Appendix V

Grades received by Chemistry Tutees and students on the Waiting List for Chemistry Tutors, Fall Quarter, 1975

	A	B	C	D	F	Average Grade	P	NP	NR	Drop	N
EOP Tutees	1	4	9	3	2	2.18	1	0	0	8	28
	(5.3%)	(21.0%)	(47.4%)	(15.8%)	(10.5%)						
EOP Waiting List	0	0	5	3	0	1.63	0	0	1	0	9
	(0.0%)	(0.0%)	(62.5%)	(37.5%)	(0.0%)						
Non-EOP Tutees	3	12	15	2	1	2.42*	0	0	2	7	42
	(9.1%)	(36.4%)	(45.4%)	(6.1%)	(3.0%)						
Non-EOP Waiting List	1	3	3	5	2	1.71*	0	0	0	9	23
	(7.1%)	(21.4%)	(21.4%)	(35.7%)	(14.3%)						

* Grades received by Non-EOP Tutees are significantly higher than grades received by the Non-EOP Waiting list, $t(45) = 2.279$, $p < .05$.

Appendix VI

Grades received by Mathematics Tutees and students on the Waiting List for Mathematics Tutors, Fall Quarter, 1975

	A	B	C	D	F	Average Grade	P	NP	NR	Drop	N
EOP Tutees	8	10	20	8	2	2.29*	1	0	4	23	76
	(16.7%)	(20.8%)	(41.7%)	(16.7%)	(4.2%)						
EOP Waiting List	0	3	9	3	2	1.76*	0	0	0	4	21
	(0.0%)	(17.6%)	(52.9%)	(17.6%)	(11.8%)						
Non-EOP Tutees	18	28	24	7	5	2.57	3	1	7	25	118
	(22.0%)	(34.1%)	(26.1%)	(7.6%)	(5.4%)						
Non-EOP Waiting List	5	10	20	4	2	2.29	0	0	2	7	50
	(12.2%)	(24.4%)	(48.8%)	(9.8%)	(4.9%)						

* Grades received by EOP Tutees are significantly higher than grades received by the EOP Waiting List, $t(63) = 1.821$, $p < .05$.

Appendix VII

Grades received by Physics Tutees and students on the Waiting List for Physics Tutors, Fall Quarter, 1975

	A	B	C	D	L	Average Grade	P	NP	NR	Drop	N
EOP Tutees	0	1	2	0	1	1.75	0	0	0	4	8
	(0.0%)	(25.0%)	(50.0%)	(0.0%)	(25.0%)						
EOP Waiting List	0	1	1	1	0	2.00	0	0	0	0	3
	(0.0%)	(33.3%)	(33.3%)	(33.3%)	(0.0%)						
Non-EOP Tutees	0	8	0	2	0	2.60*	0	0	0	0	10
	(0.0%)	(80.0%)	(0.0%)	(20.0%)	(0.0%)						
Non-EOP Waiting List	0	1	1	2	1	1.40*	0	0	0	5	10
	(0.0%)	(20.0%)	(20.0%)	(40.0%)	(20.0%)						

* Grades received by Non-EOP Tutees are significantly higher than grades received by the Non-EOP Waiting List, $t(13) = 2.319$, $p < .05$.

APPENDIX VIII

EVALUATION

TEP Interpersonal Communication Skills Workshop

October 25, 1975

	Check one			
	Very Useful	Useful	Not Useful	A Waste of Time
1. I found this workshop to be	_____	_____	_____	_____
2. When tutoring, I believe the listening skills taught during this workshop will be	_____	_____	_____	_____
3. When tutoring, I believe the feedback skills taught during this workshop will be	_____	_____	_____	_____

---

4. Which of the workshop activities did you find to be the most valuable? (Write most). The least valuable? (Write least).

_____ Demonstration role play

_____ General discussion on listening skills

_____ Lecture on listening skills

_____ Small group role play on listening skills

_____ Small group discussion on listening skills

_____ General wrap-up on listening skills

_____ General discussions on feedback

_____ Lecture on feedback

_____ Small group role play on feedback

_____ Small group discussions on feedback

_____ General wrap-up on feedback

5. What would you suggest to improve the workshop? (Use reverse side)

6. Comment: (Use reverse side)

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ABSTRACT

The results of an evaluation of the Provost's Tutorial Fellowship Program (PTFP), the Tutorial Clinics and an interpersonal communications skills workshop are presented along with recommendations for change. The PTFP met its three objectives: Over 90 percent of the tutees who received a letter grade passed the course (objective 1). A formal system for gathering noncognitive data on tutees was instituted (objective 2). Tutors received positive ratings from tutees (objective 3). The Clinics also met their objectives by being able to meet requests for assistance from more than 10 percent of the enrollment in lower division chemistry, mathematics, and physics courses. (Author)

OASIS Evaluation Report #3
Tutorial Programs

February 1976

Larry V. Hedges

Kenneth Majer

Office of Academic Support and Instructional Services
Kenneth Majer, Director

Office of Student Affairs
George S. Murphy, Vice Chancellor

Office of Academic Affairs
Paul D. Saltman, Vice Chancellor

University of California, San Diego
La Jolla, California 92093

Abstract

The results of an evaluation of the Provost's Tutorial Fellowship Program (PTFP), the Tutorial Clinics and an interpersonal communications skills workshop are presented along with recommendations for change. The PTFP met its three objectives: Over 90% of the tutees who received a letter grade passed the course (objective 1). A formal system for gathering non-cognitive data on tutees was instituted (objective 2). Tutors received positive ratings from tutees (objective 3). The Clinics also met their objectives by being able to meet requests for assistance from more than 10% of the enrollment in lower division chemistry, mathematics and physics courses.

