

COLLEGE OF THE CANYONS

*Santa Clarita Community College District
26455 Rockwell Canyon, Santa Clarita, CA 91355*

Institutional Development and Technology

Tutoring/Learning/Computer Center Retention & Success Spring 2005

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Daylene M. Meuschke, M.A.
Barry C. Gribbons, Ph.D.

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Introduction

To inform the Tutoring/Learning/Computer (TLC) Center's self-review process, the Office of Institutional Development and Technology prepared a report addressing the impact of tutoring services on student retention and success. The analyses were delimited to tutoring services, rather than the broader array of services, which includes services related to computer use. Since students pursue a variety of different amounts of tutoring and the impact will likely vary by amount of services received, retention and success rates of students were assessed for amount of tutoring as well as whether or not students received any tutoring services.

Methods

Two data sources were used for this study. The first data file was obtained from TLC. In this file, each tutoring contact was identified, including the type of contact (tutoring, computer use, and both tutoring and computer use), course for which tutoring was provided, and length of tutoring contact. Data for both Spring 2003 and Fall 2003 were used.

The second type of data file was the California Community College Chancellor's Office referential file for enrollments (referred to as the "USX file"). This file contains information on the enrollments of each student in a given term, including the grade ultimately received.

The two files were matched based on student identification number and course for which tutoring was received. Simple descriptive statistics were computed. Additionally, the relationship between amount of tutoring (number of visits and number of hours) with retention and success rates was assessed. Retention is defined as completing a course (not withdrawing). Success rates are defined as the percentage of students passing a class with a "C" or better or credit. Students who drop prior to the dropped deadline were not included in the analyses.

Major Findings

In the Fall 2003 semester, the TLC provided tutoring to 2,579 students. As students often seek more than one tutoring contact, the total number of tutoring contacts reported was 14,029. The number of students tutored and tutoring contact increased from 1,805 in the Fall 2000 to 2,579 students in Fall 2003. The number of tutoring contacts increased from 9,482 in Fall 2000 to 14,029 in Fall 2003. (Note that these are for tutoring services only. TLC provides other services, such as computer use, that are not included.)

Table 1 lists the number of students who go to the TLC by frequency of visits. In Fall 2000 and Fall 2003, about one third of students (36 and 33 percent, respectively) received tutoring services only once. The remaining two-thirds of the students received tutoring services between 2 and more than 40 times in the semester.

Table 1. Number of visits per student in Fall 2003

	Fall 2003		Fall 2003	
	Number of Visits	Number of Students	Number of Visits	Number of Students
1		857	21	5
2		406	22	14
3		261	23	6
4		179	24	7
5		143	25	12
6		121	26	5
7		80	27	6
8		65	28	3
9		75	29	3
10		50	30	5
11		47	31	1
12		33	32	6
13		34	33	1
14		26	34	3
15		15	35	3
16		19	36	4
17		13	37	3
18		9	38	2
19		17	39	1
20		12	40 or more	27
			Total	2,579

Table 2 compares the number of tutor contacts and number of students served (unduplicated) for Fall 2000 and Fall 2003, along with the increase in number of contacts and students served.

Table 2. Number of Tutor Contacts and Unduplicated Number of Students Served by Tutors: Fall 2000 Compared to Fall 2003

	Fall 2000	Fall 2003	Increase (N)	Increase (%)
Tutor Contacts	9,482	14,029	4,547	48%
Unduplicated Number of Students Served by Tutors	1,805	2,579	774	43%

Tables 3 and 4 list the courses for which students receive the greatest amount of tutoring (shown are disciplines in which 10 or more contacts were made). English and Math courses top the lists. In fact, in both the Spring and Fall semesters, there were more than 1000 tutoring contacts for Math 070 alone! Although the English and Math departments dominate the top of the most frequently tutoring list, tutoring services are provided for many other courses in most departments at the College.

