROGRAM REVIEW

SEMESTER: SPRING - DAY YEAR: 1976

Based on 1st Census Week data. 2nd Census Week unavailable.

TYPE OF PROGRAM (please circle): (AVIATION) POLICE FIRE

MASTER COURSE NO.	COURSE NO.	WSCH	AVERAGE ENROLLMENT FIGURE	A.D.A.
80441) Hoover	101	250.0	25.0	15.80
80442) Hoover	102	375.0	25.0	22.78
80443) Malpass	103	250.0	25.0	15.18
80444) Malpass	104	375.0	25.0	22.78
80445) Weber	109	250.0	25.0	15.18
80446) Weber	110	375.0	25.0	22.78
80447) Ettel	111	200.0	20.0	12.15
80448) Ettel	112	300.0	20.0	18.22
80449 - Irwin	022	144.0	16.0	8.75
89506 - Ettel**	X049	2.0	2.0	0.12
*[illegible]01) Tiffit	039	Cancelled -	- - - - - - - - - - - -	- - - - - - - - - - - -
*85002) "	039	Cancelled -	- - - - - - - - - - - -	- - - - - - - - - - - -
*85003) "	039	Cancelled -	- - - - - - - - - - - -	- - - - - - - - - - - -
*85004) Tiffit	039	Cancelled -	- - - - - - - - - - - -	- - - - - - - - - - - -
	Total	2,521.0		153.74

*Note: According to the records of Student Services, there were no classes/grades for these Master Numbers. The figures used within this report are averages suggested by the department chairperson.

**Note: According to the records of Student Services, there were no classes/grades for these Master Numbers.

MIRAMAR COLLEGE PROGRAM REVIEW

SEMESTER: SPRING - EVENING YEAR: 1976

Based on 1st Census Week data. 2nd Census Week unavailable.

TYPE OF PROGRAM (please circle): (AVIATION) POLICE FIRE

MASTER COURSE NO.	COURSE NO.	WSCH	AVERAGE ENROLLMENT FIGURE	A.D.A.
90440 } Staff	001	180.0	1.8	10.93
90441 } Staff	002	170.0	1.8	16.40
	Total	350.0		27.33

MIRAMAR COLLEGE PROGRAM REVIEW

SEMESTER: SUMMER - DAY YEAR: 1976

TYPE OF PROGRAM (please circle): (AVIATION) POLICE FIRE

MASTER COURSE NO.	COURSE NO.	WSCH	AVERAGE ENROLLMENT FIGURE	A.D.A.
80441 - Ganderton	005	255.0	25.5	15.49
80442 - Ettel	007	360.0	24.0	21.86
80443 - Ganderton	006	463.75	26.5	28.17
80444 - Ettel	008	715.0	22,0	43.42
80445 - Elame	005	250.0	25.0	15.18
80446 - Weber	007	500.0	25.0	30.37
80447 - Elame	006	428.75	24.5	26.04
80448 - Weber	008	428.75	24.5	26.04
	Total	3,401.25		206.57

MIRAMAR COLLEGE PROGRAM REVIEW

SEMESTER: SUMMER - EVENING YEAR: 1976

TYPE OF PROGRAM (please circle): (AVIATION) POLICE FIRE

MASTER COURSE NO.	COURSE NO.	WSCH	AVERAGE ENROLLMENT FIGURE	A.D.A.
90441 } LaFrance	005	130.0	13.0	7.90
90443 } LaFrance	006	227.5	13.0	13.82
	Total	357.5		21.72

MIRAMAR COLLEGE PROGRAM REVIEW

SEMESTER: FALL - DAY YEAR: 1976

TYPE OF PROGRAM (please circle): (AVIATION) POLICE FIRE

MASTER COURSE NO.	COURSE NO.	WSCH	AVERAGE ENROLLMENT FIGURE	A.D.A.
80441) Hoover	101	250.0	25.0	15.18
80442) Hoover	102	375.0	25.0	22.78
80443) Malpass	103	235.0	23.5	14.27
80444) Malpass	104	352.5	23.5	21.41
80445) Weber	109	185.0	18.5	11.24
80446) Weber	110	277.5	18.5	16.85
80447) Ettel	111	205.0	20.5	12.45
80448) Ettel	112	292.5	19.5	17.76
80450 - McAuliffe	021	Cancelled -	- - - - - - - - - - - - - - -	- - - - - - - - - - - -
	Total	2,172.5		131.94

MIRAMAR COLLEGE PROGRAM REVIEW

SEMESTER: FALL - EVENING YEAR: 1976

TYPE OF PROGRAM (please circle): (AVIATION) POLICE FIRE

MASTER COURSE NO.	COURSE NO.	WSCH	AVERAGE ENROLLMENT FIGURE	A.D.A.
90440) Elame	103	220.0	22.0	13.36
90441) Elame	104	330.0	22.0	20.04
90442) Neel	111	185.0	18.5	11.24
90443) Neel	112	277.5	18.5	16.85
90444 - Leano	123	28.5	9.5	1.73
90445 - Weir	121	28.5	9.5	1.73
	Total	1,069.5		64.95

MIRAMAR COLLEGE PROGRAM REVIEW

SEMESTER: SPRING - DAY YEAR: 1977

TYPE OF PROGRAM (please circle): (AVIATION) POLICE FIRE

MASTER COURSE NO.	COURSE NO.	WSCH	AVERAGE ENROLLMENT FIGURE	A.D.A.
80441 } Hoover	101	235.0	23.5	14.27
80442 } Hoover	102	352.5	23.5	21.41
80443 } Malpass	103	240.0	24.0	14.58
80444 } Malpass	104	360.0	24.0	21.86
80445 } Neel	109	270.0	27.0	16.40
80446 } Neel	110	405.0	27.0	24.60
80447 } Ettel	111	185.0	18.5	11.24
80448 } Ettel	112	277.5	18.5	16.85
80449 - McAuliffe	121	Cancelled -	- - - - - - - - - - - - - - -	- - - - - - - - - - - -
	Total	2,325.0		141.21

MIRAMAR COLLEGE PROGRAM REVIEW

SEMESTER: SPRING - EVENING YEAR: 1977

TYPE OF PROGRAM (please circle): (AVIATION) POLICE FIRE

MASTER COURSE NO.	COURSE NO.	WSCH	AVERAGE ENROLLMENT FIGURE	A.D.A.
90041) Elame	101	230.0	23.0	13.97
90042) Elame	102	345.0	23.0	20.95
90045) Weber	109	130.0	13.0	7.90
90046) Weber	110	195.0	13.0	11.84
90050 - Weir	121	Cancelled -	- - - - - - - - - - - - - -	- - - - - - - - - - - -
90052 - Welch	122	85.5	9.5	5.19
90055 - Leano	123	Cancelled -	- - - - - - - - - - - - - -	- - - - - - - - - - - -
90056 - Staff**	X370	2.0	2.0	.12
	Total	987.5		59.97

**Note: According to the records of Student Services, there were no classes/grades for these Master Numbers.

MIRAMAR COLLEGE PROGRAM REVIEW

SEMESTER: SUMMER - DAY YEAR: 1977

TYPE OF PROGRAM (please circle): (AVIATION) POLICE FIRE

MASTER COURSE NO.	COURSE NO.	WSCH	AVERAGE ENROLLMENT FIGURE	A.D.A.
80021) Ettel	107	352.5	23.5	21.41
80023) Ettel	108	411.25	23.5	24.98
80025) Weber	107	352.5	23.5	21.41
80027) Weber	108	411.25	23.5	24.98
80029) Neel	107	330.0	22.0	20.04
80031) Neel	108	385.0	22.0	23.38
80050) Ganderton	105	300.0	24.0	18.22
80052) Ganderton	106	360.0	24.0	21.86
80054) Elame	105	318.75	25.5	19.36
80056) Elame	106	382.5	25.5	23.23
80058 - Staff	X370	1.0	1.0	.06
	Total	3,604.75		218.93

SEMESTER: SUMMER - EVENING YEAR: 1977

TYPE OF PROGRAM (please circle): (AVIATION) POLICE FIRE

MASTER COURSE NO.	COURSE NO.	WSCH	AVERAGE ENROLLMENT FIGURE	A.D.A.
NONE				
			38	

ERIC

MIRAMAR COLLEGE PROGRAM REVIEW

SEMESTER: FALL - DAY YEAR: 1977

TYPE OF PROGRAM (please circle): (AVIATION) POLICE FIRE

MASTER COURSE NO.	COURSE NO.	WSCH	AVERAGE ENROLLMENT FIGURE	A.D.A.
80050) Hoover	101	210.0	21.0	12.75
80051) Hoover	102	315.0	21.0	19.13
80052) Elame	103	210.0	21.0	12.75
80053) Elame	104	322.5	21.5	19.59
80054) Weber	109	205.0	20.5	12.45
80055) Weber	110	307.5	20.5	18.68
80056) Ettel	111	185.0	18.5	11.24
80057) Ettel	112	277.5	18.5	16.85
80058 - McAuliffe	121	Cancelled	- - - - - - - - - - - - - - -	- - - - - - - - - - - -
80059 - Ettel**	X370	6.0	6.0	.36
	Total	2,038.5		123.80

**Note: According to the records of Student Services, there were no classes/grades for these Master Numbers.

MIRAMAR COLLEGE PROGRAM REVIEW

SEMESTER: FALL - EVENING YEAR: 1977

TYPE OF PROGRAM (please circle): (AVIATION) POLICE FIRE

MASTER COURSE NO.	COURSE NO.	WSCH	AVERAGE ENROLLMENT FIGURE	A.D.A.
90041) Staff	101	Cancelled -	- - - - - - - - - - - - - -	- - - - - - - - - - - -
90042) Staff	102	Cancelled -	- - - - - - - - - - - - - -	- - - - - - - - - - - -
90045) Weber	109	Cancelled -	- - - - - - - - - - - - - -	- - - - - - - - - - - -
90046) Weber	110	Cancelled -	- - - - - - - - - - - - - -	- - - - - - - - - - - -
90048) LaFrance	103	165.0	16.5	10.02
90049) LaFrance	105	240.0	16.0	14.58
90050 - Weir	121	Cancelled -	- - - - - - - - - - - - - -	- - - - - - - - - - - -
90052 - Welch	122	Cancelled -	- - - - - - - - - - - - - -	- - - - - - - - - - - -
90053) Neel	111	225.0	22.5	13.67
90054) Neel	112	377.5	22.5	20.50
90055 - Leano	123	Cancelled -	- - - - - - - - - - - - - -	- - - - - - - - - - - -
	Total	1,007.5		58.77

MIRAMAR COLLEGE PROGRAM REVIEW

SEMESTER: SPRING - DAY YEAR: 1978

TYPE OF PROGRAM (please circle): (AVIATION) POLICE FIRE

MASTER COURSE NO.	COURSE NO.	WSCH	AVERAGE ENROLLMENT FIGURE	A.D.A.
80065) Hoover	101	225.0	22.5	13.67
80066) Hoover	102	337.5	22.5	20.50
80067) Elame	103	135.0	13.5	8.20
80068) Elame	104	202.5	13.5	12.30
80069) Neel	109	250.0	25.0	15.18
80070) Neel	110	375.0	25.0	22.78
80071) Ettel	111	170.0	17.0	10.32
80072) Ettel	112	255.0	17.0	15.49
80073 - McAuliffe	121	30.0	10.0	1.82
80074 - Staff**	X370	2.0	2.0	.12
	Total	1,982.0		120.38

**Note: According to the records of Student Services, there were no classes/grades for these Master Numbers

MIRAMAR COLLEGE PROGRAM REVIEW

SEMESTER: SPRING - EVENING YEAR: 1978

TYPE OF PROGRAM (please circle): (AVIATION) POLICE FIRE

MASTER COURSE NO.	COURSE NO.	WSCH	AVERAGE ENROLLMENT FIGURE	A.D.A.
90041) LaFrance	101	153.0	15.5	9.41
90042) LaFrance	102	24.0	16.0	14.58
90045) Weber	109	150.0	15.0	9.11
90046) Weber	110	225.0	15.0	13.67
90048 - McAuliffe	121	Cancelled	- - - - - - - - - - - - - - -	- - - - - - - - - - - -
90050 - Ley	122	Cancelled	- - - - - - - - - - - - - - -	- - - - - - - - - - - -
90052 - Leano	123	Cancelled	- - - - - - - - - - - - - - -	- - - - - - - - - - - -
90053 - Neel**	X370	1.0	1.0	.06
*90054 - Staff	X370	Cancelled	- - - - - - - - - - - - - - -	- - - - - - - - - - - -
	Total	555.0		46.83

*Note: According to the records of Student Services, there were no classes/grades for these Master Numbers. The figures used within this report are averages suggested by the department chairperson.