Acknowledgements

We wish to thank Barbara Shreve, the OASIS Tutorial Programs Coordinator, for her assistance in specifying program objectives, and for her help in gathering the data for this report. We also thank her for her help in the preparation of the interpersonal communication skills workshop section of this document.

Our special thanks go to Dan Munoz, Dean of Third College, for conducting the interpersonal communication skills workshop.

Part I: Provosts' Tutorial Fellowship Program

The Provosts' Tutorial Fellowship Program (PTFP) serves students who request assistance in lower division mathemtaics and science courses. The PTFP assigned one tutor to each three students requesting aid in a particular course. These tutors are selected from upper division students who have a GPA of 3.00 or above and who have a strong background in mathematics or science.

All novice tutors were required to attend a four unit tutor training course entitled "The psychology of teaching and the structure of information for academic learning". The class, Teacher Education Program 196 (TEP 196), emphasized topics in psychological principles of learning, test construction, instructional objectives and content task analysis. Because this was a practicum course, the students engaged in tutoring while they were enrolled in the class. In addition to the training class for new tutors, all tutors were required to attend a Saturday workshop on interpersonal communications skills which was developed by members of the counseling and psychological services staff in conjunction with OASIS.

Students who had been PTFP tutors in previous quarters were also required to take a training class during their first quarter of tutoring. These experienced tutors were not required to repeat the training course. They were selected to tutor again on the basis of their previous performance as tutors and their eligibility by the academic standards OASIS sets for all tutors. Experienced

tutors received a $150.00 per quarter stipend for their services.

During the second week of the quarter, meetings were held in each college to orient the tutees to the program. Tutees' responsibilities and program procedures were explained. Tutees received information about their tutor(s) at these meetings which was prior to when the tutors received information about them. Thus, tutees who were intent on receiving tutorial assistance at the earliest possible moment had the opportunity to contact their tutors. Tutees who did not attend the meeting and did not call OASIS to say they were unable to attend were dropped from the tutee list. Therefore, by the time that the tutors received their tutorial assignments on Monday of the third week of the quarter, the OASIS staff had updated the tutorial assignments by matching tutors with tutees who were initially on the waiting list.

Tutors were required to meet with the OASIS Tutorial Co-ordinator twice during the quarter to give tutorial progress reports and to contact her whenever any problems arose. A process of matching tutors with tutees from the waiting list continued throughout the quarter as tutees dropped classes or no longer needed their tutors.

A letter was sent to all faculty members whose classes had PTFP tutors. This letter described the OASIS tutorial program, provided some relevant evaluation data from the previous year, and invited faculty to work with OASIS (see Appendix I). It also provided the names and telephone numbers of all tutors

working in the particular instructor's class.

Method

Evaluation Criteria

The OASIS Coordinator for Research and Evaluation met with the Tutorial Program Coordinator to discuss the objectives of the PTFP. Following that discussion, several objectives for the PTFP were formulated. These objectives were:

1. At least 90% of PTFP tutees should receive a passing grade in the classes for which a tutor was assigned.

2. A formal monitoring system should be developed to provide the Tutorial Coordinator with information on aspects of tutees' motivation, study skills, and personal factors which would influence their course work or their ability to benefit from the tutorial programs.

3. PTFP tutees should report satisfaction with the tutors, the program in general, and with the assistance that the program provided to them.

Procedure

Tutee grades. Students' class grades were recorded in the class for which each student requested a tutor. The grade distributions for Educational Opportunity Program (EOP) tutees, non-EOP tutees, and all tutees were tabulated. In addition, grade summaries were produced which reflected the proportion of A and B grades; grades or C or better; passing grades; and grades of D or F received by tutees. In each case, data were subdivided

into EOP tutees, non-EOP tutees, and all tutees.

Non-cognitive tutee factors. An instrument was designed to yield information on non-cognitive factors that could influence tutees' academic success (see Appendix II). This instrument allowed tutors to rate their tutees on six personal factors, eight study skills factors, and three motivational factors. In addition, tutors were asked the questions "Does this student need a tutor?" and "Are there any problems?". This instrument was used to gather data during the two required meetings with the Tutorial Coordinator.

Tutee questionnaire. Tutees were asked to rate the PTFP on a questionnaire at the end of the quarter (see Appendix III). Tutors provided the instrument to all tutees who were asked to return the questionnaire to OASIS by intercampus mail. The questionnaire rated tutors on eight scales. In addition, it asked for assessments of whether they had been helped by the tutor and, more generally, by the OASIS program. The questionnaire also asked for comments that would be useful for improvement of the tutorial program.

Results

Tutee Grades

Table 1 presents a breakdown of the grades received by tutees in the class (es) in which they received a tutor. A total of 148 EOP students received tutors during fall quarter 1975, while 181 non-EOP students received tutors for a grand total of 329 tutees.

Table 1

Grades received by EOP tutees, non-EOP tutees and all tutees in the class in which they were tutored, Fall Quarter, 1975

	A[a]	B	C	D	F	Average Grade	P	NP	NR	Drop	N
EOP Tutees	9	20	43	15	7	2.12	5	0	5	46	148
	(9.6%)	(21.3%)	(45.7%)	(16.0%)	(7.4%)						
Non-EOP Tutees	22	53	43	12	6	2.54	3	1	0	32	181
	(16.2%)	(39.0%)	(31.6%)	(8.8%)	(4.4%)						
Total Tutees	31	73	86	27	13	2.36	8	1	14	78	329
	(13.5%)	(31.7%)	(37.4%)	(11.7%)	(5.6%)						

[a] Percentages reflect the proportion of students who received a grade

EOP tutee grades were approximately normally distributed with a mean grade of 2.12. Nine EOP students received A grades and 20 students received B's while 15 students received D grades and 7 students received F grades. Ten EOP students received either Pass (P) or Not Recorded (NR) grades. A total of 46 students either dropped their tutor or the class in which they received a tutor.

