



FOOTHILL COLLEGE

Institutional Research and Planning

DATE: February 18, 2016

TO: Lisa Schultheis, Instructor, Biology
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FROM: Elaine Kuo, Institutional Researcher

RE: Embedded Tutoring—BIOL 10 (Fall 2015)

Overview

Students enrolled in BIOL 10 sections that offered embedded tutoring in Fall 2015 were identified and tracked to determine their course success rates. These students' characteristics and outcomes were compared to those who did not participate in embedded tutoring.

Highlights

- All students who participated in embedded tutoring successfully completed the course (n=12).
- The BIOL 10 sections that offered embedded tutoring yielded about a 20% participation rate (12 out of 59).
- The BIOL 10 sections that offered embedded tutoring experienced a higher course completion rate than those sections that did not offer embedded tutoring.
- Students participating in embedded tutoring were primarily Asian and Latino (n=9), female (n=10) and lower income (n=7);
- Latino and White students who were offered embedded tutoring appeared less likely to participate in this opportunity (Latino: 3 out of 16 or 19%; White: 1 out of 11 or 9%) compared to their African American and Asian peers (African American: 1 out of 1 or 100%; Asian: 6 out of 21 or 29%).
- Allied health students participated in embedded tutoring at a slightly lower rate (2 out of 12 or 17%) given the proportion that they represent in the sections offering embedded tutoring (2 out of 16 or 12%).
- Students receiving financial aid represented the majority of those participating in financial aid (58% vs. 42%).

Table 1 shows the course success rates between the BIOL 10 sections that offered embedded tutoring compared to those that did not offer this option. The course success rates indicate that students enrolled in the embedded tutoring sections experienced a higher completion rate.

Table 1. Embedded Tutoring and BIOL 10 Course Success Rates, Fall 2015.

Embedded Tutor Ind	Success		Nonsuccess		Withdraw		Total	
	Id	Percent	Id	Percent	Id	Percent	Id	Percent
Yes	59	89%	6	9%	1	2%	66	100%
No	87	69%	23	18%	16	13%	126	100%
Total	146	87%	29	11%	16	2%	192	100%

All students who participated in embedded tutoring successfully completed BIOL 10 (Table 2). Note that the success rate was also higher among those who chose not to participate in embedded tutoring compared to those sections that did not offer embedded tutoring (18% difference).

Table 2. Embedded Tutoring Participation and BIOL 10 Course Success Rates, Fall 2015.

Embedded Tutor Ind	Success Count	HC	Percent
Yes	12	12	100%
No	47	54	87%
Did Not Offer	87	126	69%
Total	146	192	76%

Students who participated in tutoring indicated a range of majors in all instructional divisions, including Biological and Health Sciences (5); Business and Social Sciences (2); Fine Arts and Communication (2); Kinesiology and Athletics (2); and Physical Sciences, Mathematics and Engineering (1). Among those who did not participate in embedded tutoring (either by choice or was not an option), the top majors indicated were Biological Sciences (17), Radiologic Technology (17), Veterinary Technology (16), Business (10), Dental Hygiene (10) and Psychology for Transfer (10). These data suggest that students in the allied health programs are less likely to participate in embedded tutoring as none of the dental hygiene (0 out of 4) and only 20% of the radiologic technology students (2 out of 10) elected to participate. Note that two-thirds of allied health students in the non-embedded tutoring sections tend to successfully complete BIOL 10 while only one allied health student was unsuccessful among those with the option of participating in embedded tutoring.

As the findings suggest that embedded tutoring may facilitate course success, it is important to examine student characteristics to determine if there are any differences in participation rates. Table 3 shows the participation rates by ethnicity, and while Asian and Latino students composed the majority of students participating in embedded tutoring, Asian students represent less than half of the student enrollment in the same sections or in the other BIOL 10 sections. Meanwhile, Latino students represented about 25% among those participating in embedded tutoring and those who chose not to participate (enrollment within the same sections).

Table 3. BIOL 10 Embedded Tutoring Participation by Ethnicity, Fall 2015.

Ethnicity	<u>Embedded Tutoring Ind</u>					
	<u>Yes</u>		<u>No</u>		<u>Did Not Offer</u>	
	HC	Percent	HC	Percent	HC	Percent
African American	1	8%	0	0%	6	5%
Asian	6	50%	15	28%	22	17%
Filipino	0	0%	10	19%	13	10%
Latino/a	3	25%	13	24%	44	35%
Native American	0	0%	1	2%	0	0%
Pacific Islander	0	0%	0	0%	2	2%
White	1	8%	10	19%	31	25%
Unknown	1	8%	5	9%	8	6%
Total	12	100%	54	100%	126	100%

Female students composed the majority of those who participated in embedded tutoring (Table 4). While females represent the majority of students enrolled in BIOL 10, the participation rate is much higher than what would be expected, regardless of whether they had the opportunity to participate in embedded tutoring. In fact, females chose to participate in embedded tutoring at almost twice the rate of their male peers (20% vs. 11%).

Table 4. BIOL 10 Embedded Tutoring Participation by Gender, Fall 2015.

Gender	<u>Embedded Tutoring Ind</u>					
	<u>Yes</u>		<u>No</u>		<u>Did Not Offer</u>	
	HC	Percent	HC	Percent	HC	Percent
Female	10	83%	37	69%	74	59%
Male	2	17%	17	31%	51	41%
Total	12	100%	54	100%	125	100%

A higher percentage of students receiving financial aid represented those who participated in embedded tutoring compared to those who elected not to participate and those who did not have the option to participate (Table 5). Even among those students provided the option to participate in embedded tutoring, 22% of those receiving aid compared to 15% of those not receiving aid engaged in this opportunity.

Table 5. BIOL 10 Embedded Tutoring Participation by Financial Aid, Fall 2015.

Financial Aid Ind	<u>Embedded Tutoring Ind</u>					
	<u>Yes</u>		<u>No</u>		<u>Did Not Offer</u>	
	HC	Percent	HC	Percent	HC	Percent
No Aid Awarded	5	42%	29	54%	85	67%
Aid Recipient	7	58%	25	46%	41	33%
Total	12	100%	54	100%	126	100%

Methodology

Participants in the two Fall 2015 BIOL 10 sections that offered embedded tutoring were identified so that students' course success rates could be determined. Student IDs were provided by BIOL faculty, so that institutional research could track for student outcomes. The sections that offered embedded tutors were identified by the CRN (20560, 22290).

Allied health majors include dental hygiene, diagnostic medical sonography, radiologic technology and veterinary technology.

Unknown gender was defaulted to female (1 unknown gender in the BIOL 10 sections not offering embedded tutoring).

The financial aid indicator includes only those students who applied and received aid, and does not consider how many students would be eligible for aid.

Source

FHDA IR&P, ODS [Registration Analysis, SS_Student_Term_Attributes]