Table 3. Courses most frequently tutored: Number of tutoring contacts per course during Fall 2000

Dept	Course Number	Number of tutoring contacts	Dept	Course Number	Number of tutoring contacts
1. MATH	070	1122	28. BUS	202	60
2. ENGL	090	706	29. MATH	059	51
3. MATH	103	656	30. PHYSIC	110	49
4. MATH	060	601	31. ENGL	080	47
5. MATH	140	601	32. HIST	150	41
6. ENGL	035	600	33. SPAN	101	40
7. ENGL	101	390	34. SPAN	102	39
8. MATH	057	378	35. MATH	213	38
9. MATH	211	375	36. BIOSCI	221	37
10. MATH	212	323	37. ECON	201	37
11. MATH	025	293	38. WELD		37
12. OTHER		272	39. ESL	100	35
13. BUS	144	216	40. MATH	063	34
14. MATH	102	196	41. PSYCH	101	34
15. ENGL	034	189	42. ENGL	103	33
16. BUS	201	178	43. ENGL	010	32
17. ENGL	102	130	44. ENGL	250	32
18. MATH	240	124	45. MATH	026	31
19. CHEM	151	116	46. NURSN	102	29
20. POLISC	150	115	47. SPAN	150	29
21. NURSN	101	96	48. ENGL	011	24
22. MATH	214	85	49. MATH	130	24
23. PERDEV	111	74	50. PHYSIC	220	24
24. SPCOM	105	72	51. PSYCH	102	21
25. BIOSCI	107	67	52. ESL	070	20
26. NURSN	200	67	53. BIOSCI	204	19
27. CHEM	201	63	54. HIST	111	19

Dept	Course Number	Number of tutoring contacts	Dept	Course Number	Number of tutoring contacts
55. BIOSCI	106	15	62. BUS	100	13
56. BUS	211	15	63. SOCI	101	13
57. ESL	080	15	64. NURSN	151	11
58. NURSN	150	15	65. NURSN	204	11

59. CMPSCI	111	14	66. SPAN	201	11
60. HIST	245	14	67. GEOG	101	10
61. MATH	010	14			

Table 4. Courses most frequently tutored: Number of tutoring contacts per course during Fall 2003

Dept	Course Number	Number of tutoring contacts	Dept	Course Number	Number of tutoring contacts
1. ENGL	35	2,024	35. MATH	59	35
2. ENGL	90	1,786	36. POLISC	150	34
3. MATH	70	1,431	37. CIT	105	32
4. MATH	103	1,044	38. MATH	10	32
5. ENGL	34	751	39. HIST	150	30
6. MATH	140	746	40. CMPSCI	111	28
7. ENGL	11	665	41. ESL	75	26
8. ENGL	101	526	42. MATH	215	26
9. MATH	211	479	43. CHEM	201	25
10. MATH	58	432	44. ENGR	152	23
11. MATH	60	376	45. PHYSIC	221	23
12. ENGL	80	295	46. CIT	150	21
13. ENGL	102	239	47. COMS	105	20
14. MATH	102	230	48. NURSNG	101	20
15. BUS	201	223	49. CMPSCI	235	19
16. ESL	80	199	50. ECE	120	19
17. ENGL	10	144	51. HIST	111	19
18. MATH	25	144	52. SOCI	101	19
19. BUS	202	141	53. BIOSCI	107	18
20. MATH	63	131	54. CHEM	151	18
21. BUS	144	125	55. PHYSIC	110	17
22. MATH	213	120	56. CIT	116	15
23. SPAN	101	120	57. CIT	110	14
24. MATH	212	108	58. CIT	160	14
25. ESL	100	106	59. HIST	112	14
26. CIT	140	61	60. CIT	145	13
27. ENGL	92	51	61. ENGL	12	13
28. GENSTU	94	49	62. ECON	201	12
29. PHYSIC	220	47	63. ENGL	63	12
30. SPAN	102	45	64. MATH	214	12
31. MATH	130	42	65. CHEM	255	11
32. CHEM	110	41	66. BIOSCI	221	10
33. ENGL	103	38	67. PSYCH	101	10
34. CIT	155	36			

Figures 1 through 8 contain information on the retention and success of students receiving tutoring services. Figures depict both the retention (completing a course) and success (passing a course with a “C” or better or credit) rates for both the Spring 2000 and Fall 2000 semesters, broken down by the number of visits and the number of hours tutored. In all instances there was a statistically significant relationship between the number of hours or visits and students’ retention and success in courses ($p < .05$). As is evidenced by the Figures, the differences are primarily between those who receive tutoring and those who do not, rather than the amount of tutoring received.