**Note: According to the records of Student Services, there were no classes/grades for these Master Numbers.

MIRAMAR COLLEGE PROGRAM REVIEW

SEMESTER: SUMMER - DAY YEAR: 1978

TYPE OF PROGRAM (please circle): (AVIATION) POLICE FIRE

MASTER COURSE NO.	COURSE NO.	WSCH	AVERAGE ENROLLMENT FIGURE	A.D.A.
*80018) Davenport	270	Cancelled	- - - - - - - - - - - - - - -	- - - - - - - - - - - -
*80019) "	270	Cancelled	- - - - - - - - - - - - - - -	- - - - - - - - - - - -
*80020) "	270	Cancelled	- - - - - - - - - - - - - - -	- - - - - - - - - - - -
*80021) Davenport	270	Cancelled	- - - - - - - - - - - - - - -	- - - - - - - - - - - -
80022) LaFrance	105	230.0	23.0	13.97
80024) LaFrance	106	345.0	23.0	20.95
80026) Elame	105	190.0	19.0	1 .54
80028) Elame	106	285.0	19.0	17.31
*80030 - Neel	X370	Cancelled	- - - - - - - - - - - - - - -	- - - - - - - - - - - -
80034) Ettel	107	250.0	25.0	15.18
80035) Ettel	108	375.0	25.0	22.78
80036) Weber	107	110.0	11.0	6.68
80037) Weber	108	165.0	11.0	10.02
*80038 - Casey	X370	Cancelled	- - - - - - - - - - - - - - -	- - - - - - - - - - - -
	Total	1,950.0		118.43

*Note: According to the records of Student Services, there were no classes/grades for these Master Numbers. The figures used within this report are averages suggested by the department chairperson.

MIRAMAR COLLEGE PROGRAM REVIEW

SEMESTER: SUMMER - EVENING YEAR: 1978

TYPE OF PROGRAM (please circle): (AVIATION) POLICE FIRE

MASTER COURSE NO.	COURSE NO.	WSCH	AVERAGE ENROLLMENT FIGURE	A.D.A.
90041) Staff	105	200.0	20.0	12.15
90043) Staff	106	300.0	20.0	18.22
90045) Neel	107	240.0	16.0	14.58
90047) Neel	108	240.0	16.0	14.58
*90709) Staff	270	Cancelled -	- - - - - - - - - - - -	- - - - - - - - - - - -
*90711) "	270	Cancelled -	- - - - - - - - - - - -	- - - - - - - - - - - -
*90713) Staff	270	Cancelled -	- - - - - - - - - - - -	- - - - - - - - - - - -
90715 - Staff	270	8.0	2.0	.49
	Total	988.0		60.02

*Note: According to the records of Student Services, there were no classes/grades for these Master Numbers. The figures used within this report are averages suggested by the department chairperson.

IV THE JOB PLACEMENT DATA

The goal of the Aviation Maintenance program is to produce students/ graduates who can compete in the marketplace for the jobs available. Within this section we have covered student placement, job market availability, employment placement percentages, future job market projections, job placement in addition to information concerning the employment situations both locally and nationally.

MIRAMAR COLLEGE PROGRAM REVIEW WORKSHEET

PROGRAM AVIATION MAINTENANCE

Job placement data:

1. Job placement of students completing the program:

	1975-76	1976-77	1977-78
# students completing program	69	68	20
# students placed in field of study	21	17	5
# students in other type of employment	12	10	3
# unemployed	1	1	2
# transfer to 4-year institutions	---	---	---
# unknown	35	40	10

2. Job market availability ratio:

	1975-76	1976-77	1977-78
Approximate # jobs available	259	229	526
# jobs available/ student completing program	3.75	3.37	26.30
% of students obtaining positions in field of study	30%	25%	25%

MIRAMAR COLLEGE PROGRAM REVIEW WORKSHEET

PROGRAM AVIATION MAINTENANCE

Job placement data:

2. Job market availability ratio, continued:

The market for Aviation Maintenance workers is projected to increase this year. It has been estimated that placement may go as high as 75% but there is the possibility of relocating out of the San Diego area (i.e., Los Angeles, etc.) in order to find these opportunities.

The overall labor market has been depressed for the past few years due to the recent recessionary trends but future prospects look very good.

MIRAMAR COLLEGE PROGRAM REIVEW WORKSHEET

PROGRAM AVIATION MAINTENANCE

3. Employment placement percentages compared with like programs at other institutions:

TITLE OF PROGRAM	SCHOOL	YEAR	#/% PLACED IN FIELD OF STUDY
Airframe and Power Plant Technology	Orange Coast Community College	1975-76	6 / 50%
"	"	1976-77	3 / 23%
"	"	1977-78	20 / 83%

Please Note: Besides Miramar College, Orange Coast College is the only other institution in Southern California to offer this program.

PROGRAM AVIATION MAINTENANCE

4. Projections of future job market:

According to the State of California's Employment Development Department's publication "Manpower 1975-1980, San Diego County," the employment situation for those in the Aviation Maintenance field was as follows:

No. of Employed Persons			Percentage Change	
1970	1975	1980	70-75	75-80
23,500	13,700	15,800	-41.7	15.3

The employment period between 1970-1975 was particularly low due to a 40% decline in the field, while the period between 1975-1980 represented over a 13% projected increase. The recessionary trends of the early/mid 1970's created a lack of employment. The late 1970's/early 1980's are showing signs of better employment opportunities.

PROGRAM AVIATION MAINTENANCE

4. Projections of future job market , continued:

For Aviation Maintenance personnel in San Diego County, the breakdown of employment opportunities were as follows:

Industries	Number of Persons Employed 1975 (Actual)	1980 (Projected)	% Up or Down
Agriculture, Forestry Fishing	-0-	-0-	-0-
Mining	-0-	-0-	-0-
Construction	-0-	-0-	-0-
Manufacturing	836	1,018	22% ↑
Transportation, Communications, Utilities	675	830	23% ↑
Trade	17	16	6% ↓
Finance, Insurance, Real Estate	-0-	-0-	-0-
Services	8	7	13% ↓
Public Administration	1,679	1,787	6% ↑
TOTAL	3,215	3,658	14% ↑

The two leading areas in Aviation Maintenance for San Diego County are manufacturing and transportation. These will be the two areas where employment opportunities will be the best.

PROGRAM AVIATION MAINTENANCE

4. Projections of future job market, continued:

On a national level, from the United States Department of Labor, according to "The Occupational Outlook Quarterly for Spring, 1978," there is the following information:

Occupation	Estimated Employment 1976	Annual Average Anticipated Openings 1976-1987
Airplane Mechanic	110,000	5,200/year

Employment Prospects:

Employment expected to grow faster than average, but opportunities in various areas of aviation may differ. Good opportunities in general aviation; keen competition for airline jobs; opportunities in Federal Government dependent upon defense spending.

For San Diego County, according to the State of California's Employment Development Department's "Labor Supply and Demand, San Diego County, April - June, 1979":

Airframe and Powerplant Mechanic

Employment Prospects:

Occasional orders in San Diego. A surplus of applicants, few of whom have the required airframe and powerplant license. Some orders require multi-engine experience. The licensing and multi-engine experience are major job placement barriers in the San Diego market.

Although there is limited employment opportunities locally, it appears that nationally the situation is more promising.

PROGRAM AVIATION MAINTENANCE

4. Projections of future job market, continued:

Net demand from industry change:

1980 anticipated employment level	- 3,657	
1975 actual employment level	- 3,215	442
Expected replacement needs		+ 260
Total job opportunities from these sources		= 702
Average annual job opportunities		÷ 5
Volume of job openings per year		= 140

AVIATION MAINTENANCE TECHNOLOGY

The Aviation Maintenance Technology program includes classroom study and practical application in such subjects as aircraft structures; powerplants and sub-systems; and aircraft engine operations, maintenance, repair and servicing.

The Aviation Maintenance Technology Program is Federal Aviation Agency approved. The laboratory at Miramar College is officially designated as F.A.A. Aviation Maintenance Technical School No. 3418. The curriculum includes more than 1,900 hours of instruction and is designed to be completed within a two-year period, including four regular school semesters and two summer sessions. The student attends class five hours per day, Monday through Friday.

PROGRAM AVIATION MAINTENANCE

4. Projection of future job market, continued:

Aircraft Mechanics

Aircraft Mechanics (Airframe and Powerplant Technicians) service, repair, and overhaul aircraft bodies and engines to insure safety and dependability.

Aptitudes:

Mechanical ability, form and spatial perception, eye-hand coordination, good use of hands and fingers, ability to do detail work, average strength and agility.

Work Setting:

Inside, but frequently outside for emergency repairs. Work areas are noisy when engines are tested. Mechanics often work in awkward positions. Almost all buy their own hand tools. Employers: Schedule and Charter Airlines; Air Taxis, independent repair shops, and other companies in general aviation; aircraft manufacturing plants; and the armed forces.

Hiring Practices:

Licensing and additional qualifying experience are the major hiring requirements. Scheduled airlines prefer applicants licensed to work on both airframes and powerplants.

Current Employment:

This occupation employs about 30,000 in California. Most A & E mechanics work in metropolitan areas near airports.

PROGRAM AVIATION MAINTENANCE

4. Projection of future job market, continued:

Aircraft Mechanics, continued

Wages:

Licensed mechanics working for scheduled airplanes earn about $10.00/Hr. Licensed mechanics working in general aviation earn between $5.00 and $8.00/Hr. Unlicensed mechanics, who are permitted to work under the supervision of a licensed mechanic, earn less.

Outlook:

Some of the scheduled airlines have not hired mechanics in California in over 10 years, although they have been recalling workers laid off in the late 1960's. However, fairly strong growth in the number of jobs is expected. Other openings will occur as workers leave the occupation. There is a large supply of well-qualified mechanics who have been working in general aviation or the armed forces but would like to work for scheduled airlines. Opportunities will be best in cities like San Francisco, New York, Kansas City and Dallas, where maintenance bases for major airlines are located. Competition for jobs in general aviation is not as strong, because pay is lower. Growth is expected from turnover when the scheduled airlines begin hiring these mechanics.

PROGRAM AVIATION MAINTENANCE

4. Projection of future job market, continued:

Aircraft Mechanics, continued:

Outlook, continued:

Faster than average growth in employment expected through mid-1980's and some replacement needs. General aviation opportunities will be good (rough balance between supply and demand). Keen competition for jobs with scheduled airlines due to higher wages. Federal government jobs depend on defense spending.

Location of Jobs:

About half of work for scheduled airlines at airports near large cities; 1/3 of work for Federal government at military bases; the rest in general aviation at smaller airports all over the country.

MIRAMAR COLLEGE PROGRAM EVALUATION

PROGRAM AVIATION MAINTENANCE

5. Placed by Whom:

AGENCY	NUMBER OF STUDENTS* PLACED 1976	1977	1978
American Airlines**	←	40 - 49	→
Continental Airlines**	NO DATA AVAILABLE		
Crown Aviation**	30	33	36
Eastern Airlines	NO DATA AVAILABLE		
General Dynamics**	184	49	387
Gibbs Aviation**	NO DATA AVAILABLE		
Hughes Air West	NO DATA AVAILABLE		
Pacific Southwest Airlines**	---	104	165
Rohr Industries**	4 - 5 Persons Hired in Past 3 Years		
Ryan Industries**	2 Persons Hired in Past 3 Years		
Solar Industries**	4 - 5 Persons Hired in Past 3 Years		
Western Airlines**	NO DATA AVAILABLE		

*Figures represent the number of people placed in Aviation Maintenance field but do not necessarily mean graduates of the Miramar program.

**Note: More specific information is attached.

PROGRAM AVIATION MAINTENANCE

5. Placed by Whom, continued:

Additional data for number of students placed by industry:

American Airlines

Number of Aviation Mechanics hired:

1976)
1977) Between 40 - 49 individuals hired annually.
1978)

Any Miramar students - if so, how many?

None

Projected plans for hiring:

.Reductions/lay offs are the future plans.
.Less need for mechanics due to aircraft structure.
.Transfer of personnel fills vacancies.

Continental Airlines

Number of Aviation Mechanics hired:

1976)
1977) Unknown - Person in charge is new and there are no specifics available on numbers hired.
1978)

Any Miramar students - if so, how many?

None

This is a Los Angeles based airline and, therefore, secures workers from Golden West Air, Northrop, L.A. Tech. Inst., etc.

Projected plans for hiring:

.40 - 60 personnel to be hired within next six weeks, but after that no more bulk hiring.

PROGRAM AVIATION MAINTENANCE

5. Placed by Whom, continued:

Additional data for number of students placed by industry:

Crown Aviation

Number of Aviation Mechanics hired:

1976 - 30
1977 - 33
1978 - 36

Any Miramar students - if so, how many?

None

Projected plans for hiring:

.No future hiring.
.Staff remains 30 - 35 workers.

Eastern Airlines

Information requested by phone/letter to headquarters but there was no response.

General Dynamics

Number of Aviation Mechanics hired:

1976 - 184)
1977 - 49) Turnover approximately 15%
1978 - 387)

Any Miramar students - if so, how many?

.No specifics on SDCCD graduates as employees.
.General Dynamics major sources are military.

Projected plans for hiring:

.Projected hiring could be between 60 - 150 people per quarter depending on number of projects.

PROGRAM AVIATION MAINTENANCE

5. Placed by Whom, continued:

Additional data for number of students placed by industry:

Gibbs Aviation

Over the past year only 1 person hired which is the usual number hired by this company for a 1 year calendar period.

Hughes Air West

Information requested by phone/letter to headquarters but there was no response.

Pacific Southwest Airlines

Number of Aviation Mechanics hired:

1976 - Not Avilable)
1977 - 104) Low turnover rate.
1978 - 61)

Any Miramar students - if so, how many?