Non-EOP tutee grades were skewed toward the high end of the grade scale. Twenty-two non-EOP tutees received A's and 53 students received B's while 12 students received D's and 6 students received F grades. The mean grade for non-EOP tutees was 2.54. A total of 13 non-EOP students received either Pass (P), Not Pass (NP) or Not Recorded (NR) grades. Thirty-two students dropped their tutor or the class in which they were tutored.

The distribution of grades for all tutees was also skewed toward the high end of the scale. Thirty-one tutees received A grades and 73 received B grades while 27 received D grades and 13 received F grades. The mean grade for all tutees was 2.36. A total of 23 students received Pass (P), Not Pass (NP), or Not Recorded (NR) grades. In addition, 78 tutees either dropped the class in which they were tutored or dropped the use of their tutor.

Table 2 summarizes the tutee grade data. A total of 30.8%[1]

[1] Percentages reflect proportion of students who received grades, i.e., percentages do not include NP, P, NR, or withdrawals.

of the EOP tutees received A or B grades in the class in which they were tutored. Similarly, 55.1% of the non-EOP tutees and 45.2% of all tutees received grades of A or B. A total of 76.6% of the EOP tutees, 86.8% of the non-EOP tutees and 82.6% of all tutees achieved grades of C or better in the class in which they were tutored. Almost 92.6% of EOP tutees, 95.6% of non-EOP tutees and 94.3% of all tutees achieved passing grades in the classes for which they received a tutor. Twenty-three percent of EOP tutees, 13.2% of non-EOP tutees and 17.4% of all tutees who received letter grades achieved grades of D or F in the classes in which they were tutored.

Table 2

Summary of grades received by all tutees, Fall Quarter, 1975

	A or B	C or Better	D or Better	D or F
EOP Tutees	29	72	87	22
	(30.8%)	(76.6%)	(92.6%)	(23.4%)
Non-EOP Tutees	75	118	130	18
	(55.1%)	(86.8%)	(95.6%)	(13.2%)
All Tutees	104	190	217	40
	(45.2%)	(82.6%)	(94.3%)	(17.4%)

Table 3 presents a comparison of grade distributions of EOP and non-EOP tutees as well as EOP and non-EOP students who could not be assigned a tutor because an insufficient number of tutors were available. Students who could not be assigned a tutor constitute the EOP and non-EOP waiting lists. EOP tutees achieved significantly higher grades than EOP students on the waiting list, $t(131) = 1.911$, $p < .05$. Non-EOP tutees also achieved significantly higher grades than non-EOP students who were on the waiting list, $t(200) = 2.605$, $p < .01$.

The same grade distribution data broken down by subject area appear in Appendices IV through VII.

Table 3

Grades received by all Tutees and all Students on the Waiting List for Tutors, Fall Quarter 1975

	A	B	C	D	F	GPA	P	NP	NR	Drop	N
EOP Tutees	9	20	43	15	7	2.12*	5	0	5	46	148
	(9.6%)	(21.3%)	(45.7%)	(16.0%)	(7.4%)						
EOP Waiting List	0	6	20	11	2	1.77*	0	0	2	6	47
	(0.0%)	(15.4%)	(51.3%)	(28.2%)	(5.1%)						
Non-EOP Tutees	22	53	43	12	6	2.54**	3	1	9	32	181
	(16.2%)	(39.0%)	(31.6%)	(8.8%)	(4.4%)						
Non-EOP Waiting List	6	18	26	11	5	2.14**	0	0	2	22	90
	(9.1%)	(27.3%)	(39.4%)	(16.7%)	(7.6%)						

Note: The same grade distribution data by subject appears in Appendices IV - VII.

* Grades received by EOP Tutees are significantly higher than grades received by the EOP Waiting List $t(131) = 1.911$, $p < .05$.

** Grades received by Non-EOP Tutees are significantly higher than grades received by the Non-EOP Waiting List, $t(200) = 2.605$, $p < .01$.

Non-cognitive Tutee Factors

Table 4 presents a summary of the information gathered on non-cognitive factors that may effect tutee performance.

Table 4

Interview data on non-cognitive factors that may effect tutee performance

		Yes	Maybe	No	N
I.	Personal Factors				
	Is course level appropriate	160	47	19	226
	Is handling overall load (in other classes)	144	67	11	222
	Has self-confidence	113	78	40	231
	Maintains physical health	199	12	2	213
	Is coping with personal/ social situations	162	33	6	201
	Has test anxiety	79	82	56	217
II.	Does this student have study skills problems?	37	78	101	216
	Has ability to pick key concepts	120	73	23	216
	Understands course objectives	106	85	13	204
	Has background knowledge	115	50	48	213
	Can study independently	142	55	18	215
	Organizes time well	99	77	27	203
	Studies efficiently	75	97	32	204
	Has reading difficulty	18	29	159	206
	Takes good notes	109	70	16	195

		Yes	Maybe	No	N
III.	Motivation				
	Completes reading assignments and prepares for class	143	59	17	219
	Spends enough time studying	113	79	28	220
	Attends class	189	17	6	212
IV.	Does this student need a tutor?	132	55	26	213

Tutors rated 19 of 226 tutees to be in a course that was at an inappropriate level of difficulty. Tutors responded that 11 tutees were not handling their overall course load in other classes. Tutors also rated 40 tutees (out of 231) as having a lack of self-confidence. Tutors indicated that two tutees did not maintain their physical health and six tutees could not cope adequately with personal/social situations. The largest potential personal problem factor among tutees (79 of 217) was test anxiety.