Figure 1 illustrates the retention rates for Fall 2000, broken down by the number of tutoring visits per student. Students who received tutoring had greater retention rates. As demonstrated in Figure 1, the greatest difference was between students who received more than ten tutoring sessions and students not receiving any tutoring, an 11 percent difference. (Note that in this analysis and others presented in this report, only courses in which at least one student received tutoring were included in the analyses to mitigate differential retention and success rates.)

Figure 1. Fall 2000 retention rates by number of TLC visits

Similarly, the success rates for Fall 2000 were greater for students engaging tutoring compared to students not engaging tutoring (see Figure 2). The differences were greatest for students participating in more than 10 tutoring sessions and students receiving no tutoring, an 11 percent difference in success rates.

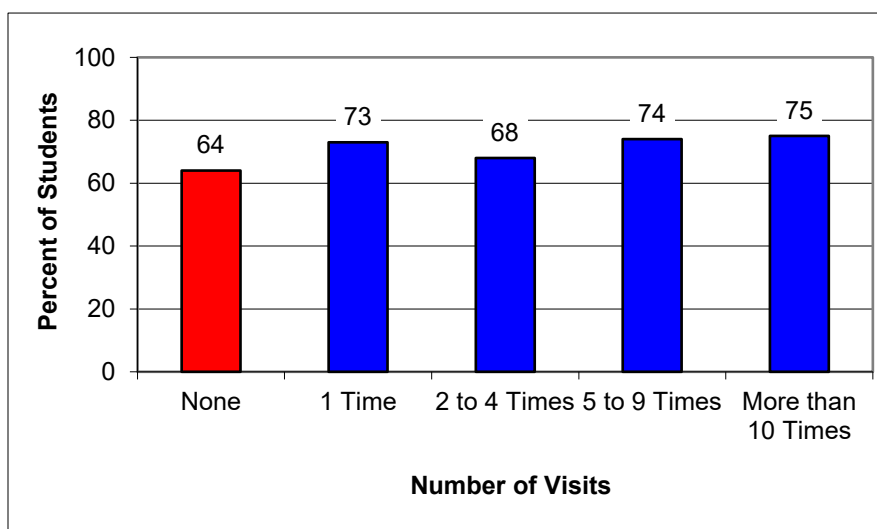


Figure 2. Fall 2000 success rates by number of TLC visits

Figures 3 and 4 depict similar relationships to those in Figures 1 and 2. Students participating in more hours of tutoring outperform students not participating in tutoring.