Data Unavailable

Projected plans for hiring:

.50 personnel to be hired in the next 6 months on a temporary status.

.Market extremely good for females.

Rohr Industries

Number of Aviation Mechanics hired:

1976)
1977) Over total 3 year period, 4 - 5 individuals hired.
1978)

Any Miramar students - if so, how many?

None

Projected plans for hiring:

.4 - 5 personnel to be hired within the next year.

PROGRAM AVIATION MAINTENANCE

5. Placed by Whom, continued:

Additional data for number of students placed by industry:

Ryan Industries

Number of Aviation Mechanics hired:

1976)
1977) Over total 3 year period, 2 individuals hired.
1978)

Any Miramar students - if so, how many?

None

Projected plans for hiring:

.None - In fact, layoffs pending.

Solar Industries

Number of Aviation Mechanics hired:

1976)
1977) Maintains 4 -5 persons in Aviation Maintenance field.
1978)

Any Miramar students - if so, how many?

Have hired some people from Miramar but have no specifics.

Projected plans for hiring:

.Will maintain 4 - 5 personnel for Aviation Maintenance staff.

PROGRAM AVIATION MAINTENANCE

5. Placed by Whom, continued:

Additional data for number of students placed by industry:

Western Airlines

Number of Aviation Mechanics hired:

1976)
1977) Unknown - No specific records maintained.
1978)

Any Miramar students - if so, how many?

None

Projected plans for hiring:

.No hiring foreseen in Los Angeles International area.

.Present staff in entire system: 2,000 Aviation Maintenance workers.

.Low turnover.

V THE CAPITAL EQUIPMENT OUTLAY DATA

The following are the actual capital equipment outlay expenditures for all three academic years in the Aviation Maintenance program. For your information, this does not include Evening program expenditures (destroyed due to reorganization) and the data was not stored in an orderly manner. Therefore, there is no guarantee that all information was examined.

Capital equipment outlay data:

The capital equipment outlay budget is not a conventional District budget in which monies are earmarked for specific purposes. Instead, monies are set aside for possible anticipated expenditures and then used if needed.

On the following pages there is a three-year comparison of actual expenditures with a comparison table of the amount budgeted, spent and over/under budget columns, in addition to a section on trends in this budget and a listing of constant expenditures:

MIRAMAR COLLEGE PROGRAM REVIEW WORKSHEET

PROGRAM AVIATION MAINTENANCE

Capital equipment outlay data:

1. ACTUAL EXPENDITURES	SCHOOL YEAR 1975-76	1976-77	1977-78
Fuel Assembly	$ 1,012.43	$ -	$ 807.00
Helicopter	500.00	-	-
Gear Assembly	56.14	-	-
Engine Test Cell	250.00	-	-
Propeller	604.20	-	450.00
Batteries	2,759.32	-	-
Testing Stand	1,288.54	-	-
Reflex Charger	2,650.00	-	-
Tool Holders	81.38	-	-
Live Center	43.46	-	-
Steel Car.	651.90	-	-
Tube Bender	88.68	-	-
Compressor Repair	139.03	-	-
Tensometer	159.00	-	-
Spring	12.72	-	-
Air Hammer	50.24	-	-
Contract Fee	700.00	-	-
Starter Tester	120.00	-	-
Time Recorder	210.41	-	-
Chalk Board	107.61	-	-
Arbor Press	-	188.63	-
Control Assembly	-	101.02	-
Engine	-	800.00	-
Chairs/Tables	-	92.54	-
Eye Wash Stand	-	330.00	-
Engine Gauge Unit	-	53.00	-
Sink & Pump	-	89.00	-
Low Wing & High Wing	-	612.68	-
Pumps	-	249.75	155.00

continued . . . .

MIRAMAR COLLEGE PROGRAM REVIEW WORKSHEET

PROGRAM AVIATION MAINTENANCE

Capital equipment outlay data:

1. ACTUAL EXPENDITURES	SCHOOL YEAR 1975-76	1976-77	1977-78
File Cabinet	-	399.98	-
Scale	-	75.00	-
Training Aids	-	203.60	-
Mock-up Equipment	-	100.00	-
Testing Set	-	103.35	40.00
Bookcase	-	188.60	-
Additional Funds (can't locate records)	-	1,985.00	-
Drain Shelf	-	-	659.50
Radio	-	-	535.24
Fuel Flow Analyzer	-	-	1,044.10
Tools/Protractor	-	-	1,399.90
Watt Meter	-	-	31.75
Permit Renewal	-	-	32.00
Parts	-	-	948.32
Spray Gun	-	-	189.06
Charger Repair	-	-	196.52
Power Supply	-	-	346.00
System Analyzer	-	-	31.00
Tachometer	-	-	318.00
Voltage Regulator	-	-	94.00
Internal Growler	-	-	72.00
Function Generator	-	-	313.00
TOTAL	$11,485.06	$5,572.15	$7,662.39

MIRAMAR COLLEGE PROGRAM REVIEW WORKSHEET

PROGRAM AVIATION MAINTENANCE DATE _____

2.

$ AMOUNT BUDGETED	AMOUNT SPENT			OVERSPENT BY	UNDERSPENT BY
	1976	1977	1978		
$10,257.00	$11,485.06			$1,228.06	
$8,028.00		$5,572.15			$2,455.80
$8,242.00			$7,662.39		$579.61

3. Trends in capital outlay expenditures:

Increasing _____ Constant _____ Decreasing ✓

% decrease from 75 - 78 = 33%

The total capital outlay expenditure for all three years was $24,719.65. The 1975-76 year expenditures represented 46% of the total, the 1976-77 year expenditures maintained 23% of the three year total, and 1977-78 represented 31% of the total. The average annual expenditure for this budget is $8,239.88.

4.

AREAS OF CONSTANT EXPENDITURES:	TOTAL SPENT (3 YEARS)
Fuel Assembly	$1,819.43
Pumps	$404.75
Testing Sets	$143.35
Propeller	$1,054.20
This amounts to 14% of all expenditures for the 3 year period.	

Most expenditures seem to be for one-time purchases of equipment that will not have to be replaced frequently.

Capital equipment outlay data, continued:

The constant capital expenditures are in the four areas of fuel assembly, propellers, pumps and testing sets. All four areas must be replaced due to daily useage. They are more expensive to purchase due to inflation and can fall victim to vandalism and age. The impact of increased enrollment upon this budget might, in turn, increase equipment expenditures.

VI THE INSTRUCTIONAL COST DATA

The following are the actual instructional cost data for all three academic years in the Aviation Maintenance program. For your information, this does not include Evening program xpenditures (destroyed due to reorganization) and the data was not stored in an orderly manner. Therefore, there is no guarantee that all information was examined.

MIRAMAR COLLEGE PROGRAM REVIEW WORKSHEET

PROGRAM AVIATION MAINTENANCE

The instructional budget includes instructional training materials, duplication costs, etc., which support the instruction program. Following is a breakdown of all of the instructional cost data:

1. ACTUAL EXPENDITURES	SCHOOL YEAR 1975-76	1976-77	1977-78
Gas/Oil	$ 912.83	$ 495.74	$1,158.52
Instructional Handbooks & Training Materials	113.72	64.78	112.04
Tools	479.87	726.92	150.87
Batteries	106.54	142.24	29.26
Valve Seat Wheels	98.61	143.25	635.92
Aluminum	128.64	193.10	-
Paint Materials	118.56	101.06	277.73
Sewing Thread	54.48	5.92	-
Sander Belts	51.76	77.44	34.81
Heat Gun	46.96	-	-
Directory	31.80	2.01	-
Spring Gun	18.32	-	-
Lamp	33.30	-	31.16
Rack	14.58	14.58	-
Inspection Aids	10.05	-	-
Reamer	9.38	-	-
Air Hose	223.74	-	23.69
Tires	152.12	-	-
Oxygen	143.23	-	-
Nuts/Bolts/Screws	96.50	772.75	219.80
Rivets	155.06	472.26	367.11
Turco	60.31	-	-
Glass Bead Abrasive	46.11	47.09	92.22
Generator	42.82	-	-
Fuses	12.10	-	10.32
Resin	56.02	-	-
Spot Check Equipment	254.40	-	-
Masks/Gloves, etc.	223.80	168.12	-

continued . . . .

MIRAMAR COLLEGE PROGRAM REVIEW WORKSHEET

PROGRAM AVIATION MAINTENANCE

Instructional cost data:

1. ACTUAL EXPENDITURES	SCHOOL YEAR 1975-76	1976-77	1977-78
Tarpaulin	$ 181.96	$ -	$ -
Acetone	30.95	-	-
Gaskets, Valves, Plugs	1,042.36	86.41	320.44
Water	4.56	-	-
Bulb	17.98	-	-
Centrifuge	10.60	-	-
Gauges	21.07	64.09	-
Cap Screen	254.00	-	-
Insulation	1.01	-	-
Business Cards	12.72	-	-
Welding Rods	391.94	-	-
Fuel Pumps	302.10	58.30	-
Pipe Coupler	22.60	56.63	-
Battery Charger	10.42	11.79	-
Time Cards	70.49	-	-
Fluid - Hydraulic	120.10	176.49	-
Wire	80.59	55.12	-
Dopes	568.69	333.90	343.23
Counter Sinks	40.70	-	-
Tubine	157.82	-	489.16
Cable/Thimbles	119.25	22.79	-
Hand Tap	593.00	-	-
Rags	248.33	188.31	103.56
Duplicating/Materials	64.55	175.40	208.39
Paper/Pens/Pencils	176.06	54.86	104.60
Measuring Tape	28.53	107.85	2.23
Protectors	113.06	-	-
File Folders/File Index	5.07	58.03	.67
Index Cards	98.21	33.48	-

continued . . . .

MIRAMAR COLLEGE PROGRAM REVIEW WORKSHEET

PROGRAM AVIATION M. .NTENANCE

Instructional cost data:

1. ACTUAL EXPENDITURES	SCHOOL YEAR 1975-76	1976-77	1977-78
Knives	$ 6.00	$ -	$ -
Binders	61.61	66.67	184.11
Magnets	2.40	-	-
Rope	5.30	-	-
Cups	-	.79	-
Lubricant	-	8.28	-
Staplers/Hole Punch, etc.	-	60.23	-
General Materials	-	104.53	-
Soldering Tips	-	59.06	-
Power Supply	-	50.88	-
Brake Bleeder System	-	46.64	-
Cutting/Finishing Wheels	-	51.15	-
Bridge	-	21.62	-
Dome Breather Hole	-	53.72	-
Control Cables	-	75.00	-
Quick-Sorb	-	8.75	-
V-Belts	-	9.37	-
Crankshaft Bearing	-	7.04	-
Dial Test Indicator	-	76.32	-
Permit Renewal	-	21.25	-
Magnaglo Powder	-	49.29	-
Metal Protector	-	38.54	19.72
Adjustable Die	-	10.47	-
Dhrome Drive	-	10.27	-
Arbor	-	14.63	-
Calipers	-	147.33	-
Collets, etc.	-	129.32	-
Capacitors	-	96.00	-
Meter	-	23.85	-

continued . . . .

MIRAMAR COLLEGE PROGRAM REVIEW WORKSHEET

PROGRAM AVIATION MAINTENANCE

Instructional cost data:

1. ACTUAL EXPENDITURES	SCHOOL YEAR 1975-76	1976-77	1977-78
Bearing Check	$ -	$ 76.02	$ -
Name Plate	-	9.92	-
Engine Starter	-	17.70	20.00
Screw Assembly	-	106.84	-
Brush Set	-	15.07	-
Bearing	-	17.21	-
Poly Brush - Spray	-	384.43	-
Shears	-	-	45.63
Thermometer	-	-	15.90
Compass	-	-	2.01
Repairs	-	-	258.40
Honing Stones	-	-	46.53
Clover	-	-	11.34
Cellophane/Styrofoam	-	-	133.31
Spar Assembly	-	-	425.06
Bunks	-	-	85.07
Splices	-	-	72.88
Cylinders	-	-	661.44
AM/MS Standards	-	-	544.10
Carburator Cleaner	-	-	255.10
Cement	-	-	28.73
Continential	-	-	31.80
Terminal/etc.	-	-	306.97
Gloop	-	-	3.13
TOTAL	$8,559.64	$6,778.90	$7,866.96

MIRAMAR COLLEGE PROGRAM REVIEW WORKSHEET

PROGRAM AVIATION MAINTENANCE

2.

$ AMOUNT BUDGETED	AMOUNT SPENT			OVERSPENT BY	UNDERSPENT BY
	1976	1977	1978		
$13,453.00	$8,559.64				$4,893.36
$9,479.00		$6,778.90			$2,700.10
$11,293.00			$7,866.96		$3,426.04

3. Trends in instructional expenditures:

Increasing _____ Constant ✓* _____ Decreasing _____

*There has been a minor decrease of approximately 8% overall.

The total instructional expenditure for all three years was $23,205.50. The 1975-76 year expenditures represented 37% of the total, the 1976-77 year expenditures maintained 29% of the three year total, and 1977-78 represented 34% of the total. The average annual expenditure for this budget is $7,735.17.

4.