Tutors indicated that they believed 37 tutees had study skills problems, while 78 tutees might have a problem and 101 tutees did not have a study skills problem. Twenty-three tutees were rated as being unable to pick out key concepts in their class, while 73 might be able to and 120 could definitely pick out key concepts. Thirteen tutees were rated as not understanding the objectives of the course in which they received tutoring while 85

might understand them and 106 did understand the objectives. Background knowledge was the most frequently indicated potential problem in the skills area. Forty-eight students were rated as not having sufficient background knowledge to compete optimally in the course in which they were tutored, while 50 possibly had an adequate background and 115 definitely had adequate background. Eighteen tutees were rated as unable to study independently, while 55 tutees were rated as possibly able and 142 as definitely able to study independently. Twenty-seven students were categorized as not organizing time well and 99 students were reportedly organizing their time well. Thirty-two tutees were reported to study inefficiently, while 75 reportedly studied efficiently and 97 possibly studied in an efficient manner. Eighteen of 206 tutees were reported to have definite reading difficulty, while 29 were reported to possibly have some difficulty. Sixteen tutees were reported to take poor notes while 70 were reported to take possibly good notes and 106 were reported to take notes well.

Tutors reported that 17 tutees failed to complete reading assignments for the class in which they were tutored while 59 students usually did and 143 students definitely completed reading assignments. Twenty-eight students were rated as spending too little time studying, while 79 may have spent sufficient time and 113 definitely spent enough time studying. Six tutees reportedly did not regularly attend the class in which they were tutored, and 17 were reported to possibly do so while 189 tutees

definitely attended class.

Tutors responded that 26 tutees did not need a tutor when they were asked "Does this student need a tutor?" Tutors responded that 55 tutees may have needed a tutor and 132 tutees definitely needed a tutor.

Tutee Questionnaire

Table 5 presents a summary of the data from 72 tutee questionnaires that were returned:

Table 5

Responses to the tutee questionnaire

	$\bar{X}$	3	2	1	N
Tutor's knowledge of subject	2.96	good 69	fair 3	poor 0	72
Tutor's ability to explain ideas	2.83	good 61	fair 10	poor 1	72
Tutor's ability to explain problems and problem solving methods	2.79	good 57	fair 15	poor 0	72
Tutor's level of enthusiasm and interest	2.70	high 51	medium 19	low 1	71
Tutor's class attendance	2.50	always 40	usually 22	seldom 6	68
Tutor's availability (within reason)	2.83	good 62	OK 8	poor 2	72
Tutor's preparation: Does he or she keep up with class and know what's happening day by day?	2.75	good 58	OK 10	poor 4	72
Tutor's ability to relate: Do you feel comfortable with your tutor?	2.87	very 63	reasonable 9	no 0	72
Has this tutor helped you?	2.67	a lot 48	reasonable 24	no 0	72

	$\bar{X}$	3	2	1	N
Should this tutor continue to tutor?	2.90	definitely 65	maybe 7	no 0	72
The OASIS tutoring program was useful to me	2.78	very 56	somewhat 16	useless 0	72

Comments: Please tell us what you think about the program. What would you change? How can it be improved?

RESPONSE	FREQUENCY
Program is excellent	24
Tutor was excellent	10
Program should tutor more classes	8
There should be more tutors	8
Tutors should be assigned earlier	6

There was virtually unanimous agreement that tutors had good subject knowledge with only three respondents suggesting tutor knowledge as less than good. One student added an "excellent" category to this item on the questionnaire and checked it. Sixty-one of the respondents rated tutors' ability to explain ideas as good while 10 rated explanations as fair and one rated tutor's ability to explain ideas as poor. One student added an "excellent" category to this item on the questionnaire and checked it. Tutees rated tutors' ability to explain problem solving methods almost as highly, with 57 respondents rating tutors as good and 15 rating tutors as fair on this scale. Again, one student added an "excellent" category to this item on the questionnaire and checked it.

Tutors' level of enthusiasm and interest was rated as high

by 51 tutees, medium by 19 tutees and low by one tutee. One student added the comment that their tutor had a "very high" level of interest. Forty tutees indicated that their tutors always attended the lectures of the class they were tutoring, while 22 tutees indicated their tutors usually attended and six tutees indicated that their tutors seldom attended class. Tutees rated their tutors' availability as good in 62 instances, "OK" in eight instances and poor in two instances. Three students added that their tutors' availability was "fantastic".

Fifty-eight tutees responded that their tutors' preparation was good, 10 tutees indicated that their tutors' preparation was OK and four tutees indicated that their tutors' preparation was poor. Sixty-three tutees indicated that their tutors made them feel very comfortable while nine tutees indicated that they felt reasonably comfortable with their tutor. Forty-eight tutees indicated that their tutors helped them "a lot" while 24 felt that their tutor helped them to a "reasonable" degree. Tutees were very positive about tutors. Sixty-five said their tutors should "definitely" continue to be a tutor while seven said "maybe" their tutor should continue to be a tutor. Fifty-six tutees said that the OASIS tutoring program was very useful while 16 said that it was somewhat helpful and no one said that it was useless.

Students were also asked to comment on the program and make suggestions for changes or improvements. The most frequent comment made by tutees (cited by 24 respondents) was that the program

was "excellent" or "fantastic". The next most frequent comment (cited by 10 respondents) was that the tutors, specifically, were "excellent". Eight tutees cited the desirability for more tutors and eight also mentioned specifically the need for tutors in more classes. Six tutees suggested that tutors should be assigned earlier in the quarter.