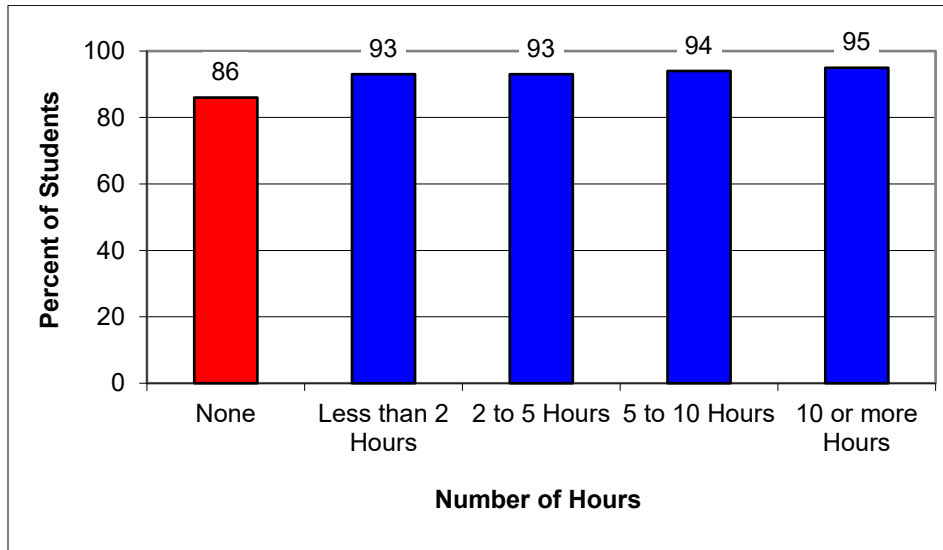


Figure 3. Fall 2000 retention rates by number of hours of tutoring

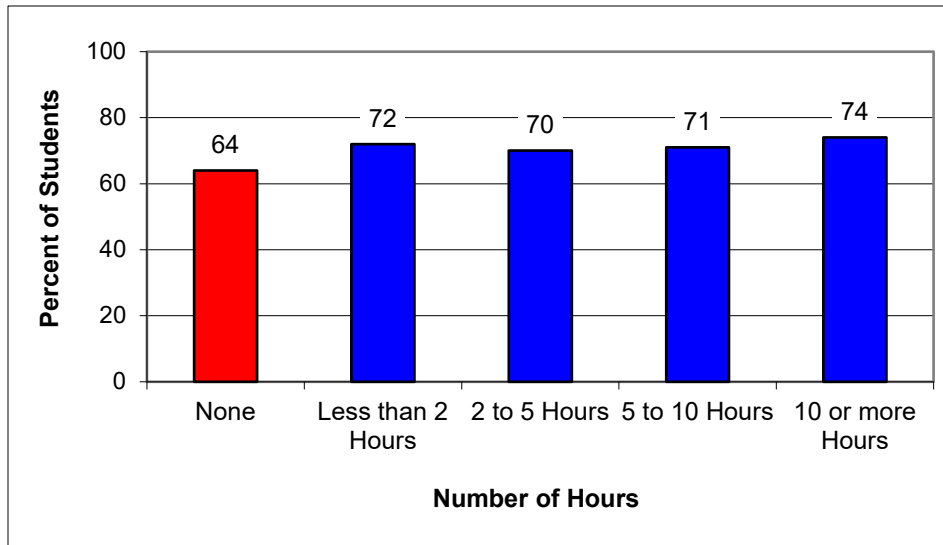
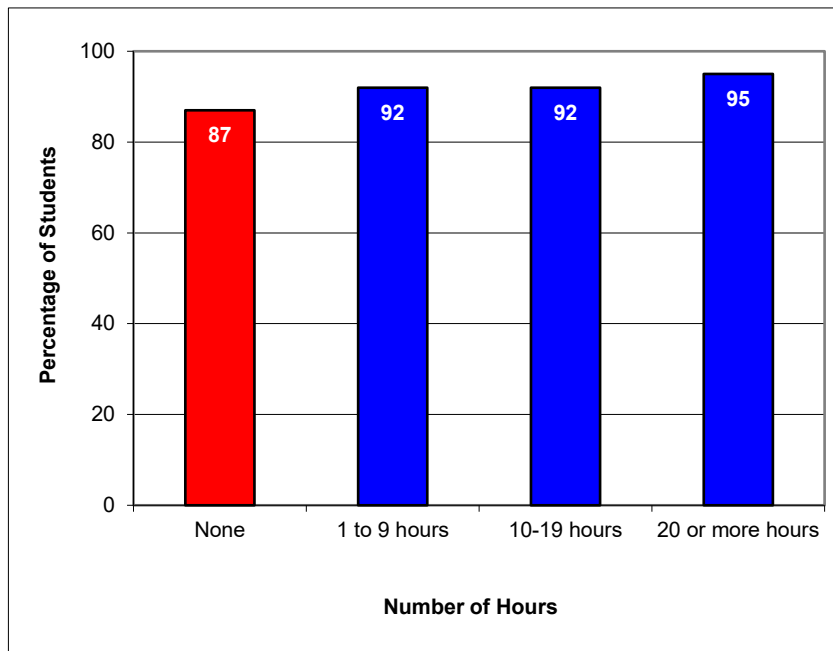


Figure 4. Fall 2000 success rates by number of hours of tutoring



Conclusions

This study assessed the relationship between the amount of tutoring received and the student retention and success for the Spring and Fall of 2000. The amount of tutoring was operationally defined as both the number of tutoring contacts and number of hours of tutoring a student received. Student success was defined both as retention (completing the course) and success (passing the course with a grade of “C” or better or credit).

In all analyses, students who participated in tutoring outperformed students did not, regardless of the amount of tutoring they received and the measure of success (retention and success rates). These differences could be attributable to several factors, including motivational differences in students. However, the results are necessary to support conclusions that tutoring services do improve success. Furthermore, results indicate that students pursuing tutoring are more likely to succeed than other students, negating any claims that students pursuing tutoring are less capable.

Action Implications

- Inform and encourage students to use the TLC Lab through faculty and other sources of advertisement (i.e. web page Canyon Call, flyers, etc.).
- Hire more tutors in all areas to meet the students' needs.