AREAS OF CONSTANT EXPENDITURES:	TOTAL SPENT (3 YEARS)
Gas/Oil	$2,567.09
Instructional Training Material	$290.54
Tools	$1,357.66
Batteries	$278.04
Valve Seat Wheels	$877.78
Paint Supplies	$497.35
Sander Belts	$164.01
Nuts/Bolts, etc.	$1,089.05
Rivets	$994.43
Glass Bead Abrasive	$185.42
Gaskets, Valves, Plugs	$1,449.21
Dopes	$1,245.82
Duplicating	$448.34
Rags	$540.20
Paper/Pencils, etc.	$335.52
Binders	$312.39
This amounts to 54% of all expenditures for the 3 year period.	

Instructional cost data, continued:

For the past three years this program has remained below budget in its expenditures. In the event of increased enrollment, the impact of this budget will undoubtedly result in more expenditures to fulfill student needs.

VII THE AUDIO VISUAL/LEARNING RESOURCE COST DATA

The following are the actual Audio Visual/Learning Resource expenditures for all three academic years in the Aviation Maintenance program. For your information, this does not include Evening program expenditures (destroyed due to re-organization) and the data was not stored in an orderly manner. Therefore, there is no guarantee that all information was examined.

MIRAMAR COLLEGE PROGRAM REVIEW WORKSHEET

PROGRAM AVIATION MAINTENANCE

Audio-visual/learning resource cost data:

The audio-visual/learning resource budget lists all instructional aids, such as, films, tapes, etc., used in the Aviation Maintenance program:

1. ACTUAL EXPENDITURES	SCHOOL YEAR 1975-76	1976-77	1977-78
Subscriptions	$164.47	$665.83	$446.24
Books	656.84	92.00	-
Films	25.50	-	-
Periodicals	79.87	51.47	-
Film Viewer	45.00	-	-
Microfilm Bulbs	-	44.22	-
Audio Visual Program	-	53.00	-
Membership	-	20.00	-
Slide Tray	-	18.89	-
Learning Unit	-	-	$386.90
TOTAL	$971.68	$945.41	$833.14

MIRAMAR COLLEGE PROGRAM REVIEW WORKSHEET

PROGRAM AVIATION MAINTENANCE

2.

$ AMOUNT BUDGETED	AMOUNT SPENT			OVERSPENT BY	UNDERSPENT BY
	1976	1977	1978		
$80.00	$971.68			$891.68	
-0-		$945.41		$945.41	
-0-			$833.14	$833.14	

3. Trends in audio-visual/learning resource expenditures:

Increasing _____ Constant _____ Decreasing ✓

$ decrease from 75 - 78 = 14%

The total instructional expenditures for all three years was $2,750.23. The 1975-76 yearly expenditures represented 36% of the total, the 1976-77 yearly expenditures maintained 34% of the three year total, and 1977-78 represented 30% of the total. The average annual expenditure for this budget is $916.74.

4.

AREAS OF CONSTANT EXPENDITURES:	TOTAL SPENT (3 YEARS)
Subscriptions	$1,276.54
Books	$748.84
This amounts to 74% of all expenditures for the 3 year period.	

Subscriptions and books to continue to build library.

Required - "Federal Air Regulations" - bi-weekly - 10-15 volumes, to reflect changes in industry.

Audio-visual/learning resource cost data, continued:

There has been only $80.00 budgeted for these resources. Therefore, the budget has been overspent during 1976, 1977 and 1978. The constant expenditures of subscriptions, books and films are required expenses to maintain program equality. The only area in which increased enrollment would impact on this budget would possibly be books, but this is an area where budgetary controls can be maintained.

VIII THE PROGRAM SUMMARY

Within this report we have tried to cover as many aspects as possible in conjunction with the Aviation Maintenance program. The points of information covered within this report are:

A) An interview with the program chairman to investigate specific areas which should be brought to your attention.

B) A summary of the program staffing situation over the past three academic years to give you a better perspective on its evolution.

C) The program enrollment data which includes ADA, WSCH and other enrollment data and summaries. This segment will give you ideas on enrollment trends for the past three years.

D) The job placement summary in which employment data has been gathered for the past three years in addition to the local and national job outlook.

E) The capital equipment outlay budget in which information was monitored and tabulated to show a three year comparison.

F) The instructional budget was tabulated in the same manner as the above budget but this will give you a more detailed description of the majority of classroom expenditures.

G) The audio-visual/learning resource expenditures which will give you a fairly good idea of the costs involved with instructional materials.

Program summary, continued:

In closing, this program evaluation took place during the reorganization of the District and the combination of the day and evening academic programs. During this period of change, the best effort was made to give a good, fair report.

These are some observations of the program:

1. The enrollment figures have grown, therefore showing interest in this program.

2. The employment/placement outlook in this field can be labeled fair-to-good depending upon the choice of the local or national job market.

3. The program budgets have basically remained within their prescribed boundaries.

4. This program is required to fulfill federal and other agencies (F.A.A., etc.) course requirements which add to all respective workloads and budgets of the program.

5. With all of its equipment, supplies, etc., this program is an expensive program to maintain.

Once again, it is hoped that this report will be of assistance to you.

IX THE PROGRAM EVALUATION SOURCES

.The University of California at Irvine - Career Planning and Placement Center - The Ziggy Project, 1979

.The Occupational Outlook Handbook - The United States Department of Labor - 1976-77 Edition

.The Educational Program Vitalit- Report - Los Angeles Community College District, 1977

.The Place of Program Completions in Vocational Education Programs - Coast Community College District, 1975-76, -77, -78

.The Monterey Peninsula College Proram Review - Monterey Peninsula College, 1978

.The Labor Supply and Demand - San Diego County Employment Development Department - April - June, 1979

.The Job Outlook in Brief - The United States Department of Labor - Bureau of Labor Statistics, Spring, 1978

.The Manpower 1975 - 1980 - Employment Development Department - San Diego County, May 1976

.Elame, C., Aviation Maintenance Chairperson - Miramar College

.Plummer, K. - American Airlines, Operations Department, San Diego, California

.Blackerby, K. - Continental Airlines, Employment Office, Los Angeles, California

.Crown Aviation, Personnel Department, San Diego, California

.Jackson, J.J. - General Dynamics, Personnel Department, San Diego, California

.Gibb Aviation, Personnel Department, San Diego, California

.Rohr Industries, Personnel Department, San Diego, California

.Ryan Aeronautics, Personnel Department, San Diego, California

.Solar Industries, Personnel Department, San Diego, California

.Cluff, R. - Western Airlines, Employment Office, Los Angeles, California

ERIC Clearinghouse for Junior Colleges
96 Powell Library Building
University of California
Los Angeles, California 90024

JAN 16 1980

TABLE E3

REASONS STUDENTS SELECTED AC BY ETHNIC GROUP, SEX

Reasons	White				Black				Mexican-American				Total			
	Men		Women		Men		Women		Men		Women		Men		Women	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Low Cost	727	63	874	60	22	61	41	68	36	53	36	47	823	62	968	59
Programs Offered	616	54	901	61	28	78	38	63	40	59	53	70	732	55	[illegible]	62
Geographic Location	424	37	575	39	9	25	8	13	17	25	20	26	476	36	[illegible]	38
High Quality Instruction	425	37	490	33	9	25	19	32	17	25	26	34	483	36	550	33
Credits Transfer Well	265	23	333	23	5	14	11	18	8	12	9	12	293	22	370	22
Live w/Parents, Relatives	257	22	292	20	5	14	14	23	13	19	14	18	282	21	331	20
Excellent Voc. Training	221	19	209	14	8	22	9	15	23	34	19	25	271	20	240	15
Local Job Opportunities	189	16	203	14	5	14	12	20	17	25	15	20	230	17	237	14
Friends Attend AC	91	8	169	12	5	14	10	17	5	7	9	12	115	9	192	12
Counseling Services	29	3	43	3	5	14	5	8	5	7	8	11	48	4	60	4
Student Activities	11	1	24	2	3	8	1	2	1	1	1	1	21	2	26	2
Total Responses*	3255	284	4113	281	104	289	168	280	182	268	210	276	3774	282	4612	280
Total Respondents	1148		1466		36		60		68		76		1337		1645	

*Respondents could check more than one reason; therefore totals may exceed 100%.

TABLE E5

MOST IMPORTANT SOURCE OF INFORMATION BY CURRICULAR GROUP

Source	Arts & Sciences N	%	Pending N	%	Bio-Medical N	%	Technology N	%	Vocational Arts N	%	All Students N	%
Friends, other students	202	28	223	31	98	29	191	26	86	34	800	28
Parents, relatives	225	30	182	24	58	17	105	15	37	15	607	22
AC publications	124	17	126	17	84	25	171	24	64	26	569	21
Employer	43	6	62	8	25	7	92	13	7	3	229	8
ewspaper/radio/TV	37	5	72	10	9	3	48	7	20	8	186	7
AC personnel	29	4	24	3	25	7	28	4	6	2	112	4
High School Personnel	35	5	27	4	10	3	23	3	10	4	105	4
Texas Rehabilitation or other agency	10	1	9	1	9	3	19	3	13	5	60	2
College Day at HS	10	1	10	1	12	4	18	3	4	2	54	2
Women's program	5	1	9	1	3	1	7	1	1	0	25	1
AC booths	5	1	3	0	3	1	2	0	2	1	15	1
Speakers from AC	5	1	3	0	0	0	4	1	0	0	12	0
Total	730	100	750	100	336	100	708	100	250	100	2774	100

TABLE E6 -

MOST IMPORTANT SOURCE OF INFORMATION BY ATTENDANCE PATTERNS

Source	Part-Time N	Part-Time %	Full-Time N	Full-Time %	Day Only N	Day Only %	Evening Only N	Evening Only %	Day & Evening N	Day & Evening %
Friends, other students	475	29	322	29	373	27	318	32	112	28
Parents, relatives	236	14	371	34	388	28	124	12	95	24
AC publications	388	24	180	16	254	19	233	23	83	21
Employer	194	12	35	3	48	4	146	14	35	9
Newspaper/radio/TV	150	9	36	3	75	5	93	9	18	5
AC personnel	44	3	60	5	71	5	19	2	16	4
High School Personnel	62	4	50	4	63	5	32	3	17	4
Texas Rehabilitation or other agency	18	1	36	3	41	3	7	1	6	2
College Day at HS	32	2	28	2	34	2	20	2	6	2
Women's program	19	1	6	1	12	1	12	1	1	0
AC booths	10	1	5	0	6	0	6	1	3	1
Speakers from AC	8	0	5	0	8	1	4	0	1	0
Total	1636	100	1134	100	1373	100	1014	100	393	100

TABLE E7

MOST INFLUENTIAL SOURCE OF INFORMATION BY SEX, ETHNIC GROUP

Source	White				Black				Mexican-American				Total			
	Men		Women		Men		Women		Men		Women		Men		Women	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Friends, other students	328	31	379	28	6	17	9	17	17	30	15	23	382	31	416	28
Parents, relatives	217	20	317	23	5	14	14	26	9	15	17	27	248	20	359	23
AC publications	235	22	263	19	11	32	10	19	15	25	10	15	278	22	291	19
Employer	70	7	137	10	0	0	3	6	5	8	7	10	79	6	150	10
Newspaper/radio/TV	73	7	92	7	5	14	2	4	6	10	1	1	87	7	99	6
AC personnel	37	3	60	4	3	9	3	6	1	2	2	3	46	4	66	4
High School Personnel	41	4	51	4	2	6	3	6	0	0	6	9	45	4	60	4
Texas Rehabilitation or other agency	29	3	18	1	2	6	1	2	5	8	3	4	36	3	24	2
College Day at HS	18	2	26	2	0	0	5	10	1	2	3	4	20	2	34	2
Women's program	4	0	18	1	0	0	1	2	0	0	2	3	4	0	21	1
AC booths	5	0	8	1	0	0	1	2	0	0	1	1	5	0	10	1
Speakers from AC	6	1	4	0	1	2	0	0	0	0	1	0	8	1	4	0
Total	1063	100	1373	100	35	100	52	100	59	100	67	100	1238	100	1534	100

TABLE E8

MOST INFLUENTIAL SOURCE OF INFORMATION BY AGE

Source	17-19		20-24		25-29		30-39		40-49		50-Up	
	N	%	N	%	N	%	N	%	N	%	N	%
Friends, other students	192	45	186	25	146	33	168	32	74	34	20	22
Parents, relatives	49	11	194	26	44	10	44	9	8	4	2	2
AC publications	90	21	145	20	112	25	132	26	61	28	19	20
Employer	16	4	61	8	52	12	55	11	26	12	19	20
Newspaper/radio/TV	12	3	30	4	41	9	51	10	29	13	20	22
AC personnel	20	5	34	5	19	4	29	6	5	2	4	4
High School Personnel	9	2	37	5	6	1	6	1	2	1	1	1
Texas Rehabilitation or other agency	2	0	20	3	15	3	14	3	6	3	2	2
College Day at HS	33	8	16	2	3	1	2	0	0	0	0	0
Women's program	2	0	5	1	6	1	4	1	2	1	6	6
AC booths	1	0	3	0	5	1	3	1	3	1	0	0
Speakers from AC	3	1	5	1	1	0	1	0	1	1	1	1
Total	429	100	736	100	450	100	505	100	217	100	94	100

TABLE E9

PERCENT EXPECTING TO ATTEND COLLEGE IF AC DID NOT EXIST, BY:

Curricular Group	Percent Yes
Arts & Sciences	76
Pending	60
Biomedical	71
Technology	60
Vocational Arts	59
All Students	65

Enrollment Pattern	Percent Yes
Part-time	53
Full-time	83
Day Only	75
Evening Only	50
Day & Evening	72

Ethnic Group & Sex	Percent Yes
White	
Men	69
Women	63
Black	
Men	81
Women	53
Mex. Amer.	
Men	75
Women	68
Total	
Men	70
Women	62

Age	Percent Yes
17-19	87
20-24	74
25-29	57
30-39	48
40-49	41
50-Up	35

TABLE E10

STUDENTS' WILLINGNESS TO RECOMMEND AC TO OTHERS, BY:

Curricular Group	Percent Yes
Arts & Sciences	94
Pending	95
Biomedical	94
Technology	96
Vocational Arts	93
All Students	95

Enrollment Pattern	Percent Yes
Part-time	95
Full-time	94
Day Only	94
Evening Only	96
Day & Evening	94

Ethnic Group & Sex	Percent Yes
White	
Men	94
Women	95
Black	
Men	92
Women	91
Mex. Amer.	
Men	94
Women	100
Total	
Men	94
Women	96

Age	Percent Yes
17-19	93
20-24	92
25-29	98
30-39	97
40-49	97
50-Up	96

PARTICIPATION AT AC

Many studies have shown that impact of educational institutions on students is related to the students' sense of belonging and participation. Institutions that have been credited with having greatest impact are small liberal arts colleges enrolling several hundred resident students who live in a milieu of academic, social and related activities. Amarillo College, however, is a very different type of institution. It exists to provide low-cost local education to students. It offers no residential facilities, as students are expected to live at home (and thus keep the cost low). Also much of its student body is short-term and enrolled part-time, often for just one of two courses.