Discussion

The results of this evaluation indicate that the PTFP met its first objective. Well over 90% of PTFP tutees who were assigned a letter grade received passing grades in the class in which they received a tutor. However, almost one-fourth of the students who received tutorial assistance dropped the class or their tutor. This figure may reflect tutees who were enrolled in courses requiring background knowledge that the tutees did not possess. It can be argued that a legitimate function of a tutorial program, in this case, is to facilitate the students' discovery that the course level is inappropriate.

Data on non-cognitive tutee factors reflects that a significant number of students were rated as having questionable background. Consequently, this number of students with questionable academic preparation for courses may be a factor in the drop rate even with tutorial assistance. An additional factor in the number of drops is likely to be students who were assigned a tutor but did not need one. Interview data suggested that 26 tutees were rated by their tutor as not needing assistance, and

were likely dropped as tutees by their tutor.

The second objective of the tutorial program, development of a non-cognitive profile on tutees, was met by the interviews with the Tutorial Coordinator. Test anxiety, study skills problems, background knowledge deficiency and/or inappropriate course choices may be major factors effecting tutee academic performance. Because these problems cannot be directly addressed by the tutorial program, they are more appropriately left to the programs designed to meet these needs. However, since these factors effect tutees' academic performance and, hence, the efficiency of the tutorial program, coordination with other programs to address these factors in indicated.

The third objective of the PTFP was met by the tutee questionnaire. Although only 72 questionnaires were returned, the data on tutors were uniformly positive. This seems to suggest that tutees are either satisfied with tutor performance in general, or are reluctant to indicate their dissatisfaction.

Recommendations for Change

A synthesis of the results and discussion led to the following recommendations for change:

1. Develop a formal process to use non-cognitive information gathered on tutees as a basis for referral to the appropriate agency when intervention is indicated.

2. Modify tutee questionnaire to yield more affective data on program procedures and the tutoring process.

3. Determine the validity of tutors' ratings of tutee study skills deficiencies.

4. Obtain a higher return rate on the tutee evaluations of tutors.

Part II: Tutorial Clinics

The Biology/Chemistry Clinic (BCC) and Mathematics/Physics Clinic (MPC) are walk-in tutoring services available to all registered UCSD students. The clinics provide tutorial assistance in all undergraduate science courses although the emphasis is on lower division courses. Each clinic is staffed by undergraduate tutors who are selected on the same basis as PTFP tutors, although an effort is made to select experienced tutors with a broad range of knowledge for Clinic assignments. In addition, there is an undergraduate student clinic coordinator for each of the two clinics. The coordinators are responsible for scheduling, record keeping and general supervision of tutors in their respective clinics.

Method

Evaluation Criteria

The Coordinator for Research and Evaluation met with the Tutorial Programs Coordinator to discuss the evaluation of the tutorial clinics. Following that meeting, objectives for the tutorial clinics were formulated. The objective for the Math/Physics Clinic was:

1. The Math/Physics Clinics will serve more than 10% of students enrolled in lower division mathematics and physics courses.

The objective for the Biology/Chemistry Clinic was:

1. The Biology/Chemistry Clinic will serve more than 10%

of the students enrolled in lower division chemistry courses.

Procedure

Students who used the clinics were required to fill out a card providing their name, college and the class in which they were seeking assistance. These cards were then filed by the clinic coordinators who tabulated the results. Clinic usage was broken down and data were gathered indicating the number of different individuals who used the clinic.

Results

Table 6 shows a summary of Biology/Chemistry Clinic usage during fall quarter 1975. The largest group of clinic users sought help in connection with the chemistry 4A class, with 72 of the 204 students enrolled or 35.3% receiving clinic assistance. A total of 17 of the 88 students enrolled in science and technology 12A (19.3% of the enrollment) sought tutorial assistance from the clinic. Thirty-nine of the 294 students enrolled in natural science 1A (13.3% of the enrollment) and 27 of the 230 students enrolled in science 3C (11.7% of the enrollment) received assistance from the BCC. A total of 155 of the 816 students enrolled in lower division chemistry courses, or 19.0%, received tutorial assistance at least once from the BCC during fall quarter, 1975.

Table 6

Lower Division Chemistry Course Enrollment and Biology/Chemistry Clinic Usage During Fall Quarter, 1975

Course	Total Enrollment	Individuals Tutored	Percentage of Class Enrollment Tutored
Chemistry 4A	204	72	35.3
Natural Science 1A	294	39	13.3
Science 3C	230	27	11.7
Science/Technology 12A	88	17	19.3
Total	816	155	19.0

Table 7 presents a summary of Math/Physics Clinic usage by students who sought assistance in math courses during fall quarter, 1975. The largest number of tutees came from math 2A, with 195 individuals constituting 29.3% of the total course enrollment. Large proportions of the math 1A class (26.7% of the enrollment), the math 2C class (24.5% of the enrollment), and the math 4C class (29.1% of the enrollment) also received assistance. Approximately 23.7% of the math 2D class and 18.9% of the math 2B class received assistance. A relatively small proportion of the students enrolled in the math 1C (10.7%), math 4A (7.8%) or math 4B (1.4%) classes received tutorial assistance in the MPC. A total of 662 of the 2,923 students enrolled in lower division mathematics courses (22.6%) received help at

least once from the MPC during fall quarter, 1975.

Table 7

Lower Division Mathematics Course Enrollments and Math/Physics Clinic Usage During Fall Quarter, 1975

Course	Total Enrollment	Individuals Tutored	Percentage of Class Enrollment Tutored
Math 1A	420	112	26.7%
Math 1C	103	11	10.7%
Math 2A	879	258	29.3%
Math 2B	153	29	18.9%
Math 2C	192	47	24.5%
Math 2D	396	94	23.7%
Math 2E	82	5	6.1%
Math 4A	90	7	7.8%
Math 4B	282	4	1.4%
Math 4C	326	95	29.1%
Total	2,923	662	22.6%

Table 8 presents a summary of Math/Physics Clinic usage by students who sought assistance in lower division physics courses during fall quarter, 1975. The largest proportion of users came from the physics 2A class where 33 individuals (25.0% of the course enrollment) received assistance from the Clinic. Twenty-five of the 103 students enrolled in physics 3A, or 24.3%,

received assistance from the Clinic. Twenty-four of the 242 students enrolled in science 4A received tutorial assistance, which constituted 9.9% of the total enrollment. A total of 19 students from natural science 2C and 15 students from science and technology 15A, each constituting 11.9% of the total enrollments, received aid in the clinic. A total of 116 of the 762 students enrolled in lower division physics courses, or 15.2%, received assistance from the MPC at least once during fall quarter, 1975.

Table 8

Lower Division Physics Course Enrollments and Math/Physics Clinic Usage During Fall Quarter, 1975

Course	Total Enrollment	Individuals Tutored	Percentage of Class Enrollment Tutored
Natural Science 2C	159	19	11.9%
Physics 2A	132	33	25.0%
Physics 3A	103	25	24.3%
Science 4A	242	24	9.9%
Science/Tech 15A	126	15	11.9%
Total Physics	762	116	15.2%

Discussion

The BCC met its objective of serving at least 10% of the enrollment of lower division chemistry courses. These figures indicate that the BCC is serving 19.0% of the designated target

population of the clinic.

The MPC also met its objective of serving at least 10% of the enrollment of lower division mathematics and physics courses. This occurred in spite of the fact that two mathematics courses, math 4A and 4B, were self-paced courses with extensive tutorial aid as a part of the course. This built-in tutoring is reflected in the low proportion of clinic usage to course enrollment for these classes (7.8% and 1.4%, respectively). In five math courses, the MPC served over 20% of the course enrollments, thereby far exceeding its objective of 10%.

The MPC also met its objective of serving at least 10% of the enrollment of lower division physics courses. The bulk of the aid was provided to students enrolled in physics 2A. Students from other physics courses used the MPC proportionately less than physics 2A students. This may reflect the availability of tutoring within the science and technology 15A which was a self-paced course. In addition, the science 4A course established its own tutorial clinic which may have had some impact on the number of students from this course who used the MPC.

Recommendations

Synthesis of the results and discussion sections presented above lead to the following recommendations:

1. Include a measure of student satisfaction and the quality of the clinics' tutorial service in subsequent clinic evaluations.

2. Provide more effective advertising of clinic services to

students in classes showing low representation among clinic users.

Part III: Interpersonal Communications Skills Workshop

The purpose of the interpersonal communication skills workshop was to train tutors to increase listening and feedback skills and to help them become more aware of the importance of person-to-person interaction within the tutorial context.

Staff members from Counseling and Psychological Services (CPS) and the OASIS Coordinator for Tutorial Programs worked together to develop the format for the workshop. One staff member from CPS acted as convener and lecturer. The workshop was held on Saturday morning, October 25, 1975, for three hours and was divided into two sections: listening skills and feedback skills. An hour and one-half was allotted for each topic. The format for each section was as follows: a mini-lecture on the topic, small group role plays and discussions, community discussion and general summary of the topic.

Method

An evaluation questionnaire which had been prepared by OASIS was distrubuted to all participants at the end of the workshop (see Appendix VIII). There were six questions on the instrument concerning the general topics presented, the various activities and an overall rating of the workshop. Two of the questions asked for comments and suggested improvements for future workshops.

Subjects

All tutors participating in the Tutorial Programs during fall quarter, 1975, were requested to attend. Of the 122 tutors in the program, 95 students responded to the evaluation questionnaire.

Analysis

Response frequencies were tallied for each question. In addition, the mean response was computed for the questions that had discrete answers. Short answer responses were categorized and the frequency of the responses were tallied.

Results

Table 8 presents the tabulation of the questionnaire data:

Table 8

Interpersonal skills workshop evaluation data

Workshop Rating	$\bar{X}$	4	3	2	1	N
		Very Useful	Useful	Not Useful	A Waste of Time	
1. I found this workshop to be:	2.61	7	60	18	10	95
2. When tutoring, I believe the listening skills taught during this workshop will be:	2.97	17	58	15	2	92
3. When tutoring, I believe the feedback skills taught during this workshop will be:	2.91	17	56	18	3	94

4. Which of the workshop activities did you find to be the most valuable? The least valuable?

Activity	Most Valuable	Least Valuable
Demonstration role play	18	13
General discussion on listening skills	13	13
Lecture on listening skills	11	15
Small group role play on listening skills	18	17
Small group discussion on listening skills	33	5
General wrap-up on listening skills	4	11
General discussion on feedback	11	9

Activity	Most Valuable	Least Valuable
Lecture on feedback	16	9
Small group role play on feedback	12	23
Small group discussion on feedback	26	8
General wrap-up on feedback	4	18

5. What would you suggest to improve the workshop?

6. Comments.

Response	Frequency
Small group discussions of actual tutorial experiences were preferable to role playing hypothetical situations.	31
Workshop was too long.	12
Workshop should have been more concise, concrete.	10
Workshop should have more clearly differentiated between listening and feedback skills.	6
Workshop should have been held earlier in the quarter.	6

The majority of participants (60) found the interpersonal communication skills workshop to be useful. Of the respondents not included above, 7 found it to be very useful, 18 found it not useful and 10 participants found it a waste of time. The listening skills and feedback skills sections of the workshop had very similar ratings with 58 and 56 participants finding these sections useful, 17 finding these exercises very useful, while 17 and 21

respectively found it not useful or a waste of time.