Still, most community college educators believe that a strong sense of belonging and identification with the college is a major factor in student learning and human development. For this reason, knowledge about student participation and feelings toward AC may help in assessing and improving the College's impact. This paper covers three related topics: students' feelings of being an active part of the College, the nature and extent of students' participation, and reasons for non-participation.

Feeling an Active Part

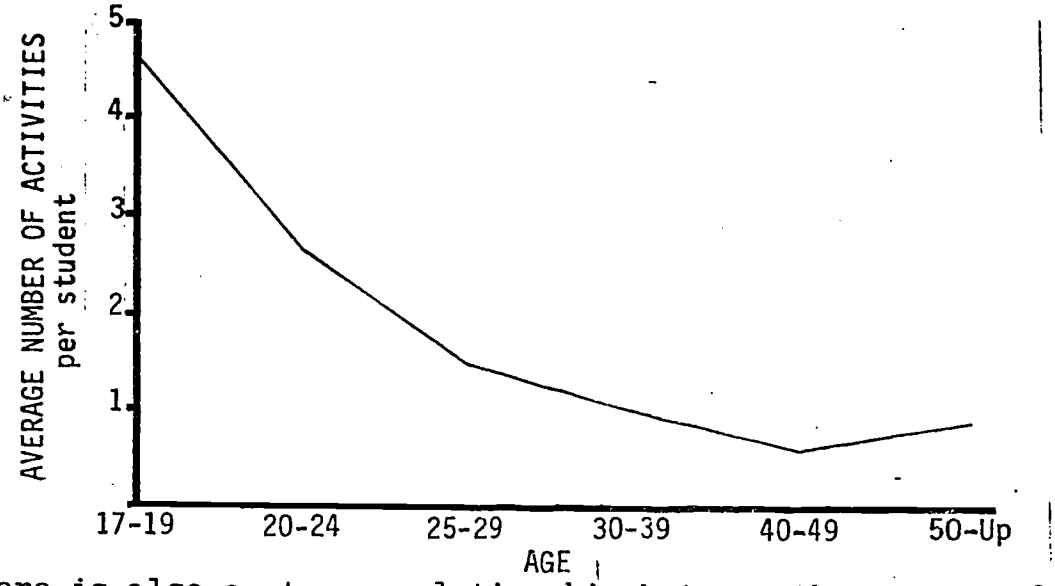
To determine their sense of belonging, students were asked the question, "Do you feel an active part of Amarillo College?" Half responded "somewhat," one-sixth responded "yes," and one-third responded "no" (Table F1).

To better understand the students' attitudes toward this and the report's other topics, responses were examined by curricular group, full- or part-time status, sex, ethnic group, and age.

The curricular group to which students belong seems to have minimal effect on their feelings of being an active part of AC (Table F1), but enrollment pattern has a greater impact. Full-time individuals are much more likely than part-time ones to respond "yes" to the question, and part-time students are much more likely than full-timers to respond "no". Even so, approximately half of each group responded "somewhat" (Table F2).

Differences between men and women and between ethnic groups are less apparent. However White and Mexican-American women are somewhat more likely than other students to say they do not feel an active part of AC (Table F3).

Age is strongly associated with the amount of participation, as seen in the following chart. Older students rank the categories "music and drama" and "guest speakers" higher than do younger students, while the categories "Badger Park" and "intramurals" are ranked higher by younger students (Table F8).



There is also a strong relationship between the extent of employment and participation in activities, as noted in the following tabulation. Those working 35 or more hours a week and homemakers participate far less often than do other students (Table F9).

Employment Status	Avg. Number of Activities
0 Hrs./wk.	3.3
1-10	3.8
11-20	4.0
21-34	3.7
35-Up	1.3
Homemaker	1.2

Reasons for not Participating

Students who do not participate in activities were asked to respond to one of four possible reasons for not doing so. Eighty-five percent of non-participants say that they had no time or that they were not interested. Perhaps the unfulfilled group is the remaining 15 percent, for whom inconvenient meeting times or lack of activities in their realm of interest are stated as reasons (Table following and Table F10).

Reason	Percent
No time for clubs or activities	67
Not interested in clubs or activities	18
Meeting times are inconvenient	8
No clubs or activities in my areas of interest	7

Most groups of students express similar reasons for not participating, except as noted below (Tables F10 - F12).

- Those employed full-time, those aged 25-29, and Vocational Arts Students are somewhat more likely than others to say they have no time for clubs or activities.
- Those who say they do not feel a part of AC and those age 40 and older are more likely to say they are not interested in clubs or activities.
- Mexican-Americans are more likely than others to say meeting times are inconvenient.
- Black women and full-time students are somewhat more likely than others to say no clubs or activities exist in their areas of interest.

Summary

Despite their overwhelming willingness to recommend AC to potential students, noted earlier ("The Attraction of AC"), most students have just mild feelings of being an active part of the College. Full-time and younger students expressed a greater sense of belonging than their part-time and older counter parts. The extent of participation in activities varies according to a number of student characteristics, with younger, full-time, and Arts and Sciences students being most active. Most students who do not participate say they have no time to do so.

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TABLE F1

DO YOU FEEL AN ACTIVE PART OF AC BY CURRICULAR GROUP

Curricular Group		Yes	Somewhat	No	Total
Arts and Sciences	%	18	53	29	100
	N	139	404	227	770
Pending	%	17	47	36	100
	N	129	367	274	770
Biomedical	%	13	59	28	100
	N	47	208	98	353
Technology	%	15	51	34	100
	N	110	387	257	754
Vocational Arts	%	17	57	26	100
	N	46	148	69	263
All Students	%	16	52	32	100
	N	471	1514	925	2910

TABLE F2

DO YOU FEEL AN ACTIVE PART OF AC BY ENROLLMENT PATTERN

Enrollment Pattern		Yes	Somewhat	No	Total
Part-time	%	12	48	40	100
	N	203	831	692	1726
Full-time	%	23	57	20	100
	N	268	683	233	1184
Day Only	%	20	56	24	100
	N	287	794	336	1417
Evening Only	%	11	46	43	100
	N	121	486	464	1071
Day and Evening	%	15	55	30	100
	N	63	234	125	422

TABLE F3

DO YOU FEEL AN ACTIVE PART OF AC BY ETHNIC GROUP AND SEX

Ethnic Group		Yes	Some-what	No	Total
White Men	%	18	53	29	100
	N	200	605	323	1128
White Women	%	15	50	35	100
	N	211	715	505	1431
Black Men	%	16	62	22	100
	N	6	23	8	37
Black Women	%	17	60	23	100
	N	9	31	12	52
Mex.-Amer. Men	%	16	62	22	100
	N	11	41	15	67
Mex.-Amer. Women	%	11	55	34	100
	N	8	41	25	74
Total Men	%	18	54	28	100
	N	237	708	366	1311
Total Women	%	15	50	35	100
	N	233	805	559	1597

TABLE F4

DO YOU FEEL AN ACTIVE PART OF AC BY AGE

Age		Yes	Some-what	No	Total
17-19	%	23	55	22	100
	N	172	410	162	744
20-24	%	13	52	35	100
	N	98	409	273	780
25-29	%	12	51	37	100
	N	60	243	179	482
30-39	%	14	52	34	100
	N	75	276	184	535
40-49	%	19	44	37	100
	N	45	101	87	233
50-Up	%	16	48	36	100
	N	16	47	36	99

TABLE F5

PARTICIPATION IN ACTIVITIES BY CURRICULAR GROUP

Activity	Arts and Sciences N	Arts and Sciences %	Pending N	Pending %	Biomedical N	Biomedical %	Technology N	Technology %	Vocational Arts N	Vocational Arts %	All Students N	All Students %
Free Movies	293	37	234	29	100	28	210	27	55	20	892	30
Special Events	241	31	198	24	111	31	187	24	51	19	788	26
Basketball Games	260	33	212	26	78	22	181	23	35	13	766	26
Open Period	247	31	173	21	69	19	130	17	21	8	640	21
Dances	192	24	146	18	62	17	128	17	41	15	569	19
Music and Drama	205	26	156	19	80	22	108	14	15	6	564	19
Guest Speakers	208	26	153	19	68	19	103	13	17	6	549	18
Badger Park	170	22	123	15	47	13	115	15	25	9	480	16
Intramural Sports	178	23	126	16	31	9	99	13	31	11	465	16
Student Clubs	164	21	92	11	72	20	86	11	6	15	429	14
Fraternity/Sorority	107	14	82	10	15	4	48	6	5	2	257	9
Student Senate	83	11	61	8	21	6	40	5	9	3	214	7
Student Paper	66	8	47	6	15	4	44	6	8	3	180	6
Total Responses*	2414	306	1803	223	769	216	1479	191	328	121	6793	227
Total Respondents	788		810		356		773		272		2999	

*Respondents could check more than one reason; therefore totals may exceed 100%.

TABLE F6

PARTICIPATION IN ACTIVITIES BY ENR[illegible] TERN

	Part-Time		Full-Time		Day Only		E.. Only		Day and Evening	
Activity	N	%	N	%	N	%	N	%	N	%
Free Movies	446	26	446	38	543	39	209	2	140	34
Special Events	319	19	469	40	528	38	137		123	30
Basketball Games	335	20	431	37	498	35	153	15	115	28
Open Period	243	14	397	34	453	32	72	7	115	28
Dancers	202	12	367	32	399	28	86	8	84	20
Music and Drama	290	17	274	24	355	25	113	11	96	23
Guest Speakers	307	18	242	21	332	24	123	12	94	23
Badger Park	177	10	303	26	343	24	65	6	72	18
Intramural Sports	146	9	319	27	329	23	62	6	74	18
Student Clubs	155	9	274	24	305	22	38	4	86	21
Fraternity/Sorority	80	5	177	15	181	13	27	3	49	12
Student Senate	63	4	151	13	149	11	20	2	45	11
Student Paper	81	5	99	9	118	8	32	3	30	7
Total Responses*	2844	167	3949	340	4533	323	1137	108	1123	273
Total Respondents	1701		1162		1403		1049		411	

*Respondents could check more than one response; therefore totals may exceed 100%.

TABLE F7

PARTICIPATION IN ACTIVITIES BY ETHNIC GROUP AND SEX

	White				Black				Mexican-American				Total Group			
	Men		Women		Men		Women		Men		Women		Men		Women	
Activity	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Free Movies	384	33	401	27	11	31	17	28	24	35	25	33	439	33	451	27
Special Events	322	28	358	24	15	42	22	37	21	31	23	30	378	28	409	25
Basketball Games	328	29	342	23	19	53	24	40	23	34	13	17	383	29	383	23
Open Period	263	23	299	20	9	25	17	28	13	19	16	21	301	23	339	21
Dances	236	21	243	17	13	36	16	27	19	28	17	22	286	21	282	17
Music and Drama	173	15	320	22	6	17	13	22	11	16	16	21	208	16	355	22
Guest Speakers	201	18	298	20	5	14	10	17	7	10	13	17	223	17	326	20
Badger Park	254	22	170	12	9	25	13	22	12	18	11	14	283	21	197	12
Intramural Sports	227	20	188	13	7	19	6	10	13	19	8	11	260	19	205	12
Student Clubs	155	14	210	14	4	11	10	17	15	22	12	16	188	14	241	15
Fraternity/Sorority	99	9	136	9	3	8	4	7	6	9	2	3	110	8	146	9
Student Senate	91	8	100	7	0	0	6	10	5	7	5	7	100	7	114	7
Student Paper	75	7	75	5	1	3	5	8	6	9	5	7	91	7	89	5
Total Responses*	2808	245	3140	214	102	283	163	272	175	257	166	218	3250	243	3537	215
Total Respondents	1148		1466		36		60		68		76		1337		1645	

*Respondents could check more than one reason; therefore totals may exceed 100%.

TABLE F8

PARTICIPATION IN ACTIVITIES BY AGE

Activity	17-19 N	17-19 %	20-24 N	20-24 %	25-29 N	25-29 %	30-39 N	30-39 %	40-49 N	40-49 %	50-Up N	50-Up %
Free Movies	362	50	277	36	119	25	93	18	22	10	11	11
Special Events	391	54	240	31	71	15	58	11	15	7	7	7
Basketball Games	394	54	214	28	61	13	68	13	18	8	10	10
Open Period	325	45	209	27	60	13	32	6	7	3	6	6
Dances	331	46	162	21	45	10	16	3	3	1	4	4
Music and Drama	225	31	156	20	73	15	66	13	30	13	12	12
Guest Speakers	179	25	157	20	84	18	79	15	32	14	17	17
Badger Park	265	37	140	18	41	9	22	4	4	2	6	6
Intramural Sports	272	38	137	18	32	7	15	3	4	2	1	1
Student Clubs	222	31	124	16	47	10	26	5	3	1	5	5
Fraternity/Sorority	166	23	58	8	19	4	10	2	0	0	2	2
Student Senate	116	16	61	8	12	3	16	3	4	2	2	2
Student Paper	75	10	54	7	26	6	16	3	5	2	2	2
Total Responses *	3323	460	1989	258	690	146	517	98	147	64	85	83
Total Respondents	723		770		472		527		231		102	

*Respondents could check more than one reason; therefore totals may exceed 100%.

TABLE F9

PARTICIPATION IN ACTIVITIES BY EMPLOYMENT STATUS

Activity	35 or More Hrs./Wk. N	%	21-34 Hrs./Wk. N	%	11-20 Hrs./Wk. N	%	1-10 Hrs./Wk. N	%	Home-Maker N	%	Unemployed Seeking Employment N	%	Unemployed Not Seeking Employment N	%
Free Movies	319	21	179	44	121	41	50	43	39	18	84	45	91	39
Special Events	233	15	175	43	135	46	54	47	23	11	79	42	83	36
Basketball Games	238	16	169	41	138	47	44	38	17	8	73	39	81	35
Open Period	160	11	152	37	113	39	40	34	21	10	70	38	74	32
Dances	162	11	140	34	101	34	41	35	5	2	60	32	57	24
Music and Drama	178	12	117	28	89	30	35	30	43	20	49	26	47	20
Guest Speakers	190	13	88	21	82	28	31	27	43	20	47	25	58	25
Badger Park	127	8	126	31	84	29	31	27	14	7	47	25	46	20
Intramural Sports	112	7	122	30	96	33	28	24	10	5	43	23	51	22
Student Clubs	96	6	100	24	85	29	35	30	14	7	48	26	48	21
Fraternity/Sorority	58	4	68	17	58	18	19	16	5	2	25	13	29	12
Student Senate	38	3	55	13	41	14	17	15	6	3	24	13	29	12
Student Paper	60	4	31	8	24	8	11	9	11	5	21	11	16	7
Total Responses*	1971	130	1522	370	1161	396	436	376	251	118	670	360	710	305
Total Respondents	1515		411		293		116		213		186		233	

*Respondents could check more than one reason; therefore totals may exceed 100%.

TABLE F10

REASON FOR NOT PARTICIPATING BY CURRICULAR GROUP & ENROLLMENT PATTERN

Curricular Group		Do Not Have Time	Not Interested in Clubs or Act.	Meet at Inconvenient Times	No Clubs or Act. in my Area of Interest	Total
Arts and Sciences	%	66	20	7	7	100
	N	356	110	39	38	543
Pending	%	64	21	8	7	100
	N	374	119	48	39	580
Biomedical	%	66	20	8	6	100
	N	187	58	23	16	284
Technology	%	68	16	9	7	100
	N	425	101	55	43	624
Vocational Arts	%	71	12	12	5	100
	N	166	29	27	12	234
All Students	%	67	18	8	7	100
	N	1508	417	192	148	2265

Enrollment Pattern						
Part-time	%	69	19	8	4	100
	N	1029	284	120	63	1496
Full-time	%	63	17	9	11	100
	N	479	133	72	85	769
Day Only	%	62	20	9	9	100
	N	620	201	87	93	1001
Evening Only	%	71	17	9	3	100
	N	673	160	84	32	949
Day and Evening	%	68	18	7	7	100
	N	215	56	21	23	315

TABLE F11

REASON FOR NOT PARTICIPATING BY ETHNIC GROUP, SEX, AND AGE

Ethnic Group		Do Not Have Time	Not Interested in Clubs or Act.	Meet at Inconven. Times	No Clubs or Act. in my Area of Interest	Total
White Men	%	68	16	8	8	100
	N	588	140	68	71	867
White Women %	%	66	22	7	5	100
	N	733	250	83	57	1123
Black Men	%	61	19	12	8	100
	N	16	5	3	2	26
Black Women	%	62	9	9	20	100
	N	27	4	4	9	44
Mex.-Amer. Men	%	63	10	21	6	100
	N	33	5	11	3	52
Mex.-Amer. Women	%	75	9	16	0	100
	N	44	5	9	0	58
Total Men	%	68	15	9	8	100
	N	685	152	91	81	1009
Total Women	%	66	21	8	5	100
	N	823	265	100	66	1254

Age						
17-19	%	54	19	13	14	100
	N	225	76	53	56	410
20-24	%	67	16	9	8	100
	N	417	101	59	47	624
25-29	%	71	17	8	4	100
	N	291	72	34	15	41
30-39	%	74	18	5	3	100
	N	350	88	25	14	477
40-49	%	66	24	5	5	100
	N	145	53	12	11	221
50-Up	%	65	25	5	5	100
	N	59	23	5	5	92

TABLE F12

REASON FOR NOT PARTICIPATING BY EMPLOYMENT STATUS AND FEEL AN ACTIVE PART

Employment Status		Do Not Have Time	Not Interested in Clubs or Act.	Meet at Inconvenient Times	No Clubs or Act. in my Area of Interest	Total
Employed 35 hours or more per week	%	74	14	8	4	100
	N	947	181	106	53	1287
Employed 21-34 hours per week	%	63	19	9	9	100
	N	170	50	24	24	268
Employed 11-20 hours per week	%	58	26	8	8	100
	N	96	42	13	13	164
Employed 1-10 hours per week	%	53	22	9	16	100
	N	39	16	7	12	74
Homemaker	%	61	29	6	4	100
	N	105	49	10	7	171
Retired	%	45	33	0	22	100
	N	4	3	0	2	9
Unemployed seeking employment	%	41	29	17	13	100
	N	48	33	19	15	115
Unemployed not seeking employment	%	55	23	8	14	100
	N	87	37	12	22	158
Feel An Active Part						
Yes	%	70	11	8	11	100
	N	167	26	20	25	238
Somewhat	%	69	16	9	6	100
	N	811	187	108	70	1176
No	%	61	24	8	7	100
	N	497	188	62	52	799

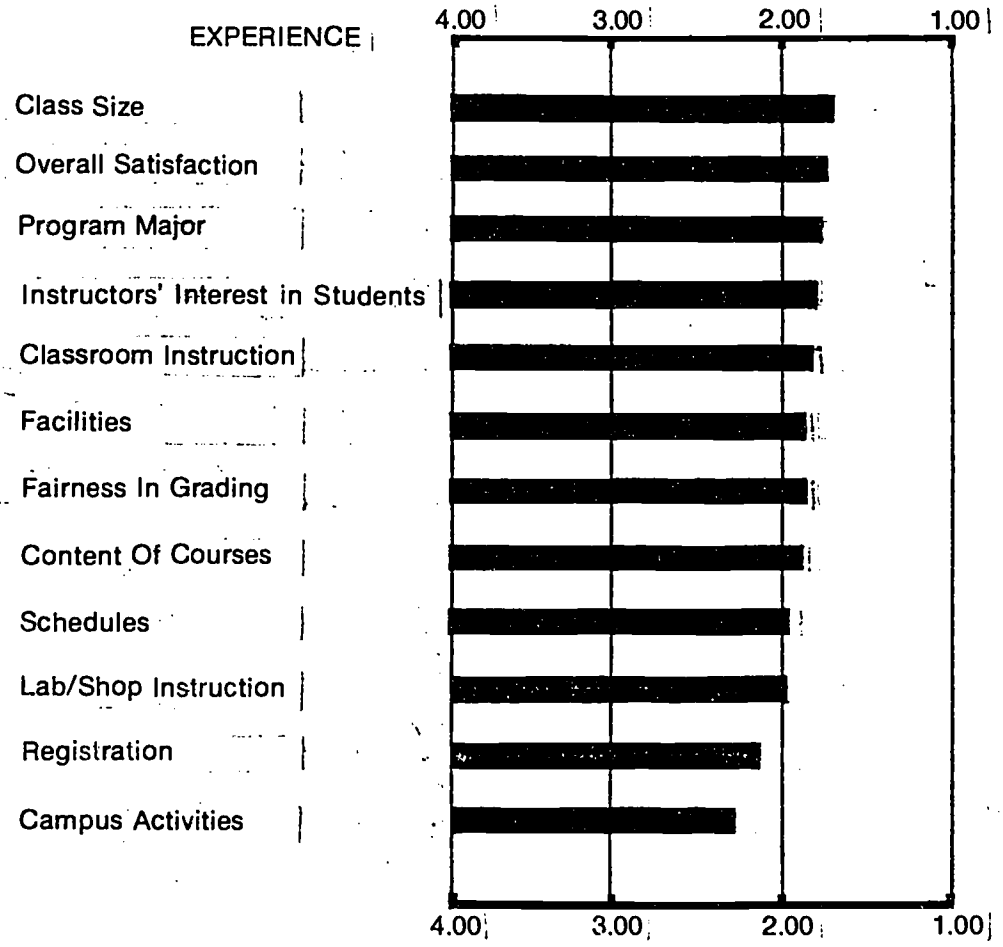
STUDENTS' PERCEPTIONS OF AC

Students' perceptions are an important indicator of the quality of their educational experience. This report, the seventh and last in a student profile series, examines AC students' perceptions of academic and instructional factors, college support services, potential problems related to college attendance and helpfulness of college personnel.

Table references (in parentheses) provide detailed information following this report narrative.

Academic and Instructional Factors

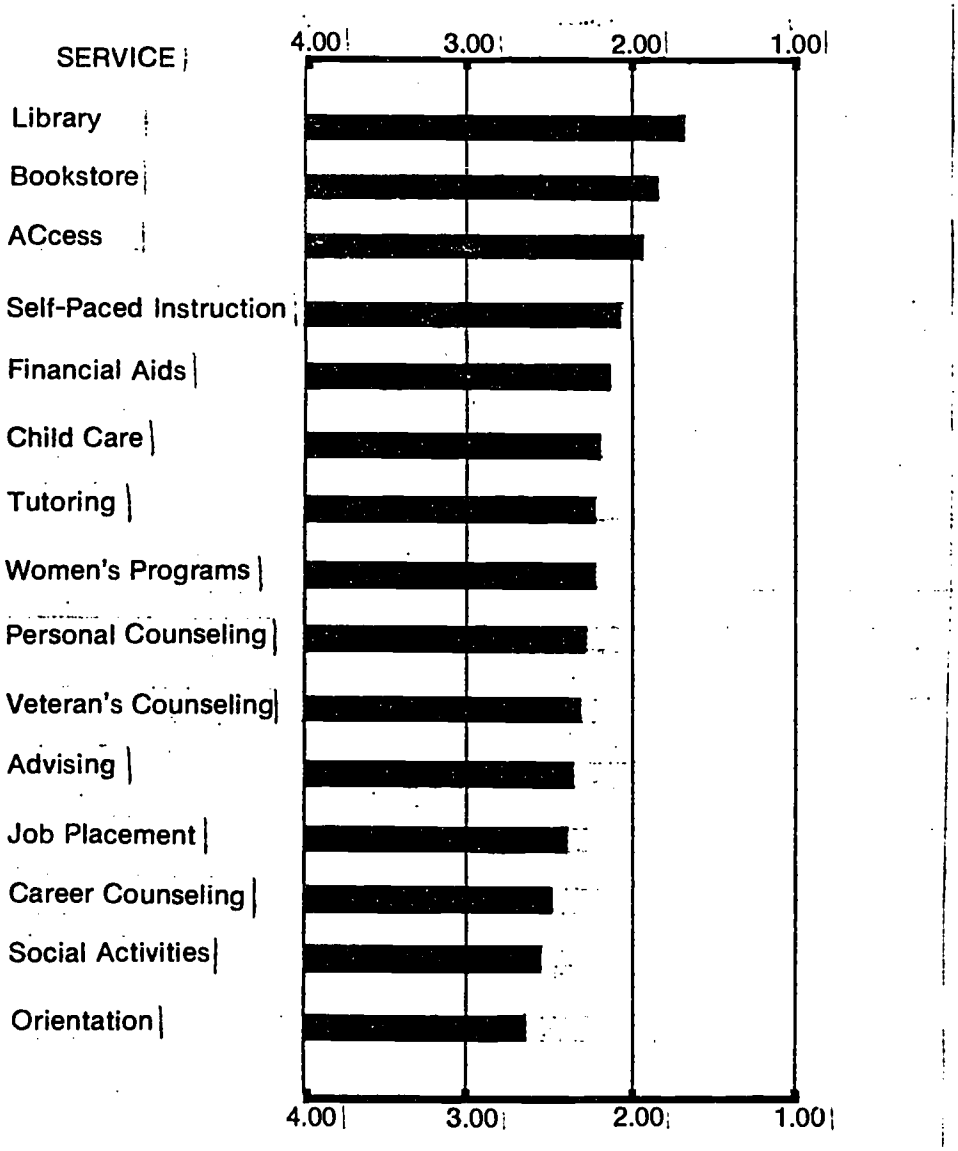
The following graph shows the student ratings for each of the academic and instructional factors. Ten of the 12 items, including OVERALL SATISFACTION, have been rated as good or better on a scale of 1.00 for superior, 2.00 for good, 3.00 for fair, and 4.00 for poor. The lowest factor, campus activities, was rated between good and fair. Rating differences between items of less than fifteen hundredths of a point are probably of no practical importance (Table G1).