The participants were asked to rate the workshop activities into most and least valuable categories. The most popular activities were the small group discussions on listening skills and feedback skills. Thirty-three students rated the listening skills activities as among the most valuable and five students rated them as among the least valuable activities. Twenty-six students rated the feedback skills activities as among most valuable and eight students rated them as among the least valuable. The second most popular activity was the lecture on feedback. Sixteen students rated it as among the most valuable activities and nine students rated it as among the least valuable activities.

The least popular activities were the general wrap-up on both listening and feedback skills. Four students rated each of these activities as among the most valuable activities, 11 rated the wrap-up on listening skills as among least valuable activities and 18 students rated the wrap-up on feedback as among the least valuable activities. The second least popular activity was the small group role play on feedback. Twenty-three students responded to it as least valuable and 12 students responded to it as most valuable.

The participants were also asked to write comments or suggestions for improvement of the workshop. Thirty-one students stated that small group discussions of actual tutorial experiences were preferable to role playing hypothetical situations. This

sentiment was also reflected in the activities section of the questionnaire. Twelve students commented that the workshop was too long. The workshop should have been more concise and concrete concluded ten students and there also should have been a clearer differentiation between listening and feedback skills according to six students. In addition, six students felt that the workshop would have been more effective if held earlier in the quarter.

Four Clinic tutors suggested that the workshop format should be more tailored to their needs. Other students commented that the two lectures on listening skills and feedback skills were too drawn out and there should have been more large group discussion with the lecturer. One student wanted more information on how to motivate tutees while another student felt that tutees should participate in a workshop of this type.

Discussion

The workshop was generally found to be useful for developing interpersonal skills. It must be noted, however, that there was a last minute and unforeseen change in the format. Originally there were to be two lecturers; each presenting one part of the program. However, on the morning on the workshop one lecturer informed us he could not attend. Consequently, the lecturer who was able to come was put into the position of having to "ad lib" the listening skills segment of the program. The effect of this last minute change is reflected in the comments section of

the questionnaire by the participants' suggestions that there should be a clearer differentiation between listening skills and feedback skills, that the materials presented should be more concise, and that the workshop was too long.

Although the small group discussions on tutorial experiences were not planned to be a major part of the workshop, it was clear that this activity superseded the small group role play exercise. Since the participants did not appear to be comfortable with the role plays, it may be appropriate to drop this exercise for future interpersonal communication skills workshops.

Recommendations

A synthesis of the results and discussion sections of the workshop evaluation leads to the following recommendations:

1. Future workshops should be shorter and more concise.

2. Future workshops should be held earlier in the quarter.

3. There should be a separate workshop for Clinic tutors which would focus on these students' special needs.

4. Future workshops should emphasize the development of listening and feedback skills.

5. There should be more concentration on actual tutorial experiences.

6. The role play exercises should be eliminated from the format.

APPENDIX I

Dear Professor:

This fall quarter marks the fifth year that the Office of Academic Support and Instructional Services (OASIS) will offer tutorial services in lower division math and science courses. Over the years this program has successfully helped several hundred students. (See Appendices for last year's data.)

The Provosts' Tutorial Fellowship Program is designed to give quarter-long aid to those students who need academic support in addition to what is traditionally provided in the classroom setting. The type of student one might find asking for this tutorial service is one who (1) is on probation, (2) has a minor background deficiency in the subject, (3) is unsure of her or himself in the academic arena. One of the objectives of the Provosts' Tutorial Fellowship Program is to help these students become independent learners. Each tutor will work with three individuals who have requested additional aid in your course. The tutors are required to sit in on your class whenever possible so they will be current with the material you are presenting. In addition, tutors may be contacting you for clarification of the objectives of your class. The tutors' names are:

If you would like additional information concerning the OASIS Provosts' Tutorial Fellowship Program, please call me at extension 3760.

Sincerely,

Barbara Shreve
Tutorial Coordinator

Name _____ Class _____ Date _____

TUTEE EVALUATION

	Name			Name			Name		
I. Personal Factors	Yes	Maybe	No	Yes	Maybe	No	Yes	Maybe	No
Is course level appropriate									
Is handling overall load (in other classes)									
Has self confidence									
Maintains physical health									
Is coping with personal/social situations									
Has Test Anxiety									
II. Does this student have study skills problems?									
a. Has ability to pick key concepts									
b. Understands course objectives									
c. Has background knowledge									
d. Can study independently									
e. Organizes time well									
f. Studies efficiently									
g. Has reading difficulty									
h. Takes good notes									
III. Motivation									
Completes reading assignments and prepares for class									

	Yes	Maybe	No	Yes	Maybe	No	Yes	Maybe	No
Spends enough time studying	___	___	___	___	___	___	___	___	___
Attends class	___	___	___	___	___	___	___	___	___

IV. Does this student need a tutor? ___ ___ ___ ___ ___ ___ ___ ___ ___

V. Problems

APPENDIX III

PROVOST'S TUTORIAL FELLOWSHIP PROGRAM

(OASIS)

Tutor Evaluation

The purpose of this evaluation sheet is to allow us to make judgments as to the ability and usefulness of our tutors. With this information, we can make the program more effective and choose and utilize our tutors more wisely.

Please bring or send this sheet directly to the OASIS office at 250 MC.