Few differences in the ratings of these factors exist among student groups. Vocational Arts students rate five items somewhat lower than other students do (Table G1), and several minor differences are associated with student age. Younger students rate four items lower than older students do (Table G4). There are no important differences in student ratings by full-time and part-time status, day and evening enrollment (Table G2), ethnic origin or sex (Table G3).

Support Services

The graph which follows shows the ratings for 15 academic and personal support services. Students were asked to rate only those services they had used, on a scale of 1.00 for superior, 2.00 for good, 3.00 for fair, and 4.00 for poor (Table G5).



Students are generally positive about AC services. They rate the library more favorably than other services, between good and superior. Social activities and orientation are rated least favorably, between good and fair.

Ratings of these services vary among curricular groups. Vocational Arts majors are the least satisfied. They rate every service lower than other student groups do. While three of these rating differences are minor, those for the library, ACcess, child care, tutoring, and personal counseling are major. It is of note that child care services are not rated as well by Vocational Arts students as by others. The reason may be in part associated with the lack of access to the service, since child care, as well as some other services, is available mainly on the Washington Street Campus. On the average, just 60 percent of the Vocational Arts students compared to 73 percent of other students rate AC services as good to superior (Table G5).

Students' day or night enrollment status also affects ratings of these services. Day students rate 11 services more favorably than evening students do. For two services--child care and tutorial services--the differences are major (Table G6).

Women rate nine services more favorably than men do, but none of the differences are major. Minor differences in ratings exist among ethnic groups. Mexican-American men rate five services somewhat lower than do others, and Blacks rate social activities lower than other students do (Table G7). No differences in ratings appear among age groups (Table G8).

Problems

A variety of problems may accompany college attendance. Some are of a family or personal nature and are caused only indirectly by college attendance, while others may result from inadequate college facilities, procedures or services.

The following tabulation shows 11 potential problems and the percentages of students who consider each a difficult problem or some problem (Table G9).

Problem	Degree of Problem Difficult	Some
Parking near campus	40	31
Scheduling classes around job hours	10	29
Locating instructors when needed	6	37
Knowing where to go to get things done on campus	5	38
Finances	9	28
Courses of my interest requre previous classes (prerequisites)	4	24
Meaning of words used on campus (semester hour, major, GPA, etc.)	3	21
Limited course offerings	6	15
Availability of transportation	3	6
Locating a residence	2	6
Physical handicap barriers	1	2

Parking, the most severe problem students encounter, affects only those who attend the Washington Street campus. Other problems experienced by substantial numbers of students are scheduling classes around job hours, locating instructors when needed, knowing where to go to get things done on campus, and finances. Physical handicap barriers, rated as the least severe problem by all students, affect 81 of the more than 3000 students surveyed. Of these, 32 note that the problem is difficult.

The problems students experience vary with their college majors. Locating instructors when needed is most difficult for Arts and Sciences majors and least difficult for Vocational Arts students. Biomedical majors encounter financial difficulties more frequently than do others. Vocational Arts students and, to a lesser extent, Technology students express fewer course prerequisite problems than other students do. However, the meaning of words used on campus in unclear to a substantial number of Vocational Arts students. Vocational Arts and Biomedical majors are least affected by limited course offerings (Table G9).

Day and full-time students experience similar problems. They, more than do part-time or night students, find parking, locating instructors, finances, and, to a lesser extent, transportation and locating a residence to be difficult problems. Scheduling classes around job hours, however, is more difficult for part-time and night students (Table G10).

Women find parking and knowing where to go to get things done on campus more difficult than men do. Men more often

TABLE G1

AVERAGE RATING OF ACADEMIC AND INSTRUCTIONAL FACTORS BY CURRICULAR GROUP

Code: Superior-1.00; Good-2.00; Fair-3.00; Poor-4.00

Factor	Arts and Sciences	Pending	Bio-medical	Tech-nology	Vocational Arts	All Students
Class size	1.70	1.76	1.78	1.76	1.93	1.76
OVERALL SATISFACTION	1.78	1.76	1.80	1.74	1.91	1.78
Major field of study	1.88	1.93	1.64	1.79	1.80	1.82
Instructors' interest in students	1.89	1.78	1.83	1.79	1.91	1.83
Classroom instruction	1.79	1.79	1.84	1.84	2.08	1.84
Instructional facilities	1.89	1.85	1.85	1.83	1.95	1.87
Fairness of grading	1.88	1.83	1.97	1.81	2.02	1.87
Content of courses	1.89	1.84	1.94	1.91	1.92	1.89
Class schedule	1.94	1.92	2.01	1.99	2.12	1.97
Lab/shop instruction	2.01	2.01	2.01	1.98	1.91	1.99
Registration process	2.06	2.18	2.03	2.10	2.12	2.10
Campus activities	2.26	2.21	2.29	2.28	2.60	2.29

TABLE G2

AVERAGE RATING OF ACADEMIC AND INSTRUCTIONAL FACTORS BY ENROLLMENT PATTERN

Code: Superior-1.00; Good-2.00; Fair-3.00; Poor-4.00

Factor	Part-Time	Full-Time	Day Only	Evening Only	Day and Evening
Class size	1.82	1.69	1.71	1.86	1.67
OVERALL SATISFACTION	1.79	1.77	1.75	1.82	1.77
Major field of study	1.86	1.79	1.79	1.88	1.81
Instructors' interest in students	1.79	1.88	1.85	1.80	1.84
Classroom instruction	1.82	1.85	1.82	1.87	1.81
Instructional facilities	1.87	1.86	1.84	1.89	1.88
Fairness of grading	1.83	1.93	1.90	1.85	1.86
Content of courses	1.88	1.91	1.88	1.89	1.91
Class schedule	1.96	1.98	1.93	1.99	2.05
Lab/shop instruction	2.00	1.98	1.97	2.03	1.98
Registration process	2.13	2.08	2.07	2.16	2.09
Campus activities	2.29	2.29	2.26	2.33	2.36

TABLE G3

AVERAGE RATING OF ACADEMIC AND INSTRUCTIONAL FACTORS BY ETHNIC GROUP, SEX

Code: Superior-1.00; Good-2.00; Fair-3.00; Poor-4.00

Factor	White		Black		Mex.-Amer.		All	
	Men	Women	Men	Women	Men	Women	Men	Women
Class size	1.73	1.72	2.00	2.04	1.89	2.16	1.76	1.76
OVERALL SATISFACTION	1.80	1.73	2.03	1.92	1.90	1.81	1.82	1.74
Major field of study	1.82	1.79	1.97	1.92	1.92	2.00	1.84	1.81
Instructors' interest in students	1.85	1.78	2.29	1.92	2.07	1.87	1.88	1.79
Classroom instruction	1.86	1.80	1.97	1.81	2.00	1.85	1.88	1.80
Instructional facilities	1.86	1.84	1.87	1.89	2.09	2.02	1.88	1.85
Fairness of grading	1.89	1.83	2.14	2.10	2.00	2.02	1.91	1.85
Content of courses	1.89	1.87	2.12	2.05	2.07	2.00	1.91	1.88
Class schedules	2.01	1.91	1.90	2.12	2.21	2.14	2.02	1.92
Lab/shop instruction	1.98	2.00	1.92	1.98	2.07	2.02	1.99	2.00
Registration process	2.06	2.14	2.13	2.21	2.03	2.36	2.06	2.15
Campus activities	2.36	2.19	2.57	2.59	2.37	2.29	2.37	2.22

TABLE G4

AVERAGE RATING OF ACADEMIC AND INSTRUCTIONAL FACTORS BY AGE

Code: Superior-1.00; Good-2.00; Fair-3.00; Poor-4.00

Factor	17-19	20-24	25-29	30-39	40-49	50-Up
Class size	1.68	1.77	1.82	1.79	1.72	1.80
OVERALL SATISFACTION	1.82	1.78	1.75	1.72	1.62	1.62
Major field of study	1.84	1.85	1.79	1.79	1.76	1.87
Instructors' Interest in students	1.92	1.94	1.70	1.76	1.63	1.65
Classroom instruction	1.88	1.88	1.79	1.79	1.76	1.66
Instructional facilities	1.87	1.92	1.85	1.81	1.74	1.91
Fairness of grading	1.94	1.95	1.81	1.79	1.74	1.67
Content of courses	1.93	1.94	1.83	1.85	1.80	1.79
Class schedule	1.91	2.02	2.03	1.97	1.84	1.93
Lab/shop instruction	2.00	2.05	1.95	2.01	1.86	1.93
Registration process	2.16	2.13	2.12	2.02	2.07	2.09
Campus activities	2.21	2.40	2.33	2.27	2.13	2.00

TABLE G5

AVERAGE RATING OF SUPPORT SERVICES USED BY CURRICULAR GROUP

Code: Superior-1.00; Good-2.00; Fair-3.00; Poor-4.00

Service	Arts and Sciences	Pending	Bio-medical	Tech-nology	Vocational Arts	All Students
Library	1.66	1.71	1.78	1.74	2.36	1.74
Bookstore	1.87	1.89	1.92	1.94	2.19	1.93
ACcess program	1.98	1.93	1.84	1.94	2.55	1.99
Self-paced instruction	1.95	1.85	2.18	2.07	2.26	2.01
Financial Aids	1.97	2.07	2.13	1.97	2.21	2.04
Child care	1.87	2.02	2.05	2.22	2.50	2.07
Tutoring program	2.01	2.00	2.00	2.10	2.77	2.09
Women's Program	2.00	2.06	2.15	2.09	2.33	2.09
Personal counseling	2.06	2.15	2.06	2.03	2.59	2.12
Veteran's counseling	2.11	2.11	2.19	2.04	2.28	2.13
Academic advising	2.24	2.20	2.04	2.08	2.47	2.18
Job placement services	2.20	2.15	2.23	2.15	2.33	2.19
Career counseling	2.30	2.30	2.17	2.18	2.61	2.27
Social activities	2.23	2.27	2.47	2.36	2.63	2.33
Freshman orientation	2.38	2.35	2.33	2.42	2.66	2.40

TABLE G6

AVERAGE RATING OF SUPPORT SERVICES USED BY ENROLLMENT PATTERN

Code: Superior-1.00; Good-2.00; Fair-3.00; Poor-4.00

Service	Part-Time	Full-Time	Day-Only	Evening Only	Day and Evening
Library	1.76	1.71	1.69	1.83	1.71
Bookstore	1.93	1.91	1.90	1.96	1.93
ACcess program	2.08	1.93	1.89	2.26	2.02
Self-paced instruction	1.96	2.03	2.01	2.03	1.93
Financial Aids	2.15	1.97	2.01	2.13	2.05
Child care	2.13	2.01	1.94	2.40	2.10
Tutoring program	2.25	1.98	2.00	2.52	1.96
Women's Program	2.12	2.07	1.94	2.32	2.33
Personal counseling	2.14	2.09	2.05	2.24	2.17
Veteran's counseling	2.06	2.15	2.02	2.17	2.31
Academic advising	2.20	2.15	2.12	2.31	2.21
Job placement services	2.17	2.19	2.19	2.13	2.29
Career counseling	2.30	2.25	2.19	2.36	2.40
Social activities	2.34	2.33	2.29	2.45	2.40
Freshman orientation	2.47	2.36	2.38	2.53	2.34

TABLE G7

AVERAGE RATING OF SUPPORT SERVICES USED BY ETHNIC GROUP, SEX*

Code: Superior-1.00; Good-2.00; Fair-3.00; Poor-4.00

Service	White		Black		Mex.-Amer.		All	
	Men	Women	Men	Women	Men	Women	Men	Women
Library	1.75	1.70	2.04	1.66	1.93	1.84	1.77	1.70
Bookstore	1.98	1.85	2.03	1.81	2.21	2.03	2.00	1.87
Access program	2.11	1.86	-	1.94	2.33	1.83	2.14	1.86
Self-paced instruction	2.14	1.85	1.88	1.94	2.35	2.19	2.14	1.87
Financial Aids	2.10	2.01	1.93	1.93	1.97	1.94	2.09	2.00
Child care	2.16	1.97	-	2.00	1.86	2.08	2.23	1.99
Tutoring program	2.21	1.98	2.50	1.75	2.31	1.92	2.23	1.90
Women's Program	2.27	1.95	-	1.80	-	2.44	2.33	1.96
Personal counseling	2.23	1.99	2.25	2.18	2.46	1.95	2.25	1.99
Veteran's counseling	2.12	2.14	1.85	2.11	2.27	2.29	2.13	2.14
Academic advising	2.21	2.17	2.29	2.21	2.38	1.92	2.21	2.15
Job placement service	2.22	2.14	-	2.22	2.39	2.06	2.24	2.15
Career counseling	2.38	2.17	2.50	2.46	2.41	2.14	2.38	2.18
Social activities	2.33	2.18	2.87	2.83	2.26	2.38	2.43	2.23
Freshman orientation	2.55	2.29	2.36	2.14	2.44	2.15	2.53	2.28