TUTOR'S NAME _____ COURSE TUTORED _____

STUDENT'S NAME _____ YEAR & QUARTER _____

Tutor's knowledge of subject	good____	fair____	poor____
Tutor's ability to explain ideas	good____	fair____	poor____
Tutor's ability to explain problems and problem solving methods	good____	fair____	poor____
Tutor's level of enthusiasm and interest	high____	medium____	low____
Tutor's class attendance	always____	usually____	seldom____
Tutor's availablilty (within reason)	good____	OK____	poor____
Tutor's preparation: does he or she keep up with class and know what's happening day by day?	good____	OK____	poor____
Tutor's ability to relate: do you feel comfortable with your tutor?	very____	reasonable____	no____
Has this tutor helped you?	alot____	reasonable____	no____
Should this tutor continue to tutor?	definitely____	maybe____	no____
The OASIS tutoring program was useful to me	very____	somewhat____	useless____

COMMENTS: Please tell us what you think about the program. What would you change? How can it be improved?

Appendix IV

Grades received by Biology Tutees and students on the Waiting List for Biology Tutors, Fall Quarter, 1975

	A	B	C	D	F	Average Grade	P	NP	NR	Drop	N
EOP Tutees	0	5	11	4	1	1.95	3	1	1	11	35
	(0.0%)	(23.8%)	(52.4%)	(19.0%)	(4.8%)						
EOP Waiting List	0	2	5	4	0	1.82	0	0	1	2	14
	(0.0%)	(18.2%)	(45.4%)	(36.4%)	(0.0%)						
Non-EOP Tutees	1	5	4	1	0	2.54	0	0	0	0	11
	(9.1%)	(45.4%)	(36.4%)	(9.1%)							
Non-EOP Waiting List	0	4	2	0	0	2.67	0	0	0	1	7
	(0.0%)	(66.7%)	(33.3%)	(0.0%)	(0.0%)						

Appendix V

Grades received by Chemistry Tutees and students on the Waiting List for Chemistry Tutors, Fall Quarter, 1975

	A	B	C	D	F	Average Grade	P	NP	NR	Drop	N
EOP Tutees	1	4	9	3	2	2.18	1	0	0	8	28
	(5.3%)	(21.0%)	(47.4%)	(15.8%)	(10.5%)						
EOP Waiting List	0	0	5	3	0	1.63	0	0	1	0	9
	(0.0%)	(0.0%)	(62.5%)	(37.5%)	(0.0%)						
Non-EOP Tutees	3	12	15	2	1	2.42*	0	0	2	7	42
	(9.1%)	(36.4%)	(45.4%)	(6.1%)	(3.0%)						
Non-EOP Waiting List	1	3	3	5	2	1.71*	0	0	0	9	23
	(7.1%)	(21.4%)	(21.4%)	(35.7%)	(14.3%)						

* Grades received by Non-EOP Tutees are significantly higher than grades received by the Non-EOP Waiting list, $t(45) = 2.279$, $p < .05$.

Appendix VI

Grades received by Mathematics Tutees and students on the Waiting List for Mathematics Tutors, Fall Quarter, 1975

	A	B	C	D	F	Average Grade	P	NP	NR	Drop	N
EOP Tutees	8	10	20	8	2	2.29*	1	0	4	23	76
	(16.7%)	(20.8%)	(41.7%)	(16.7%)	(4.2%)						
EOP Waiting List	0	3	9	3	2	1.76*	0	0	0	4	21
	(0.0%)	(17.6%)	(52.9%)	(17.6%)	(11.8%)						
Non-EOP Tutees	18	28	24	7	5	2.57	3	1	7	25	118
	(22.0%)	(34.1%)	(26.1%)	(7.6%)	(5.4%)						
Non-EOP Waiting List	5	10	20	4	2	2.29	0	0	2	7	50
	(12.2%)	(24.4%)	(48.8%)	(9.8%)	(4.9%)						

* Grades received by EOP Tutees are significantly higher than grades received by the EOP Waiting List, $t(63) = 1.821$, $p < .05$.

Appendix VI-I

Grades received by Physics Tutees and students on the Waiting List for Physics Tutors, Fall Quarter, 1975

	A	B	C	D	L	Average Grade	P	NP	NR	Drop	N
EOP Tutees	0	1	2	0	1	1.75	0	0	0	4	8
	(0.0%)	(25.0%)	(50.0%)	(0.0%)	(25.0%)						
EOP Waiting List	0	1	1	1	0	2.00	0	0	0	0	3
	(0.0%)	(33.3%)	(33.3%)	(33.3%)	(0.0%)						
Non-EOP Tutees	0	8	0	2	0	2.60*	0	0	0	0	10
	(0.0%)	(80.0%)	(0.0%)	(20.0%)	(0.0%)						
Non-EOP Waiting List	0	1	1	2	1	1.40*	0	0	0	5	10
	(0.0%)	(20.0%)	(20.0%)	(40.0%)	(20.0%)						

* Grades received by Non-EOP Tutees are significantly higher than grades received by the Non-EOP Waiting List, $t(13) = 2.319$, $p < .05$.

APPENDIX VIII

EVALUATION

TEP Interpersonal Communication Skills Workshop

October 25, 1975

	Check one			
	Very Useful	Useful	Not Useful	A Waste of Time
1. I found this workshop to be	_____	_____	_____	_____
2. When tutoring, I believe the listening skills taught during this workshop will be	_____	_____	_____	_____
3. When tutoring, I believe the feedback skills taught during this workshop will be	_____	_____	_____	_____

4. Which of the workshop activities did you find to be the most valuable? (Write most). The least valuable? (Write least).

_____ Demonstration role play

_____ General discussion on listening skills

_____ Lecture on listening skills

_____ Small group role play on listening skills

_____ Small group discussion on listening skills

_____ General wrap-up on listening skills

_____ General discussions on feedback

_____ Lecture on feedback

_____ Small group role play on feedback

_____ Small group discussions on feedback

_____ General wrap-up on feedback

5. What would you suggest to improve the workshop? (Use reverse side)

6. Comment: (Use reverse side)