*Data are not shown where based on five or fewer responses

TABLE G8

AVERAGE RATING OF SUPPORT SERVICES USED BY AGE

Code: Superior-1.00; Good-2.00; Fair-3.00; Fair-4.00

Service	17-19	20-24	25-29	30-39	40-49	50-Up
Library	1.60	1.78	1.74	1.75	1.72	1.65
Bookstore	1.87	1.96	1.97	1.94	1.89	1.73
ACcess program	2.04	2.02	2.05	1.85	1.95	1.50
Self-paced instruction	1.98	2.01	2.04	2.07	1.88	2.00
Financial Aids	1.90	2.12	2.14	2.08	1.90	1.78
Child care	1.94	2.19	1.90	2.16	2.29	-
Tutoring program	1.98	2.07	2.16	2.23	2.28	2.00
Women's Program	2.06	2.24	1.95	2.10	2.00	1.67
Personal counseling	2.09	2.21	2.06	2.12	1.89	1.92
Veteran's counseling	2.12	2.25	2.05	2.12	2.14	2.00
Academic advising	2.20	2.22	2.12	2.18	1.92	2.00
Job placement services	2.22	2.22	2.12	2.28	1.67	2.00
Career counseling	2.22	2.37	2.31	2.27	1.95	2.17
Social activities	2.28	2.43	2.30	2.43	2.07	2.25
Freshman orientation	2.35	2.49	2.33	2.62	2.25	2.73

*Data are not shown where based on five or fewer responses

TABLE G9

RATING OF PROBLEM AREAS BY CURRICULAR GROUP

Problem Area	Degree of Problem	Arts and Sciences N	Arts and Sciences %	Pending N	Pending %	Biomedical N	Biomedical %	Technology N	Technology %	Vocational Arts N	Vocational Arts %	All Students N	All Students %
Parking near campus	Difficult	324	44	276	38	171	48	330	47	11	5	1112	40
	Some	267	36	262	36	103	29	214	30	7	3	853	31
Scheduling classes around job hours	Difficult	63	9	73	10	35	10	66	9	26	11	263	10
	Some	219	30	205	29	87	25	214	31	75	30	800	29
Locating instructors when needed	Difficult	51	7	37	6	18	5	28	4	13	5	147	6
	Some	307	43	230	35	136	39	239	36	66	27	978	37
Knowing where to go to get things done	Difficult	23	3	36	5	15	4	32	5	14	6	120	5
	Some	291	41	268	40	141	40	251	37	71	29	1022	38
Finances	Difficult	60	9	54	8	56	16	57	9	14	6	241	9
	Some	220	32	163	25	132	38	165	25	51	21	731	28
Courses of my interest require previous class	Difficult	25	4	31	5	12	4	16	3	6	3	90	4
	Some	182	27	158	25	88	27	133	21	29	12	590	24
Meaning of words used on campus	Difficult	9	1	27	4	4	1	15	2	10	4	65	3
	Some	130	18	144	22	75	22	125	19	72	30	546	21
Limited courses offered	Difficult	43	8	29	6	7	3	38	7	10	5	127	6
	Some	108	19	88	17	25	9	78	14	15	8	314	15
Availability of transportation	Difficult	11	2	19	3	10	3	16	2	10	4	66	3
	Some	42	6	45	7	37	11	30	5	20	8	174	6
Locating a residence	Difficult	15	2	13	2	14	4	9	1	6	3	57	2
	Some	36	5	27	4	45	14	31	5	13	6	152	6
Physical handicap barriers	Difficult	7	1	10	2	4	1	4	1	7	3	32	1
	Some	12	2	10	2	10	3	7	1	10	4	49	2
Other	Difficult	30	4	26	4	7	2	26	4	12	5	101	4
	Some	15	2	9	1	3	1	10	1	2	1	39	1

TABLE G10

RATING OF PROBLEM AREAS BY ENROLLMENT PATTERN

Problem Area	Degree of Problem	Part-time		Full-time		Day		Evening		Day and Evening	
		N	%	N	%	N	%	N	%	N	%
Parking near campus	Difficult	581	36	530	46	608	45	292	29	212	52
	Some	512	32	338	30	406	30	317	32	130	32
Scheduling classes around job hours	Difficult	178	11	84	8	108	8	103	10	52	13
	Some	517	33	282	25	320	24	340	34	140	18
Locating instructors when needed	Difficult	69	5	78	7	77	6	43	5	27	7
	Some	478	32	499	44	545	42	254	27	179	47
Knowing where to go to get things done	Difficult	76	5	44	4	56	4	52	5	12	3
	Some	579	38	441	39	515	39	346	36	161	42
Finances	Difficult	102	7	139	13	142	11	53	6	46	12
	Some	347	24	383	35	404	31	189	21	138	37
Courses of my interest require previous class	Difficult	51	4	39	4	49	4	28	3	13	4
	Some	299	21	290	27	313	25	174	19	103	28
Meaning of words used on campus	Difficult	38	3	27	2	36	3	22	2	7	2
	Some	297	20	249	22	301	23	176	19	69	18
Limited courses offered	Difficult	81	7	46	5	48	5	57	8	22	7
	Some	183	15	131	14	141	14	116	15	57	18
Availability of transportation	Difficult	25	2	41	5	40	3	13	1	13	3
	Some	84	6	90	8	100	8	49	5	25	6
Locating a residence	Difficult	20	1	37	3	46	4	8	1	3	1
	Some	62	4	90	8	97	8	29	3	26	7
Physical handicap barriers	Difficult	13	1	19	2	19	2	9	1	4	1
	Some	15	1	34	3	36	3	8	1	5	1
Other	Difficult	60	4	41	4	42	3	41	4	18	4
	Some	19	1	20	2	21	2	10	1	8	2

TABLE G11

RATING OF PROBLEM AREAS BY ETHNIC GROUP, SEX

Problem Area	Degree of Problem	White				Black				Mexican-American				All			
		Men		Women		Men		Women		Men		Women		Men		Women	
		N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Parking near campus	Difficult	382	35	605	44	7	25	32	62	16	28	28	43	433	35	679	45
	Some	306	28	463	34	9	32	6	12	11	19	24	37	345	28	507	34
Scheduling classes around job hours	Difficult	131	12	101	8	4	13	4	9	5	8	9	15	147	12	116	8
	Some	353	33	361	27	5	16	18	38	22	36	15	25	401	32	399	27
Locating instructors when needed	Difficult	59	6	66	5	3	11	1	2	4	7	5	8	73	6	74	5
	Some	406	38	478	38	6	2	14	32	19	31	25	41	451	37	527	37
Knowing where to go to get things done	Difficult	42	4	56	4	2	7	1	2	4	7	6	9	53	4	66	5
	Some	361	34	572	44	5	17	17	38	12	20	22	34	399	33	623	43
Finances	Difficult	86	8	118	9	3	10	7	16	8	15	6	10	107	9	134	10
	Some	256	25	368	29	8	27	16	37	19	35	30	50	309	26	421	30
Courses of my interest require previous class	Difficult	42	4	34	3	0	0	0	0	6	11	2	4	52	4	38	3
	Some	250	24	272	22	6	29	15	41	11	21	11	21	288	25	302	23
Meaning of words used on campus	Difficult	22	2	30	2	1	4	1	2	4	7	1	3	29	2	36	3
	Some	197	19	271	21	9	33	7	17	12	20	21	36	242	20	303	22
Limited courses offered	Difficult	49	6	54	5	2	10	5	15	1	2	4	9	63	7	64	6
	Some	131	16	147	14	2	10	5	15	7	16	7	16	148	15	165	14
Availability of transportation	Difficult	21	2	26	2	2	7	3	7	5	9	3	5	33	3	33	2
	Some	61	6	71	6	2	7	14	31	5	9	8	13	72	6	102	7
Locating a residence	Difficult	19	2	31	3	0	0	0	0	1	1	1	2	23	2	34	3
	Some	51	5	76	6	2	8	3	8	5	9	4	7	64	6	87	7
Physical handicap barriers	Difficult	16	2	10	1	0	0	0	0	3	6	0	0	22	2	10	1
	Some	19	2	22	2	1	4	1	3	0	0	2	4	23	2	26	2
Other	Difficult	47	4	42	3	0	0	0	0	5	9	2	3	56	4	45	3
	Some	10	1	24	2	0	0	1	2	3	5	0	0	13	1	26	2

TABLE G12

RATING OF PROBLEM AREAS BY AGE

Problem Area	Degree of Problem	17 - 19 N	17 - 19 %	20 - 24 N	20 - 24 %	25 - 29 N	25 - 29 %	30 - 39 N	30 - 39 %	40 - 49 N	40 - 49 %	50 - UP N	50 - UP %
Parking near campus	Difficult	324	33	331	42	167	37	186	37	80	37	23	20
	Some	224	33	255	33	125	28	159	32	59	27	29	25
Scheduling classes around job hours	Difficult	40	6	94	12	49	11	55	11	17	8	8	8
	Some	171	25	255	33	138	31	151	31	54	26	30	29
Locating instructors when needed	Difficult	48	7	48	6	26	6	18	4	3	2	4	4
	Some	326	48	315	41	132	30	136	29	46	24	22	22
Knowing where to go to get things done	Difficult	34	5	43	6	16	4	18	4	4	2	4	4
	Some	296	44	294	38	166	38	175	37	68	35	23	23
Finances	Difficult	51	8	100	13	43	10	31	7	9	5	7	8
	Some	203	30	266	35	124	29	99	22	28	15	9	10
Courses of my interest require previous class	Difficult	32	5	25	3	12	3	15	3	3	2	3	3
	Some	173	27	207	28	96	23	82	19	25	14	6	7
Meaning of words used on campus	Difficult	18	3	16	2	7	2	13	3	5	3	6	6
	Some	188	28	139	18	90	21	82	18	32	17	14	14
Limited courses offered	Difficult	30	5	36	6	21	6	30	8	4	3	6	8
	Some	73	13	104	17	63	18	49	13	17	12	7	9
Availability of transportation	Difficult	20	3	18	2	12	3	8	2	3	2	5	5
	Some	46	7	57	7	24	6	33	7	10	5	4	4
Locating a residence	Difficult	15	2	20	3	12	3	7	2	1	1	2	2
	Some	50	8	64	9	20	5	14	3	0	0	3	3
Physical handicap barriers	Difficult	3	1	10	1	11	3	6	4	0	0	2	2
	Some	11	2	17	2	11	3	1	1	4	2	2	2
Other	Difficult	15	2	36	5	17	4	23	5	6	3	4	3
	Some	9	1	9	1	7	2	10	2	1	1	3	3

TABLE G13

ARE AC PEOPLE HELPFUL BY:

Curricular Group	% Yes
Arts and Sciences	94
Pending	94
Biomedical	94
Technology	95
Vocational Arts	90
All Students	94

Enrollment Pattern	% Yes
Part-Time	95
Full-Time	93
Day Only	94
Evening Only	95
Day and Evening	93

Ethnic Group	% Yes
White Men	94
White Women	95
Black Men	89
Black Women	90
Mex.-Amer. Men	94
Mex.-Amer. Women	93
All Men	93
All Women	94

Age	% Yes
17-19	92
20-24	92
25-29	95
30-39	95
40-49	98
50-Up	99

experience difficulties with scheduling classes around job hours. Financial and transportation problems are encountered less frequently by Whites. The meaning of words used on campus is most difficult for Black men and Mexican-Americans (Table G11).

In general, younger students, more than older students, experience difficulties with parking, locating instructors, knowing where to go to get things done on campus, and prerequisites for desired courses. The problem of finances is experienced most often by 20-24 years olds and least often by students of age 30 and over (Table G12).

Helpfulness of AC personnel

Virtually all students (94%) believe AC personnel are interested in helping with their problems and special needs related to college attendance. Fewer Vocational Arts majors and Blacks (90%) express this belief and more students of age 40 and older (99%) do (Table G13).

Summary

Most students at AC rate academic and instructional factors quite favorably. Support services are also rated well, although Vocational Arts majors, evening students and men are somewhat less satisified with them than other students are. Parking is a problem for seven of ten students on the Washington Street campus. Problems such as scheduling classes around job hours, locating instructors, knowing where to go to get things done and finances affect certain groups of students more strongly then other groups.

Ninety-four percent of all students perceive AC personnel as interested in helping students with problems and special needs related to college attendance. Students aged 40 and above are most likely to express this belief while Blacks and Vocational Arts students are somewhat less likely to do so.

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